MAEER'S
MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE)

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Re-test and Answer Sheets 2023 - 2024

MAER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

MIDSR

Department of _____

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
05		

Answer Sheet No.
(write this no. on your question booklet)
Name of Examination
Betreement Exam.

Subject	Paper

Roll No. (In Words)
Five.
Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date 18/06/2024.

USE BLUE BALL POINT PEN ONLY

1	2	3	4	5	6	7	8	9	10
A		X				X				
B	X		X	X	X			X		X
C										
D							X		X	

=8.

11	12	13	14	15	16	17	18	19	20
A		X				X	X			
B	X			X	X					
C			X							X
D								X	X	

=7.

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

MARKED SECURED

Name of Exercise	Marks Obtained
Section - A	15.
Section - B	15
Section - C	16.

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(DENTAL COLLEGE), LATUR

MIDSR

Department of _____

Name of Student :- Dhanashri Kalkoti

Roll No. of Student :- | | | | 0 | 5 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 18/6/24

Time : 2pm

15+29/16 / 50 = 31/50

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet
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12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

① Write Composition and setting reaction of GIC

→ Glass ionomer cements are adhesive tooth colored anticariogenic restorative materials which are originally used for restoration of eroded areas

Composition

Powder

	Ingredient	weight (%)
①	silica	41·9
②	Alumina	28·6
③	Aluminium fluride	1·6
④	calcium fluride	15·7
⑤	sodium fluride	9·3
⑥	Aluminium phosphate	3·8

Liquid

	Component	Functions
①	polyacrylic acid in the form of copolymer with itaconic acid, maleic and tricarballylic acid	increase reactivity of liquid, decrease viscos and reduce tendency of gelation
②	Tartaric acid	improve the handling characteristics, increase working time and shortens setting time
③	water	water is most important constituent of the cem liquid it is the reaction medium of the reactio and it hydrates the reaction products.

Setting Reaction

→ ① leaching - when the powder and liquid are mixed together, the acid attacks the glass particles. the calcium, aluminum, sodium and fluoride ions leach out into the aqueous medium.

② calcium cross-links - The initial set occurs when the calcium ions cross-links the polyacrylic acid chains. This forms a solid mass.

③ Aluminium cross links - Aluminum also begins to cross-links with polyacrylic acid chain.

④ sodium and fluorine ions - This ions do not take part in cross-linking. some of the sodium ions is slowly replace the hydrogen ions in carboxylic groups. The rest combine with fluorine to form sodium fluoride which uniformly distributed within the cement.

⑤ Hydration - water play important role in the cement Initially it serve as the medium. later it slowly hydrates the matrix, adding to strength of the cement.

⑥ Silica gel sheath - The unreacted glass particle sheathed by silica gel. It is formed by the leaching of ions from the outer portion of the glass particle.

3

② classification of dental waxes and composition of inlay wax.

→ Defi - wax - one of several esters of fatty acid with higher alcohol, usually monohydric alcohol.

Dental waxes - are combination of various types of waxes.

classification

Natural waxes

Mineral

① Paraffin
② microcrystalline
③ ozokerite
④ montan

plant

① carnauba
② ouricury
③ candelilla
④ Japan wax
⑤ cocoa butter

Insect

① Bees wax

Animal

① spermaceti.

synthetic waxes.

- polyethelene waxes
- polyoxythalene alkyl(o) waxes
- Halogenated hydrocarbon waxes
- Halogenated waxes

Based on application

		Inlate
	Pattern	Resin
		casting
		Base plate
		sticky
Dental wax	processing	Boxing
		carding
		Blocked
		white
		utility
	Impression	Corrective
		bite registration

Composition of inlay wax

paraffin wax	40-60%	used to establish melting point
Carnauba wax	25%	Decrease flow At mouth temperature
Ceresin	10%	↑ toughness
Beeswax	5%	reduce flow at mouth temperature
gum Dammar	1%	increase the smoothness

(3)

③ write composition, classification, Indication, contraindication of amalgam write a short note on mercury toxicity.

→ Composition

Silver - 63 - 70 %
Tin - 26 - 29 %
Copper - 2 - 5 %
Zinc - 0 - 2 %

classification

① Based on the copper content
low copper alloy - contain less than 6% copper
High copper alloy - contain bet^n 13 - 30% copper

② Based on the zinc content
zinc containing alloys - containing more than 0.01%
zinc free alloys - containing less than 0.01%

③ Based on the shape of alloy particle
lathe - cut alloy
spherical alloy
spheroidal alloy

④ Based on the number of alloyed metal
Binary alloy e.g - silver - tin
Ternary alloy e.g - silver - tin - copper
quaternary alloy e.g - silver - tin - copper - indium

(5) Based on the size of alloy powder particle

Microcut
Macrocut

Indications

1. As a permanent filling material for
   - class I and class II cavities
   - class V cavities where esthetics is not required
2. In combination with retentive pins to restore a crown
3. For making dies
4. In retrograde root canal filling
5. As a core material in abutment teeth.

Contraindications

1. amalgam should not be placed in a patient with impaired kidney function
2. Individual with allergic hypersensitivity to mercury or component of the alloy
3. New amalgam filling should not be placed in contact with non amalgam restoration like gold and metal devices such as orthodontic braces

(3) mercury toxicity

- toxic to living creatures
- should'nt sprayed or exposed in atmosphere
- hazards occur during trituration, condensation, finishing
- vapour can inhaled.

cumulative toxic effect

- i° risk from inhalation - pulmonary edema
  - chemical pneumatis
- By ingestion - local corrosive effects
  - nausea, vomiting, Renal damage

4. Sprue former

→ - A sprue former is made of wax, plastic or metal.
- The thickness is in proportion to the wax pattern
- A reservoir is attached to sprue of attache of the sprue to wax pattern is flared.
- The length of sprue is adjusted so that the wax pattern is approximately 1/4" from the other end of the ring

Functions of sprue former

1. To form a mount of wax pattern
2. to create a channel for the elimination of wax during burnout
3. forms a channel for entry of molten alloy during casting
4. provides a reservoir of molten metal which compensates for alloy shrinkage during solidification

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Page No. | Date: / /

5 Define impression classify impression materials.

Dental impression is negative record of the tissue of the mouth.

classification of impression materials.

1 According to the mode of setting and elasticity

mode the term thermoset, thermoplastic and rigid and elastic are used to describe materials.

mode of setting.	Rigid	elastic
set by chemical reaction irreversible or thermo set.	Impression plaster zinc oxide eugenol	Alginate hydrocolloid Nonaqueous elastomers
set by temperature change (reversible thermoplastic)	compound, waxes	Agar hydrocolloid

According to tissue displacement

① Mucostatic
② Mucocompressive

According to their use in dentistry

3 ① Impression materials used for complete denture prosthesis

② Impression material used for denticulous mouth.

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Department of _____

Name of Student :- Ishwari Kulkarni

Roll No. of Student :- | | | | 0 | 5 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : / /

Time :

Ishwari

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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1. classify cements used in dentistry, give composition types, advantages, disadvantages and uses of composite.

→ Dental cements are the materials of multiple uses including restoration, luting and therapeutic first dental cement is said to have been introduced in 1825 by Sorel

classification

① Iso standards covering cements.
① water-based cements - part 1: powder/liquid or base/activator
② water-based cements - part 2: light-activated cements.
③ Zinc oxide/eugenol and zinc oxide/non-eugenol cements.
④ polymer-based filling, restorative and luting materials.

② Iso classification.

water based cements : zinc phosphate, glass ionomer
oil based cements : zoe and non-eugenol cements.
Resin or polymer-based cements - Resin cements, compomer, etc.

③ According to setting Reaction

Acid-based reaction cements
Polymerizing cements
Dual cure cements
Tri cure cements.

④ classification of cements based on application

① Luting
② bases or lining
③ Restoration.

Composite Resin

→ composite is a system composed of mixture of two or more macromolecules which are essentially insoluble in each other and differ in form.

Uses

1. Restoration of anterior and posterior teeth
2. To veneer metal crowns and fixed partial dentures
3. To build-up cores
4. Bonding of orthodontic brackets, etched cast restorations, ceramic crown, posts, inlays onlays and laminates.
5. pit and fissure sealent
6. esthetic laminates
7. Repair of chipped porcelin restoration.

classification

I According to ISO

type 1 : polymer based materials suitable for restoration involving occlusal surfaces.
type 2 : All other polymer based materials and luting agent.

II Based on curing mechanism

class 1 - self-cured materials.
class 2 - Light cured materials.
class 3 - Dual cured materials.

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III Based on filler particle size

- Fine : particle size > 3 um
- Ultrafine : particle size < 3 um
- Microfine : Average particle size - 0.04 um
- Nanofine : 0.005 - 0.01 um

III Based on filler particle size

Macrofillers : 10 to 100 um
Midfillers : 1 to 10 um
Minifillers : 0.1 to 1 um
Microfillers : 0.01 to 0.1 um.

a. Homogeneous : contains only macrofillers
b. Heterogeneous : macrofillers combined with prepolymerized fillers.
   - splintered prepolymerized particles
   - spherical prepolymerized particles.
c. Agglomerated : Microfiller sintered to form large filler particles.

Nanofiller - 0.005 - 0.01 um
Hybrid

V Based on viscosity
conventional
Flowable
packable

VI Based on application and commercial availability

A Restorative composites : Direct intraoral restorations.

i Hybrid composites
Macrofilled hybrids
Midfilled Hybrids
Minifilled hybrids
Nanofilled hybrids.
ii) Macrofilled
iii) Nanofilled
iv) Flowable
v) Packable
vi) Core - build up composites
B. prosthodontic composites
C. provisional composites
D. Luting composites
E. Repair composites.

Composition

- Matrix : plastic resin that is continue and binds the filler particles
- Resin Matrix : Commonly used Bis-GMA or urethane dimethylacrylate
- Fillers : quartz, colloidal silica or heavy metal glasses. Fillers improve the physical properties of composite resin
- Coupling agent : organosilanes. Coupling agent bound the filler particle to the resin matrix.

Composite resin also contains

- Hydroquinone - Inhibitor
- UV absorbers : to improve color stability
- Opacifiers : Titanium dioxide and aluminum oxide
- Color pigments : To match the tooth - color.

Advantages

- composites are highly esthetic restorative materials
- working time is quite good due to maltiple curing system.
- placement of composites is very easy
- They are moderately strong and durable
- corrosion does not occur in composites.
- composites are easily repaired.

Disadvantages of composite Resin

- They have highly shrinkage
- composites are very technique sensitive
- composites stick to the instruments.
- They directly do not bond with tooth structure so require dentin bonding agent
- composites are non - condensable
- If restoration of composite is improperly done micro-leakage and recurrent caries may occur.
- composite resin have low wear resistance as compared to the metal restoration.

2 classify denture base material. write the composition and stages of polymerization of heat cure acrylic resin.

1. Denture Base materials

Metallic
e.g - Acrylic Resin
vinyl resin

Non-Metallic
Cobalt chromium
Gold alloys
stainless steel.

II Denture base materials.

temporary
e.g - self cure acrylics
shellac base plate
base plate wax.

permanent
e.g - Heat cure denture resin
Light cured resin
Pour type resin
Injection molded resin
Metallic bases.

III ISO classification.

Type 1 Heat-polymerizable polymers.
class 1 - powder and liquid
class 2 - Plastic cake

Type 2 Autopolymerizable polymers.
class 1 - powder and liquid
class 2. powder and liquid Pour-type resin.

Type - 3 Thermoplastic blank or powder
Type - 4 - light - activated materials
Type - 5 - microwave cured materials

Composition of Heat activated denture base acrylic resin

Powder

	Ingredient	Functions
①	poly (methyl methacrylate)	Major component
②	Ethyl or butyl methacrylate	Copolymers - improve
③	Benzoyl peroxide	Initiator
④	Compounds of mercuric sulfide cadmium sulfide, etc	Dyes
⑤	Zinc or titanium oxide	Opacifiers
⑤	Dibutyl phthalate	~~plas~~ plasticizers
⑦	Inorganic fillers like glass fibers, zirconium silicate, alumina, etc	Improve physical prop like stiffness
⑧	Dyed synthetic nylon or acrylic fibers.	stimulate small capillaries.

Liquid

Ingredient	Functions
Methyl methacrylate	plasticizes the polymer
Dibutyl phthalate	plasticizer
Glycol dimethacrylate	cross - linking agent
Hydroquinone	Inhibitor prevents premature polymerization

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Page No. | Date: / /

polymerization stages

physical stages.

stage I: wet sand stage
The polymer gradually settles into the monomer forming a fluid, incoherent mass

stage II: sticky stage.
The monomer attacks the polymer by penetrating into polymer. The mass is sticky and stringy when touched or pulled apart

stage III: Dough or gel stage
As the monomer diffuses into the polymer, it becomes smooth and dough like. It does not adhere to the walls of the jar.

stage IV: Rubbery stage
The monomer disappears by further penetration into the polymer and evaporation. The mass is rubberlike, non-plastic and cannot be moulded.

stage V: diff stage
The mass is totally unworkable and is discarded

9

Chemical stages of polymerization.

→ Four stages occurs.

① Induction

- Induction or initration period is the time during which the molecules of the initrator becomes energized or activated and starts to transfer the energy to the monomer.

- most denture resins are polymerized by this method. e.g- when raised they free radicles liberated by heating benzoyl peroxide will initiate the polymerization of methyl methacrylate monomer.

② propogation

- once the growth has started only 5000 to 8000 calories per mole are required the process continues rapidly and accompanied by evolution of heat.

③ Termination

- The chain reaction can be terminated either by directly coupling of two chain ends or by exchange of a hydrogen atom from one growing chain to another.

④ chain transfer.

- chain transfer termination can also result from chain transfer. Here the activated state is

transferred from an activated radicle to an inactive molecule and new nucleus of growth is created. An already terminated chain can be reactivated by chain transfer resulting in continued growth.

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Department of Endodontics and Prosthodontics.

Internal Assessment Examination- I / II / III

Roll No. 09

Question Booklet Version: A

Question Booklet Sr. No.

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination: Betterment Exam

Subject	Paper

Roll No. (In Words): zero nine

Question Booklet Version (In Words):

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature

Invigilator's Signature

Date : 18 / 10 / 20

	1	2	3	4	5	6	7	8	9	10
A	✗					✗				
B									✗	
C		✗			✗		✗	✗		✗
D	✗		✗	✗						

= 6

	11	12	13	14	15	16	17	18	19	20
A	✗		✗				✗			
B						✗			✗	
C										
D		✗		✗	✗			✗		✗

= 08

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

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D	D	D	D

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MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	14
Section - B	21 1/2
Section - C	21

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MIDSR

Department of _____

Name of Student :- Bhalerao Sushrut

Roll No. of Student :- | | | | 0 | 9 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 18 / 10 / 24

Time : 2 PM

21½ / 30

Sign. of Student

Sign. of Invigilator

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Page No. Date

LAQ.

1) Dental waxes

Dental waxes are classify.

1) on the basis of origin
— Natural wax.
1) Minral — Microcrystalline
ozokerite
ceresin

2) plant — auricury
Candilila
japan wax
coca butter

3) Animal - Spermaciti

4) Insect — Beewax.

(2) on the basis of Uses.

they are classified in

1) pattern wax

2) processing wax

3) Impression.

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Page No. | Date: / /

1) Pattern wax
   - Inlay wax → Type-I, Type-II
   - RPD wax
   - Base plate wax.
   - Casting wax

2) processing wax
   - Utility
   - Boxing
   - White
   - Shellac

3) Impression wax
   - corrective wax
   - Bite registration

Page No. Date:

Inlay wax

Ideal property

- It is oldest way used in dentistry.
- It use direct or indirect technique.

Ideal property :-

1) when soften wax should be uniform no graniness present in it.

2) It sho is not flake or tear during curving.

3) It is not chip or flake during Burnout.

4) It show homogenity property.

5) It is Uniform.

classification

Type I — Used intraorally

Type II — Used orally

Composition :-

	wt
Paraffin wax -	40-60 %
Cresin	10 %.
Gum damar	10 %.
Carnabua wax	25 %.
Candilila wax	
Synthetic wax	

Paraffin wax :- -

1) It is about 40-60%
2) It is used to establishes melting point.
3) diffrent wax are form due to diffrent melting point.

Cere sin :-

1) It is about 10%
2) It increases the C toughness.
3) It cause easy to carve.

Gum damar -

1) It is about 1 ~~25~~ %.
2) It increases the toughness of the wax.

Carnabua wax – I

1) It is about 95%.
2) It decreases flakes.

Candilila wax –

1) It Replaces carnabua way.

Synthetic wax – It Replace the candilika wa

Property

1) Flow :-

Flow is depend on temp and time.

at 45°C : Both class I & II flow about 70-90%.

at 37°C : class II flow not more than 1%.

at 90°C : class I flow not more than 1%.

2) Homogenity :-

On heating wax should be Uniform. or wax show the property of homogenity.

3) Contact angle

way have low contact angle.

4) Thermal conductivity :-

waxes have high thermal Conductivity.

Manipulation :-

Inlay wax are manipulate by two method.

1) direct method.
2) Indirect method.

1) Direct method :-

① - way is heated on flame and roll the wax.
② - Until it become plastic.

(3) In prepared cavity put the roll wax. with applying pressure through finger hold it. & set it.

(4) L.

' Indirect method.

(1) Dipping method —

— Replica of tooth dip into the hot wax liquid. & this known as the dipping method.

(2) Addition —

wax are added through the brush or spatula.

(5)

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Page No. | Date: / /

SAG

(1)

→ Sprue :-

It is channel created through which Investment material eneters into the wax pattern.

sprue is made up of plastic or metal.

1) Diameter—

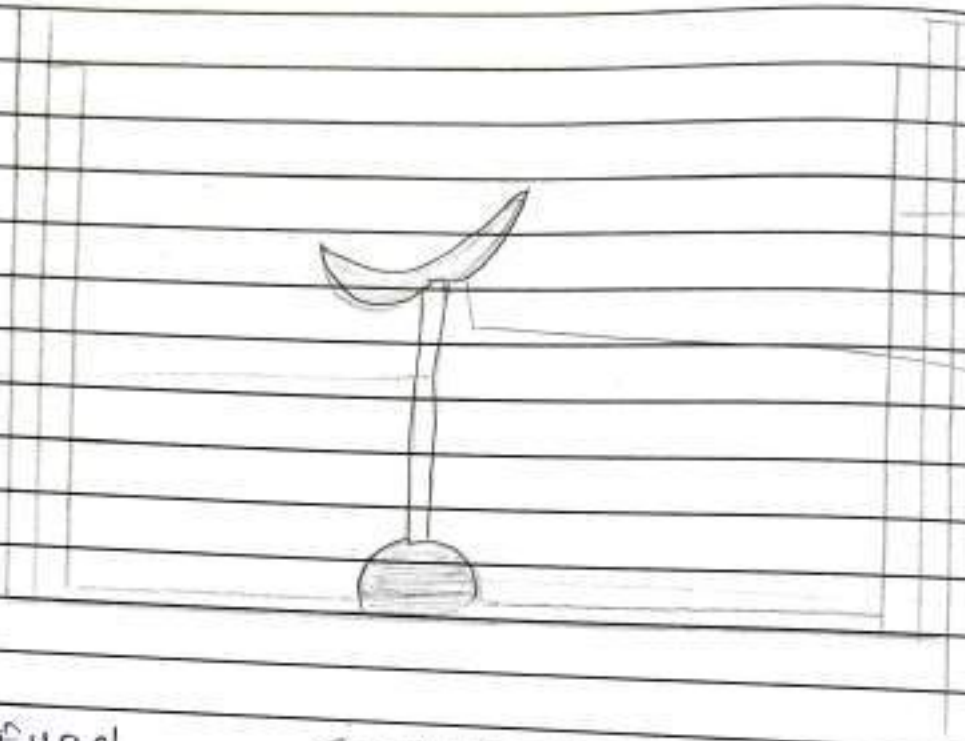
Diameter of the sprue should be same as that the thicknes of the wax pattern.

Diameter of wax pattern is about thickest portion of wax pattern.

2) Length —

Length of sprue former is 1/4 from the wax pattern.

3) Sprue former is made with thickest portion of wax pattern.



Fund Sprue Former

functions:-

1) It create channel through which wax is eliminate.

2) It creates channel through which wax pattern enters.

Q 10

(q)

→ Dental ceramics :-

Dental ceramic is combination of metal with non-metallic mostly the oxygen.

Classification →

1) on the basis of firing temperture.

1) High fusing = 1300°c & above
2) Medium fusing = 1100 & 1300°c
3) low fusing = 850 & 1100°c
4) Ultra low fusing = 850 & below.

2) Based on type.

feldspathic ceramic
Alumina ceramic
zerconia ceramic
Splenin reinforced ceramic.

3) Based on microstructure.

crystalline ceramic
Glass ceramic
crystallin containg Glass.

4) Based on formation.
- mechanical ceramic
- cementable ceramic
- ~~functo~~ mixture of above.

5) Acc. to function.

1) Core ceramic - Reinforced ceramic.

2) Veener ceramic.-

3) Opaq ceramic -

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Page No. | Date:

Q) →	Self cured	Heat cured.
1)	Heat is not nerecessary	Heat is necessary for curing.
2)	molecular weight of polymer is low	molecul weigt of the polymer is high
3)	monomer content in High	monomer content is low.
4)	porosity is greater	porosity is low.
5)	density is higher	density is lower
6)	Temprature is low	Temprecture is high.

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Page No. | Date: / /

c)

→ Calcination –

Heating of plaster to form

Heating of gypsum to form plaster is know as calcination.

1) Calcination is two types.
   1) Dry calcination
   2) wet calcination.

1) Dry calcination –
   Temprature of calcination is about 110°.
   through dry calcination dental plaster is form.

$$CaSO_4 \cdot \frac{1}{2} H_2O \xrightarrow[\text{dry calcn}]{110^\circ} CaSO_4 \cdot 2H_2O + \text{Heat}$$

Hemihydrate neat dihydrate is formed through dry calcination.

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2) wet calcination.

The wet calcination temp is 120 - 130°C

through this dental stone is formed

dihydrate heated at temp 120 - 130° & Hemihydrate formed under 121.6b pressure.

$$CaSO_4 \cdot \frac{1}{2}H_2O + H_2O \xrightarrow[\text{&pipres}]{120-130^\circ} CaSO_4 \cdot 2H_2O + \text{Heat.}$$

(3) Addd.

Addition silicon

This are used to replace condensation silicon.

Composn

1) Base. paste.
   1) polymiryl Hydrogen silance
   2) other Siloxane polyether
   3) Filled platinum H2 absorber
   4) Retarder
   5) Colouring agent.

2) Reactor paste.

   1) divinyl polymithy siloxane.
   2) other siloxane polyethere.

Advantage —

1) greater shelb life.
2) pleasent odour.
3) best dimension stability.
4) can be electroplated.

disadvantage :-

Compressive strength is low.

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Department of _____

Name of Student :- Bhalerao Sushrut

Roll No. of Student :- | | | | 0 | 9 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 18 / 10 / 24

Time : 2 PM

21/30

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet
2. Candidates should not draw additional margins as they are provided on each page.
3. Candidates should not write anything in the margin, except question number.
4. For each answer write the corresponding question number in the margin. Use the paper judiciously.
5. Do not waste the pages. Write on both sides of pages on the answer sheet. for short answer questions answers should be continued in sequence; do not leave blank spaces on the answer sheet.
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7. Candidates are forbidden a) To bring books, notes, mobile phones, electronic gadgets or scribbling papers into the examination hall. b) Speak or communicate in any manner to other candidates while the examination is in progress. c) Take with them any answer sheet (written or blank) while leaving the exam hall.
8. Candidate suspected to be guilty of any of the aforesaid acts will not be allowed for examination
9. Candidates should write exam in legible hand writing.
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12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

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Page No. | Date: / /

5)

→ GIC :-

GIC is tooth coloured restorative ~~CO~~ compo material.

Composn :-

GIC contain both liquid and powder.

Powder :-

	%	Glass
Silica	88	particle
Alumina	36	
Calcium Fluride	1-5	acts Flux
Sodium Floride	16	acts Flux
Alumium Cloride	3	acts Flux
Aluminium phosphate	9	

Silica – acts as glass particle.

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Page No. | Date: / /

Liquid

Polyacrylic acid – It increase reactivity

Tartaric acid – It decrease setting time.

Water. – It provides medium to th

Setting reaction :-

Setting reaction of GIC Involves.

1) Leaching :-
2) Ca crosslink
3) Alominium crosslink
4) Na, F ion
5) Silica gel sheath.

1) Leaching :-
when powder & liquid are mixied togethe. Na, F, Al ion are leached out from the mixture.

2) Ca crosslink –
Initial set occur when Ca ion cross links.

Aluminium cross link.

Aluminium ions cross links the poly acrylic acid.

Sodium & fluride ion -

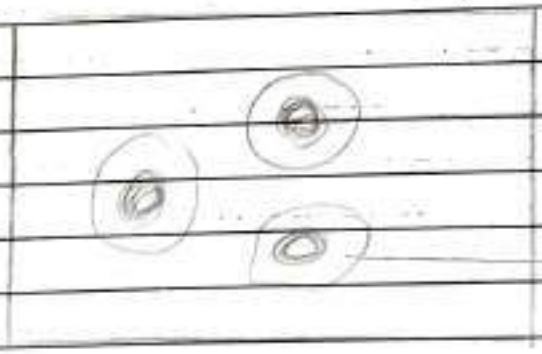
Sodium & F^- ion are not cross links.

Silica gel sheath -

Unreacted particle are coverd by silica gel.

This is known as silica gel sheath.

(5)



Set cement

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Page No. | Date: / /

1) Liner :

Liner are thin cementing component which are apply when dentine thickness is aquet.

Classifn

(1) Liner

i) Thin liner

- Solution liner
- Suspension liner

2) thick liner.

1) Liner apply when thickness of dentine is less or adquet.

2) It thin Film layer.

3) It provide thickness

(2) Varnish

It is made up of one or more resin which when apply to cavity wall are evoporate by leaving this layer.

1) Varnishes provide protection from the corrosion.

2) It provide protection from the bacteria.

Base :-

These are material which provide thermal insulation to pulp & protect to the pulp.

1) Classes

1) High strength Base.

1) GIC.
2) Zn poly. cement.

It is used in permenant Restoration.

9) low strength bases

- CaOH
- Used as temporary restoration.

thickness of Base is 0.5 mm

(3)

4) CaOH

CaOH is alkaline cement.

Applications:-

1) direct and indirect pulp capping.

2) Appixifaction of root in which root is incomplete.

3) low strength bases.

Composition :-

Catalyst.		
CaOH	- 50%.	principle ingredient
ZnO	- 10%.	
Zn streate	- 0.5	accelrator.
TiO2		Plastricisey
ethylene Tolune.		oily comp.

Base -

n- methyl trimethyl silicate.

CaSO4

Ti dioxide

Ca tungestent.

→ property

• FISE –

Setting rxn

CaOH + T-Methylene tsilicate →
Ca di silicate.

property

1) Tensile strength :-
Is 100 about 1mpa.

2) compressive strength →

3) modulus of elasticity =
0
modulus of elasticity is
about 0.37 mpa.

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Page No. | Date: / /

MTA :-

MTA is aggregate of the calcia, silica, and Alumina.

Composition :-

It contain dicalcium silicate, tricalcium silicate and dicalcium Aluminium.

Dicalcium silicate. → 7-32

Tricalcium silicate. → 45-75

Tri Aluminium silicate. → 8-3

Barium oxide — 20-25

caso4 dihydrate — 2-10

Apply

(3) ① vital pulp therapy

② Root canal filling.

③ sealer

2)

Acid etiching :-

Acid etiching is Technique to see the bonding strength between the resin & restoration.

mech. of action.

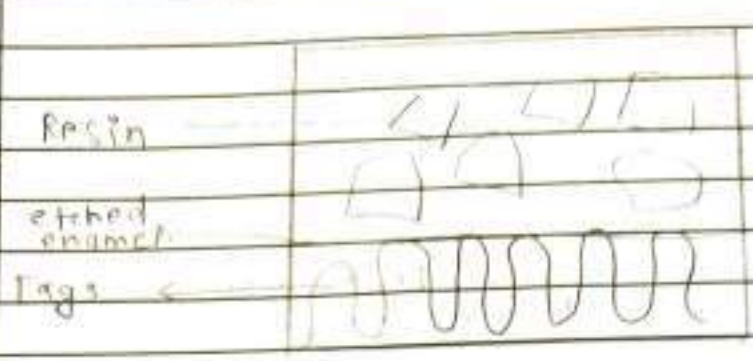
1) It discrete etiching by creates in dentinal tubules.

2) Etched enamel have high surface area.

3) Etched enamel have the high surface surface energy. which spread to the whole dentine and or enamel.

4) Tags are formed which penrates the resin.

5) Pentrate about 0.2mm 0.5mm.



acid etching.

Bonding agent →

- Bonding agent are enamel & dentine bonder.

- It contain conditioner, enamel, primer depending upon genrⁿ.

① 1st genration. - minral acid where used to etichted the enamel.

② second genration - develop adhesive agent composite resin.

③ 3rd genration → made serious attempt to legst with smear layer is form dentine is cut and bond.

④ 4thⁿ genrⁿ - total etched dentine is developed.

⑤ 5th genrⁿ - primer & adheser in one bottle.

⑥ 6th genrⁿ - seprate etched is not requre.

1) Composite

classificⁿ –

(1)

Type I :- polymer based Composite for restoration

Type II – other polymer based for luting.

(2) Based on curing mech.

1) ~~Type~~ I – Self cured.
2) Class II – Heat cured.
   Gr: I → Energy apply intraorally
   Gr. II → Energy apply extraorally

3) Dual cured

(3) Based on particle size :- (willsen)

Fine	particle size > 3
Ultrafine	particle size < 3
microfine	0.04 mm
nano	0.005 nm.

(4) Based on particle size.

macro filled	10 – 100 μm
midi filled	1 – 10 μm
mini filled	0.1 – 1 μm
micro filled	0.01 – 0.1 μm
Nano filled	0.005 nm
Hybrid	-

(5) Based on restorn function.

1) Prosthodontic Used.
2) Restorative —
   1) macrofill
      microfill
      midifill
      nanofill
      Hybrid
      flowable
3) provisional used.
3) orthodontic used.

(6) Based on visrosity.

flowable
packable
conventional.

Compsⁿ :-

matrix — Bis GMA

Binder -

Fillers — Silica, Alumina.

Advantage

1) Composite is tooth colour structure.

2) Highly esthetic

3) Easy to manipulate.

4) less equipment are required.

5) It released Fluride which prevent from secondry caries.

~~Disadvantage~~ :-

6) Used as Veeners.

7) For crown Formⁿ

8) durability

disadvantage

1) It is abrase by the tooth brush.

2) It protect during manipulation. It contaminate.

3) It have low Tensile strength.

4) Require more time.

Uses

1) It is used in full crown prepn

2) Used where esthetic is more important.

3) Laminating crown.

4) veeners.

5)

(3)	High copper alloy	low cu alloy
	High cupper alloy contain 13-30 % of Cu	low cu alloy contain 6 % of cupper.
	High cupper alloy is classified into two types. 1) Admixed. 2) Single composh.	low cu alloy is not.
	In High cu alloy η compound in formed.	In low cu η compound in not formed.
	Nowday high cu alloy is widely used.	It used not more till days.
(2)	In High cupper alloy Y_2 is replaced by η in setting rxn.	In low cu alloy Y_2 is not replaced.

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Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
7 5		

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination
Betterment Exam.

Subject	Paper

Roll No. (In Words)
75
Question Booklet Version (In Words)

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Candidate's Signature

Invigilator's Signature

Date 18 /10 / 2024.

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A ☒	A ☒
B	B	B	B
C	C	C ☒	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

	1	2	3	4	5	6	7	8	9	10
A	X	X		X				X		X
B					X	X			X	
C							X			
D			X							

	11	12	13	14	15	16	17	18	19	20
A	X						X	X		
B					X					
C			X			X			X	
D		X		X						X

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	11
Section - B	18
Section - C	18

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Page No. | Date: / /

SAQ.

a.

principles of optimal sprue former.

There are 5 main factors of the spoure former.

1) spoue length
2) sprue diameter
3) spoue position
4) spoue direction
5) spoue attachment.

- A spoue former is a wax metal tube like struture attached to the wax pattern of the fabrication of the denture base to facilitate the elimination during the burnout & filling of molten metal after the investment of the dental stone or dental plaster is done
- The sprue former is used in the case of burnout or elemination of the metal.

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Page No. | Date: / /

optimal sprue design

Sprue diameter →

The diameter should be same as the thickest portion of the tooth

For premolar → 2 mm
For molar → 2.5 mm.

Sprue position →

sprue should be attached to where the thickest part of tooth is present.

- As it prevents the back pressure porosity. It is a type of External porosity

Sprue direction

- It should be attached to 45° angle to rapid relese of the molten metal present in the sprue

Sprue attachment - sprue is attached to reservior of the molten metal to reduce the porosities in it.

Sprue length - The length of the sprue former should be $\frac{1}{4}^{th}$ of casting ring.

diagram

3

b.

Self cure	Heat cure
- Do not require heat for curing	- Requires Heat for curing.
- Porosites are more	- Porosities are less.
- Surface roughness is present	- Surface roughness is absent
- Dimensionally unstable	- Dimensionally stable.
- Residual monomer content is higher	- Residual monomer content is lower.
- warpage is seen after the polymerisation	- warpage is not seen after polymerisation.
- It is weak	- better Strength the self cure

(3)

c.

Calcination -

The process of grinding of the calcium sulphate ($CaSO_4$) and heating it on higher temperature forming the crystallisation and water is termed as calcination.

$$CaSO_4 \cdot 2H_2O \longrightarrow CaSO_4 \cdot \frac{1}{2} H_2O \xrightarrow{\Delta} CaSO_4$$

There are two types of calcination

1) Dry calcination

2) wet calcination

1) Dry calcination

- The Gypsum ($CaSO_4$) is heated at 110°C to 130°C.

$$CaSO_4 + 2H_2O \xrightarrow{110^\circ C \text{ to } 130^\circ C} CaSO_4 + \frac{1}{2} H_2O$$

(Hemihydrate)

- The dry calcination is used to make the Die stone.

2) Wet calcination -

The Dental plaster is formed from the wet calcination process

2 1/2

D.

Define -

Ceramics are compounds of one or more metal with a non metal component usually oxygen. They are hard, brittle, rigid good conductors of the thermal and electricity.

- Ceramics are best in duplication of ~~poop~~ teeth they are white opaque translucent.

Classification of ceramics.

1) According to firing temparature

High fusing (Above 1300°C)
Medium fusing (1101°C to 1300°C
Low fusing (850°C to 1100)
Ultra low fusing (Less than 850°C).

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2) According to commecial.

1) Feldspathic ceramics
2) Lithia disilyate ceramics
3) Alumina reinforced glass ceramic
4) zirconia reinforced glass ceramic
5) Lithia disiyate ceramics.
6) Alumina

3) According to method of fabrication.

1) Castable ceramics
2) Machinable ceramics.
3) Slip casting ceramics.

4) According to microstruture.

- Glass ceramic

3 1/2

Q1. LAQ.

Classification of dental waxes.
According to use

1) pattern wax

- Base plate wax
- FDD wax

2) processing wax

- Boxing wax
- Beading wax
- Sticky wax.

3) Impression wax

- Bite registration
- correcting wax.

II) According to source

1) Mineral

- Paraffine wax
- Ozokerine wax

2) plate wax

- Japan wax

3) Animal wax

4) Insect wax

- Bee wax

⊙ Composition of Inlay wax.

- paraffin wax (15%
- cerrsin
- Gum.

⊙ properties

-It should

1) Flow- It should have a good flow
2) Expansion- Normal expansion
Hygroscopic expansion
3) Thermal expansion

⊙ Manupilation

1) Direct method
2) Indirect method.

⊙ Direct -

The wax is manupilated directly into the patients mouth

⊙ Indirect -

The wax is manupilated outside the oral cavity.

1) Casting.
2) Indirect veener or cap preparation.

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Department of Conservative Dentistry.

Name of Student :- Parhan Main

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 18 / 10 / 24

Time : 2pm

18/30

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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Page No. | Date: / /

SAQ.

1.

1. Liners.

- A liquid solvent containg mainly calcium hydroxide & volatile solvent

- It is applied on the cavity via brush

- It protects the exposed dentine from physical chemical and pathological stresses.

e.g. Calcium Hydroxide

2. Varnish -

- Varnish is a material that is applied as a thin film on the wall of tooth structure/ prepared tooth.
- Varnish when applied leaves a film after evapourating out.

- e.g. - Copal varnish

Bases -

- Base is applied to block the irritants and thermal heat to preventing its passing into the pulp chamber.
- The maximum thickness of base should not be more than 0.5 mm
- There are High strength bases as well as low strength bases.
- High strength bases include cements like zinc phosphate/ oxyphosphate of zinc polycarboxylate
- Low strength bases include cements like Calcium hydroxide
- Zinc phosphate or zinc polycarboxylate may be used as a base in case of permenant restorations such as amalgum restoration to block the irritant as well as mercury to enter pulp.
- Calcium hydroxide is used for pulp capping.

e.g. zinc phosphate

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2.

Acid etching.-

- It is a technique used to bond resin to enamal
- Acid etching is also used in case to bond with dentine
- The bonding agents are nowadys used with acid etching For proper bonding of resin

Acid Etchers -

- 37% of phosphoric acid
- 10% of maleic acid.

Mode of action on enamal.-

- In case of Enamal the Acid etching technique Cause

Mode of action on Dentine.

- It Causes porosites in the denti and Cause the dentine to adhere

* procedure.

- The tooth is first cleaned and polished.
- Then after the drying of the tooth. after 15-20 sec.
- 37% of phosphoric acid is used on the surface of tooth.
- 10% of maleic acid can also be used
- The tooth is surface is dried for upto 10-15 sec after the application
- then the resin is applied by the syringed form.
- The bonding agents are also used in such case of when applying the Acid Ething teching.
- because of the use of the Acid etching it is to be noted as the bonding with the enamel and dentine is also inoresed.
- And the acid etching is used with the bonding agents of the Enamal and dentine respectively

(2 1/2)

3.

High Copper alloy	Low Copper alloy.
- High Copper alloy contain 13% to 30% of copper in it	- Low Copper alloy contain less than $\leq$ 13% of copper.
- High copper alloys have γ_1 & γ_2 phase present	- They lack the α phase.
- So the strength is better than low Copper alloy.	- They have less strength.
- Delayed expansion is less	- Delayed expansion is more
- High wear	- Low wear
- High tarnish	- Low tarnish

1/2

4.

Calcium hydroxide

- It is a dental cement used as a base
- It is a low strength base so it is used in case of pulp capping.
- The calcium hydroxide is used for base also (0.5 mm) thickness.

Available as.

- Accelator & base paste.

composition -

Accelator -	Base. -
1) Calcium sulphate	1) I-methy trimethy ethelamine
2) Titanium oxide	2) Titanium oxide
	3) Calcium Sulphate

Reaction -

The Calcium sulphate added in the 1-methy thi-methy ethalmine

uses -

- It is used as pulp capping
- It is also used in the base consistancy.
- The Calcium hydroxide is also used in luting of orthodontic bands.

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Page No. | Date: / /

5.

GIC.

- It is a tooth coloured restorative material.
- It is high in case of flouride releasing.
- It bonds ionically to the tooth struture

Composition.

Powder.	liquid.
1) Potassium flouride	1) polyacrylic acid with copolymer of maleic & itonic acid derevaties
2) Sodium flouride	
3) Calcium flouride	
4) Aluminium phosphate	
5) Alumina	2) Tartiric acid
6) silica.	
	3) Water

Setting reaction.

1) Leaching. -

The ions of Ca, Na, F, and others leach into the aqous medium

2) Cross linking.

- The sodium ions in the soln cross links with ithe polymesied chain as well Calcium ions also cross links

3) The ions that do not form cross linking gets attached to the Hydrogen atom

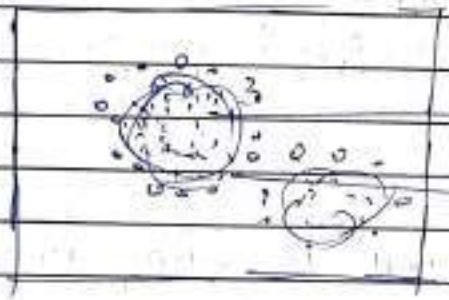
4) The Silica gel sheath gets formed after the powder attacked by the liquid of Polyacrylic acid.

5) Mattrix gets formed the unreacted ions gets surrounded to the Silio the formed matrix

c) Hydration -

Water at first acts as a medium for the reaction after the completion of reaction it Hydrates the matrix.

Silica gel sheath formation.



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Page No. | Date: / /

1. LAQ.

Cement - It is a material that can attach two surfaces by its strength

Classification of cement

High strength cements	Low strength cements
1) zinc phosphate	1) Calcium Hydroxide
2) zinc polycarboxylate	

There are various types of dental cement in dentistry

1) zinc phosphate/ oxyphasfe
2) zinc polycarboxylate
3) Calcium Hydroxide

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Ideal properties of cement. -

- The cement should be strong enough to hold the two surfaces attached to it.
- It should have Good thermal resistance.
- The cement should be able to ~~should the~~ hold the restorant.
- It should be non toxic, non irritant to the oral tissues and teeth.
- The odour and ~~the~~ taste should be good.

Uses. -

- Dental cements are used as high strength bases (zinc phosphate, zinc polycarboxylate.
- It may be used as luting during luting of orthodontic bands and brackets. (they should be in luting consistancy).

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Define -

Composite is combination of or more macromolecule with a non metallic element forms the composite resins.

Classification.

I) Based on curing mechanism

I) Heat cure
II) Light cure
III) Chemically cured.

II) Based of filler particle size.

I) Fine
II) Ultrafine
III) Nanofine
IV) Hybrid.

Modern,

I) Macrofiller.
II) Midfiller — Homogenous / Heterogenous
III) Nanofiller
IV) Hybrid.

III) According to viscosity.

Advantages -
- Comfortable to the patient.
- It is Economical.
- tooth coloured restoration so can be used in anterior as well as posterior teeth restoration
- Easy to manupilate
- Hydrophobic (no saliva interference)

Disadvantages -
- It is highly technique sensitive.
- More equipments needed.
- If placed wrongly 2° caries can be formed

Uses of composite.

- used to laminate veeners
- used to restoration of the cavity.
- cementation of the orthodontic bands band brackets.
- Inlay and onlays.

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Department of Endodontics and Prosthodontics.

Internal Assessment Examination- I / II / III

Roll No. 36

Question Booklet Version: A

Question Booklet Sr. No.

Answer Sheet No.

(write this no. on your question booklet)

Name of Examination

Prelim Betterment Exam.

Subject	Paper
Pedo - Perio.	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature

Invigilator's Signature

Date 18 / 10 / 2024.

	1	2	3	4	5	6	7	8	9	10
A	X			X	X	X				
B									X	
C							X	X		X
D		X	X							

= 09.

	11	12	13	14	15	16	17	18	19	20
A	X									
B										
C			X						X	
D		X		X	X	X		X		X

= 09

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	18
Section - B	25½
Section - C	27.

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(DENTAL COLLEGE), LATUR

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Department of Prosthodontics

Name of Student :- Gundewad Kshitija .

Roll No. of Student :- | | | | 3 | 6 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 18 / 10 / 24.

Time : 2pm

25½/30

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet
2. Candidates should not draw additional margins as they are provided on each page.
3. Candidates should not write anything in the margin, except question number.
4. For each answer write the corresponding question number in the margin. Use the paper judiciously.
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8. Candidate suspected to be guilty of any of the aforesaid acts will not be allowed for examination
9. Candidates should write exam in legible hand writing.
10. If candidates want anything they should approach the supervisor without disturbing other candidates. However, they should not leave their seat on any account.
11. If candidates disobeys any instruction issued by the examiner/ supervisor or who is guilty or rude or disobedient is liable for disciplinary action to be taken against him/ her by the Principal.
12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

LAQ

Q1.]

Dental waxes

- Pattern waxes
  - Casting wax
    - Inlay wax
    - RPD wax
    - Milling wax
  - Base plate wax
    - Type I
    - Type II
- Processing waxes
  - Boring wax
  - Shellac wax
  - Utility wax
  - Carding wax
  - Sticky wax
- Impression waxes
  - Bite registration
  - Impression

- On the basis of origin:
i) Mineral
ii) Animal
iii) Insects
iv) Plants

- Ideal requirement of Inlay wax:
- It should be non-irritant, non-toxic.
- It should not deform and should have high dimensional stability.
- Should not contract or expand unnecessarily.
- Should record the details accurately.
- It should not break while carving
- It should have a smooth surface
- It should not be bulky or hard.

- Composition of inlay wax:

Components	Abundance
Paraffin wax	40-60 %
Carnauba wax	25 %
Ceresin	10 %
Candelilla wax	Traces
Synthetic wax	Traces
Gum damar	1 %

- Paraffin wax is the major component of inlay waxes. They provide high melting point. They cause surface roughness.
- Gum damar is used to smoothen the surface of inlay waxes.
- Carnauba wax is used to replace paraffin wax as they show similar properties.
- Synthetic wax provides high melting point.

- Properties of inlay wax:

1) Flow:

Type I → Soft
- This has more flow.
- At 30°C it flows min. 1%
- At 37°C it flows upto 50%
- At 45°C it flows 70-90%

Type II → Hard
- This flows comparitively less.
- flow at 30°C should be 1% max
- At 37°C it flows upto 20%
- At & 45°C it flows 70-90%.

ii) Wax distortion:
- Waxes inherantly have a tendancy to undergo contraction after cooling.
- This can be countered by choosing appropriate investment material during investing.

iii) Thermal properties:
- Waxes have comparitively high coefficient of thermal expansion
- Inlay waxes have the highest coefficient of thermal expansion when compared to all other materials.

• Manipulation:
- Direct technique:
The stick of inlay wax is rotated over a flame rapidly to soften it (not melting). Then it is placed onto the preparation with fingers and pressure is applied until it's fully set. For Type II inlay wax (oral use).

- Indirect technique:
The wax is melted and placed in tooth preparation outside mouth.
Type I inlay wax is used (Laboratory or extraoral use)

SAQs

9a) Principles of Sprue design.

- Sprue is a channel for the wax during burnout or for the molten alloy during the casting procedure.
- It is made up of resin, wax, metal etc.

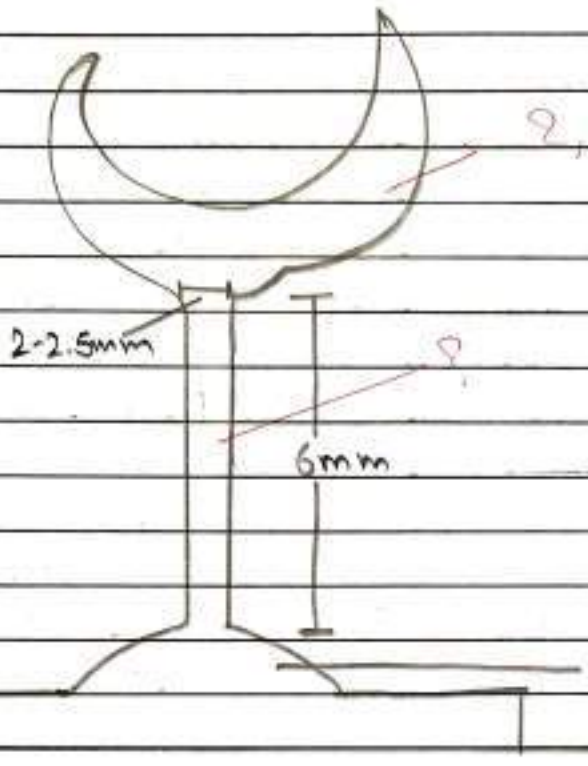
- Principles:

i) Thickness:
It should be 2.5 mm for molars
It should be 2 mm for premolars.

ii) Length:
It should be 1/4" or 6mm from the crucible former

iii) Attachment:
It should be attached to the thickest part of the wax pattern.

iv) Position:
It should be placed at an angle of 45° to the wax pattern as 90° angle can result in porosities due to molten alloy.



- Sprue former

Qb-]

Self cure	Heat cure
i) Compressive strength is less	i) Compressive strength is comparatively more.
ii) Polymerization occurs with heat at room temperature	ii) Polymerization occurs by heating at about 60°C
iii) Warpage is more	iii) Warpage is less
iv) Low molecular weight	iv) High molecular weight
v) Less colour stability	v) More colour stability
vi) Chances of porosity are more	vi) Chances of porosity are less.
vii) Less stable	vii) More stable
viii) Polymerization shrinkage is more	viii) Polymerization shrinkage is less.
ix) Poor strength	x) Better strength.

xi) Bench curing is done at room temperature.	xi) Heated upto 75°C for 8 hours and then it is boiled for 1 hour.
xii)	

Q6)

- Calcination is the formation of plaster by heating the gypsum.
- It is of two types:

i) Dry calcination :- Heating in the absence of oxygen.
- A kettle or kiln is used.
- β-hemihydrate is produced by this type of calcination.

ii) Wet calcination :- Heating in the presence of oxygen.
- α-hemihydrate is produced by this type of calcination.

$$CaSO_4 \cdot 2H_2O \xrightarrow{110-120^\circ C} CaSO_4 \cdot \frac{1}{2}H_2O + \frac{3}{2}H_2O$$

Gypsum → Plaster

- When gypsum (Calcium sulphate dihydrate) is heated at 110-120°C it forms plaster (Calcium Sulphate hemihydrate).
- On further heating, it loses the remaining water and forms Calcium sulfate

$$2CaSO_4 \cdot \frac{1}{2}H_2O \xrightarrow[130^\circ C]{\Delta} 2CaSO_4 + H_2O$$

- When heated in presence of oxygen, the formed plaster is α-hemihydrate (Dental stone)

- When heated in absence of oxygen, the plaster that will be formed is β-hemihydrate (Dental plaster).

- Further, the plaster is heated and then immediately cooled which produces cracks in it. This process is called as fritting
- Then the plaster is grinded into small particles for use in dentistry and many other fields.

3½

Qd-]

- Ceramic is a substance composed of glass-like particles which is used to prepare crowns, veneers etc.
- It gets it's name from a ~~word~~ Greek word keramikos.
- Ceramic is in use since last 2600 years.
- It is a tooth coloured substance.

• Classification:

i) On the basis of firing temperature:

High fusing → More than 1300°C
Medium fusing → 1101°C to 1300°C
Low fusing → 850°C to 1100°C
Ultra low fusing → less than 850°C

ii) According to types:
Feldspathic porcelain
Leucite based
Lithium disilicate based
Spinel reinforced.
Zirconia reinforced

iii) According to method of fabrications:
Slip-casting
Pressable
Condensable
Castable
Machineable.

Qe-)

- Composition of addition silicone

- Base

Poly (methyl hydration siloxane)
Fillers
Other prepolymers
Palladium Salts
Colouring agents

- Reactor
Divinyl Siloxane
Fillers
other prepolymers
Platinum salts.

- **Advantages of addition silicone:**

i) It records adequate surface details.
ii) It is wear resistant.
iii) It doesnot react with oral fluids.
iv) It is dimensionally stable.
v) It is flexible
vi) It is cheap.
vii) It is easy to manipulate.

- **Disadvantages of addition silicone:**

i) It is technique sensitive.
ii) Requires special tray.
iii) It has low coefficient of thermal expansion.
iv) Might get fractured due to less strength.

4

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

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Page No. | Date: / /

Q1] LAQ.

- Dental cements are classified as:

Cements	Years	Developed by.
Zinc phosphate	1879	Otto Hoffman
Glass ionomer c	1972	Kent & Wilson
Zinc polycarboxylate	1960s	Smith
Silicates	1878	

- Ideal properties of dental cements:
  - They should be non-irritant to the pulp or oral tissues.
  - They should be easy to manipulate
  - They should be stable in oral environment
  - Should not undergo dimensional changes in the mouth
  - Should resist mechanical stresses like masticatory forces.
  - Should provide thermal insulation.
  - Should be radioopaque for diagnostic purposes.

- Dental cements can also be classified as:
  1) Water-based eg. Zinc phosphate, Zinc polycarboxylate cement
  2) Resin-based eg. Composite resin, Zinc oxide eugenol cement

- **Composite resin:**
These are the substances formed from two macromolecules one organic (Resin) & other inorganic (filler) which has superior properties when compared with individual component.

- **Classification:**

1) Acc. to Phillips':

i) Megafillers → More than 100 µm
ii) Macrofillers → 10 – 100 µm
iii) Minifillers → 0.1 – 10 µm
iv) Microfillers → 0.01 – 0.1 µm
v) Nanofillers → 0.005 – 0.01 µm

2) Acc. to filler particle size:
i) Traditional → 8 – 12 µm
ii) Small fillers → 1 – 6 µm
iii) Hybrid → 0.01 – 10 µm
iv) Nanofillers → 0.01 – 0.1 µm

3) Acc. to consistency or viscosity:
i) Conventional
ii) Packable
iii) Flowable

- Uses of composite resins:

i) In order to restore anterior and posterior teeth.
ii) For Veneering metal crowns.
iii) Can be used for luting of orthodontic bands
iv) As pit and fissure sealant.
v) As root canal filling material.

- Advantages of composite resins:

i) It is a tooth coloured restoration which restores the aesthetics.
ii) It can be repaired easily.
iii) Has adequate compressive strength when compared with conventional restorative cements.
iv) It doesn't react with oral fluids.
v) Various shades of tooth colours are present.

- Disadvantages of composite resins:

i) Polymerization shrinkage occurs.
ii) Could be irritating to pulp.
iii) Restoration may get stained over time
iv) It is very technique sensitive
v) Isolation from oral fluids is must otherwise it may get contaminated due to saliva

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Page No. | Date: / /

SAQ

Q1.]

- ~~Varnishes~~:

• Varnish:

- It is resin or mixture of resins with combination with organic solvents like alcohol, ether, acetone etc.
- Varnish is applied in thin layers. Solvents get evaporated and a thin layer of resin is left behind which acts as a barrier for the irritants.
- They serve as a barrier for the irritants that may travel from the overlying base or restoration into the dentinal tubules.
- This can also provide temporary thermal insulation.
- Also provides temporary galvanic insulation.
- It's thickness is 0.01 um.
- Composed of copal resin & acetone/ether/alcohol.

• Liners:

- These are colloidal solutions of the calcium hydroxide cement which act ~~here~~ in a similar way to varnish.
- They leave a thin film ~~behind~~ behind which serves as a barrier for the irritants.
- These are of two types:
  - i) Thin liners → 0.01–1 um
  - ii) Thick liners → 1–2 um
- Eg. Colloidal solution of ~~Ca(OH)~~ calcium hydroxide
  Zinc oxide eugenol
  Type III GIC

Bases:

- Bases are the dental cements which are placed below any restoration in order to spare the underlying tooth structure from mechanical or chemical or electrical stresses.
- These are of two types:

i) High strength bases:
In order to provide strength. They spare the tooth structure from the high masticatory processes.
eg. Zinc phosphate cement, Zinc oxide eugenol cement, Zinc polycarboxylate cement.

ii) Low strength bases:
- Used for pulp capping and healing of the injured pulp.
- They have lesser strength
eg. Calcium hydroxide cement.

Q2] Acid etching

- It is a technique in which tooth surface is etched with the help of an acid in order to create microporosities for the better bonding of resin to the tooth structure.
- 37% phosphoric acid is the most widely used acid etchant. Maleic acid is also used.

- In case of enamel:

i) 37% phosphoric acid is applied for 15-30 seconds (Previously for 60 seconds)
ii) Then it is washed with water for 20-30 seconds.
iii) The hydroxyapatite crystal get dissolved and microporosities are generated on the surface of cut enamel. Enamel is predominantly inorganic

- In case of dentin:

i) Previously it was considered that etching of dentin can harm the pulp.
ii) Thus to counter this problem, primer was used. Primer is a combination of resin Matrix with alcohol as solvent, and dental adhesive.
iii) Primer is also called as water chaser, because it removes the water from the dentinal tubules making it easier for the resin to penetrate. (Dry etching)
iv) Dentin is predominantly organic thus collagen mesh network is present.

- Bonding agents are the substances used for binding the resin matrix to the tooth structure.
There are several generations of tooth bonding agents like:

i) 1st generation:
- Developed in ~~early~~ 1950-1970
- ~~Used for~~ enamel etching was done.

ii) 2nd generation:
- 1970s
- Enamel etching with 37% H_3PO_4

iii) 3rd generation:
- 1980s
- Enamel etching with 37% H_3PO_4
- Conditioning of dentin with 10% citric acid, EDTA

iv) 4th generation:
- ~~Early~~ 1990s
- Enamel etching with 37% H_3PO_4
- Dentinal etching with 37% H_3PO_4

3/7

v) 5th generation
- ~~Early~~ Mid 1990s
- Enamel etching with 37% H_3PO_4
- Dentinal etching with 37% H_3PO_4

vi) 6th generation:
- Late 1990s.
- No etching.
- Two different tubes were used which contained

binding agents.

vii) 7th generation:

- Early 200s.
- No etching.
- Binders, primers and ~~others~~ etchants are available in a singe composition.

Q3]

High copper alloy	Low copper alloy
i) Content of copper in alloy is 13-30 %.	i) Content of copper in alloy is less than 6%
ii) These are further divided into spherical alloys, Lathe-cut alloys and unicompositional alloys.	ii) No such types.
iii) This improves the compressive strength of the set amalgam.	iii) Compressive strength of set amalgam is comparatively low.
iv) Provides more wear resistance	iv) Provides less wear resistance.
v) Sn_2Hg (most unstable phase) is NOt formed during setting reaction	v) Sn_2Hg is formed during setting reaction.
vi) Content of other metal is less eg. Zn, Sn, Ag etc.	vi) Content of other metals is more
vii) More resistant to corrosion	vii) Less resistant to corrosion

3½

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Page No. | Date: / /

94]

Calcium hydroxide:

- Composition:

Base paste	Reactor paste
- I-methyl ~~tri~~ethylene disalicylate	- Calcium hydroxide
- Calcium sulfate	- Zinc oxide
- Coloring agent	- Zinc stearate
	- Retarder.

- Uses:

i) For vital pulp capping.
ii) As low strength bases
iii) For the apexification of the permanent teeth which lack complete roots.

- Advantages:

- Non-irritant to the pulp.
- Help in the healing of pulp.
- Spares from secondary caries.

- Disadvantages:

- Very low strength → Compressive → 10-27 MPa
  Tensile → 1 MP
  Elastic modulus → 0.73 GPa

- Mineral trioxide Aggregate:

- Uses: - As sealant and obturating material
  - Can be used as root canal filling

MIDSR

Page No. | Date: / /

Mineral trioxide Aggregate (MTA)

- **Composition:**

- Powder:

Substance	Abundance
Tricalcium silicate	45-75 %
Tricalcium aluminate	0-13 %
Dicalcium silicate	15-20 %
Bismuth oxide	20-25 %
Sodium phosphate (retarder)	1-2 %
Wax (hard)	0.5-1 %
coloring agent (Gray)	0-18 %

- Liquid:

This is composed of viscous aqueous solution of polymer which improves the workability.

eg. CPM sealer
Fillapex

Q5] • Composition of GIC

- Powder

Substance	Abundance
Silica	41.9 %
Alumina	26.8 %
Aluminium fluoride	2.1 %
Calcium fluoride	15.7 %
Sodium fluoride	7.1 %
Aluminium phosphate	4.5 %

- Liquid component:
  - Tartaric acid
  - Polyacrylic acid or copolymer of unsaturated acids like Maleic acid, tricarballylic acid etc.
  - Water.

- Setting reaction:

i) Leaching of ions:
When acid attacks the powder, ions leach out from the surface of powder into the aqueous medium. Ions → Na^+, Al^{3+}, Ca^{2+} & F^-

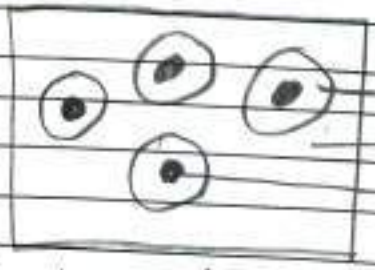
ii) Calcium cross-linking:
Calcium cross links with polyacrylic acid and forms a solid mass.

iii) Aluminium cross-links:
Aluminium cross-links with the polyacrylic acid chain and increases the strength.

iv) Sodium & fluoride ions:
Sodium ions combine with acid chain and remaining combine with fluoride ions forming NaF.

v) Hydration:
Water as dispersing medium increases the strength by hydration.

vi) Gelation:
Unreacted glass particle forms core which is surrounded by the ions (gel) in the matrix.



-Structure of set GIC

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

MIDSR

Betterment

Department of Periodontics.

Prelims. Internal Assessment Examination- I / II / III Winter 2021.

Roll No.	Question Booklet Version	Question Booklet Sr. No.
0	A 0	0
1	B 1	1
2	M 2	2
3	P 3	3
4	R 4	4
5	S 5	5
6	V 6	6
7	W 7	7
8	8	8
9	9	9

Answer Sheet No.
(write this no. on your question booklet)
Name of Examination

Subject	Paper
periodontics	

Roll No. (In Words)

one

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature

Invigilator's Signature

Date : 26 / 10 / 2021.

	1	2	3	4	5	6	7	8	9	10
A	X	·				X		·		·
B										X
C		X	X							
D	·			X	X		X	X	X	

	11	12	13	14	15	16	17	18	19	20
A	X					X				
B			X				X	X		X
C				X	·				X	
D		X			X					

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space In Question Booklet Provided

	Name of Exercise	Marks Obtained
	Section - A	11/20
	Section - B	16
	Section - C	19/30

11

20

MARKED

SECURED

37/80 good

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

MIDSR

Betterment Pre Final

Department of Periodontics. Winter 2021.

Internal Assessment Examination- I / II / III

Roll No.

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Question Booklet Version

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S	☐	5	☐	☐	☐
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W	☐	7	☐	☐	☐
	☐	8	☐	☐	☐
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Question Booklet Sr. No.

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periodontics	

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D	·	☐	✓	☒	☒	✓	☒	☒	✓	✓

	11	12	13	14	15	16	17	18	19	20
A	☒	☐	☐	☐	☐	☒	☐	☐	☐	☐
B	☐	☐	☒	☐	☐	☐	☒	☒	☐	☒
C	☐	☐	☐	☒	·	☐	☐	☐	☒	☐
D	✓	☒	✓	✓	☒	✓	☒	☒	☒	✓

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B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

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11
20

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SECURED

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37/80 good

MAEER Pune's

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MIDSR

Department of Periodontics.

Name of Student :- Chetna Agrawal

Roll No. of Student :- | | | | | 0 | 1 |

Name of the Examination :- **Internal Assessment Examination**

Betterment Winter 2023.

SECTION - C

Date : 21/10/2023

Time :

Chetna

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Sign. of Invigilator

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(10) Smoking & periodontium. (6) Classify Intrabony defects & discuss in detail

(3) Define flap. Classify incisions used in

(9) Non specific plaque hypothesis.

(1) CNAP (2) Local drug delivery

(8) Causes of pathological tooth migration.

(5) Steps in osseous resective surgery

(4) Chlorhexidine in detail

(7) Methods of CaCF collection

LAQ :

(1) ANUG in detail. Write about clinical f etiopathogenesis & treatment

(2) Define regeneration, repair, reattach & new attachment. Classify furcat involvement & treatment plan for furcation involvement

LAQ.

(1)

Ans:

ANUG -

Acute necrotizing ulcerative gingiv

Clinical features -

(1) most commonly seen in males.

(2) patient complains of metallic taste.

(3) fetid odour is present.

(4) Ulcers are present on the gingiva.

(5) Crater like ulcers are present in the mouth.

IDSR

Page No. | Date: / /

Etiology -

(1) Stress - Acute necrotizing ulcerative gingivitis is caused in patients living in stressful conditions.

(2) Excessive smoking, tobacco chewing can cause acute necrotising ulcerative gingivitis.

(3) ANUG is often seen in army personnels. Due to very high stress conditions.

(4) High alcohol consumption can also be a major factor causing acute necrotising ulcerative gingivitis.

(5) Deficiency of Vitamins and minerals like vitamin B complex, Vitamin C can also cause Acute necrotising ulcerative gingivitis.

(6) Caspin present in chillies can also irritate the oral mucosa causing ulcers in the oral cavity.

(7)

Treatment:

First visit:

Treatment of acute lesion primary goal.

Topical anesthetic applied.

Remove pseudo membrane and non-attached surface debris.

② Second visit -

- 2 days after first visit.
- patient is evaluated for resolution of signs & symptoms.
- lesion - erythematous without superficial pseudo membrane.

③ Third visit -

- 5 days after second visit.
- Hydrogen peroxide rinse discontinue.
- Chlorhexidine mouthwash for 2-3 weeks.
- Supportive therapy.
- Fluid intake, soft nutritious diet.

2.

Ans:

~~New~~ Re attachment -

The union of connective tissue with or epithelial tissue with the root surface that has been deprived of its original attachment.

Repair -

Healing of wound by tissues that does not fully restore the architecture or function of a part.

New attachment -

The union of connective tissue or epithelial tissue with the root surface.

Classification of Furcation -

Glickman

Grade I - Incipient stage, suprabony pocket.

Grade II - cul-de-sac.

Grade III - Bone is not attached to furcation.

Grade IV - soft tissue apically extended tunnel.

Page No.

Treatment plan -

Root scaling along with odontoplasty and osteoplasty.

① facilitate maintainance.

② Prevent further bone loss

③ Obliteration furcation defect

Grade I -

Conservative periodontal treatment.
- Oral hygiene maintain.
- Scaling & root planing.

Grade II -

Osteoplasty & odontoplasty and osteectomy.

Grade II to III -

Non-surgical treatment
Periodontal surgery.
Endodontic therapy
Restoration of tooth.

MIDSR

Page No.

(1) ENAP :

It is excisional new attachment procedure.

It is a procedure to form a new attachment.

It is a subgingival curetage performed with knife.

Indications -
1. Shallow pockets
2. Suprabony pockets.
3. Edimetous & inflammed tissue.
4. Adequate keratinized tissue
5. Esthetics are unimportant.

Few Advantages -
1. Improved root visualization
2. Complete removal of sulcular epithelium & epithelial attachment.
3. Minimal gingival trauma
4. No loss of keratinized gingiva.

Local Drug Delivery -

It was pioneered by Goodson.
It is available as an adjunct to scaling & root planing in order to reduce periodontal pocket depth and inflammation.

Classification -

I. personally applied by patient at home.

A. Non-sustained subgingival drug delivery.

Home oral irrigation

B. Sustained subgingival drug delivery.

II. Professionally applied

A. Non-sustained

professional pocket irrigation device.
Syringe with blunt end needle.

B. Sustained

(3)

flap.

A flap is a section of gingiva & or mucosa surgically separated from underlying tissue to provide visibility and / access to bone & root surface.

Classification

2 types.

(A) Horizontal Incision -

- Internal bevel incision.
- Crevicular incision.
- Interdental incision.

(B) Vertical incision.

- Oblique releasing incision.

MIDSR

Page No. | Date: / /

Chlorohexidine is 2nd generation chemical plaque control agent.

It kills harmful microorganisms that causes periodontal problems.

It interferes with plaque formation.

- Mechanism of action -

CHz gets attached to salivary proteins & desquamated epithelial cells.

↓

Blocks acidic groups on salivary glycoproteins.

↓

Reduces glycoprotein adsorption on tooth surface.

↓

Prevents pellicle formation.

- Usual dosage is 15 ml of undiluted chlorohexidine oral rinse.

Uses -

1. Adjunct to oral hygiene
2. High caries risk patient.
3. Removable & fixed orthodontic wearers.
4. Treatment of denture stomatitis & dry socket

Ingredients -
① Chlorhexidine gluconate.
② Glycerin.
③ Alcohol.
④ Flavouring agent.

4.
Ans: Steps in osseous resective surgery -
① Vertical grooving.
② Radicular blending
③ Horizontal grooving.
④ Scribing.
⑤ Gradualizing interproximal Bone.

Ingredients -
① Chlorhexidine gluconate.
② Glycerin.
③ Alcohol.
④ Flavouring agent.

4.
Ans: Steps in osseous resective surgery -

① Vertical grooving.
② Radicular blending.
③ Horizontal grooving.
④ Scribing.
⑤ Gradualizing interproximal Bone.

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Page No. | Date: / /

7. Methods of GCF collection -

Ans:

① Intracevicular

② Extra cevicular

③ Preweighed twisted threads

④ Micropipettes or capillary tubing.

⑤ Gingival washing method

1½

10. Smoking and periodontium -

Ans:

Vaishnavi Jagtap

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Department of Perio

Internal Assessment Examination- I / II / III

Roll No	Question Booklet Version	Question Booklet Sr. No.
0 0 0 C 0 6	A B M P R S V W	0 1 2 3 4 5 6 7 8 9

Answer Sheet No.
(write this no. on your question booklet)
Name of Examination

Subject	Paper
Perio	

Roll No. (In Words)
Six
Question Booklet Version (In Words)

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Candidate's Signature

Invigilator's Signature

Date : / /20

	1	2	3	4	5	6	7	8	9	10
A		X				X				
B					X				·	X
C	X		X				X			
D	✓	✓	✓	X	·	✓	·	X	X	✓

	11	12	13	14	15	16	17	18	19	20
A	X									X
B		X	X				X			
C				X				X		
D	✓	✓	✓	✓	X	X	X	X	X	X

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

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Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

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4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

13
20

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Section - A	13/20
Section - B	12/30
Section - C	15/30

40

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Department of Perio

Name of Student :- Vaishnavi Jagtap

Roll No. of Student :- | 0 | 0 | 0 | 0 | 6 |

Name of the Examination :- **Internal Assessment Examination**

Betterment exam

SECTION - C

Date : 26 / 10 / 23

Time :

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3. ------ ?

Flap

Defination -

A periodontal flap is a section of gingiva and mucosa surgically separated from the underlying tissues to provide visibility and access to the bone and root surface.

Classification of periodontal flap

1) Non-displaced flaps
2) Displaced flaps.

Incisions used in periodontal flap.

1) Horizontal incisions
2) Crevicular incisions
3) Interdental incisions. (2)

1 -------- ?

ENAP : Excision New Attachment Procedure

Indication

1. Suprabony pocket
2. Gingival enlargement
3. Adequate keratinized tissue.

Advantages :

1. Root visualization.

- minimal gingival trauma
- No loss of keratinized gingiva.

Technique - Internal bevel incision

↓

Remove the excised tissue with help of curette.

↓

(1½) Approximate wound ridges.

4. --------?

Steps in osseous resective surgery

It includes 2 different steps.

(1) Osteoplasty

- It is the reshaping of the alveolar process to achieve a more physiologic form without removing supportive bone.

(2) Ostectomy:

It is the excision of the bone or portion of a bone that is part of periodontal surgery.

(1½)

2

MIDSR

Page No.

7) Methods of GCF collection

(GCF - Gingival Clavicular Fluid)

1) Weighted thread method :-

A thread is placed around the tooth in the gingival crevico. the volume of collected fluid is measured by weighing the sample thread.

2) Absorbing filter paper strips.

1) Intracievicalar

2) Extrocrevicular

3) Micropipettes (or) capillary tubing.

8) Causes of pathological tooth migration.

1) Pathological tooth migration -

It is tooth displacement that results when the balance among the factors that maintain physiologic tooth position is disturbed by the periodontal disease

Causes :-

1) periodontal inflammation

2) periapical inflammation.

3) bone loss

4) class II malocclusion

5) occlusal interferences.

6) Habits (lip biting, tongue thrusting)

(9) Non-specific plaque hypothesis :-

It states that accumulation of activity of all types of dental plaque is responsible for oral disease, regardless of the virulence of the specific pathogens involved

proposed by Miller in 1890

All plaque is equally pathogenic - no qualitative differences in plaque exist.

(10) Smoking & periodontium:-

(1) It stimulates the inflammatory response.

(2) Impairs protective response

(3) accelerates periodontal destruction

(4) Acid taste in mouth

(5) development of ulcers.

(6) reduces blood supply.

Marginal gingiva (free margin)
Attached gingiva

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Page No. | Date: / /

(5) Chlorohexidine

1. It is a disinfectant & antiseptic
2. Used to treat gingivits.
3. helps to reduce the inflammation
4. reduces gum bleeding.
5. Commonly used as antiseptic mouth wash.
6. Used for oral hygiene
7. treatment of denture stomatis & dry socket.
8. Post oral surgery including periodontal surgery or root planing.

1/2

MIDSR

LAQ.

Page No. | Date: / /

1. ANUG - Acute necrotizing Ulcerative Gingivitis

Introduction

1. It is the microbial disease of the gingiva.
2. It is charachterized by sudden inflammation, pain
3. Poor-oral hygiene causes ANUG
4. Malnutrition causes ANUG

Clinical Features

1. Ulceration in the mouth.
2. Reduced mouth opening
3. Difficulty in talking
4. Difficulty in swallowing
5. Burning sensation
6. Inflammation
7. Sudden pain
8. Bleeding occurs.

MIDSR

Page No. | Date: / /

etiopathogenesis :

1. It is microbial disease
2. Poor oral hygiene
3. Malnutrition
4. smoking
5. physiologic stress.

Treatment :-

1. Gentle debridment
2. Improved oral hygiene
3. Mouth rinses
4. Supportive care
5. Antibiotics are given.

7

2)

Regeneration :-

Repair :- Healing of wound by tissue that does not fully restore the function of the part.

Reattachment :- The reunion of epithelial & connective tissue with a root surface.

New attachment - The union of connective tissue or epithelium with the root surfaces that has been deprived of its original attachment.

Classification of furcation involvement :-

Glickman classification.

Grade I - early stage of furcation involvement.

Grde II - furcation is cal-de-sac & has definative horizontal componant.

Grade III - The bone is not attached to the dome of the furcation.

Grade IV - Interdental bone is destroyed & the soft tissue has receded apically so the that furcation opening is clinically seen.

Tarnow & Fletcher classification.

A → Vertical depth 1 to 3 mm

B → Vertical depth 4 to 6 mm

C → Vertical depth 7 mm or more.

Treatment plan :-

For class I furcation :-
- conservative periodontal treatment.
- oral hygiene
- scaling and root planning.

For class II furcation :-
- localized flap procedure
- odontoplasty, osteoplasty
- osteotomy

For class III furcation :-
- periodontal surgery
- endodontic surgery
- restoration of tooth may be required.

Mudfe Snehal Sanjay

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Department of Periodontics

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
18		

Answer Sheet No.
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Name of Examination

Subject	Paper
Periodontics	

Roll No. (In Words)

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Candidate's Signature

Invigilator's Signature

Date : 26/10/2023

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A		X					X			X
B					X				X	
C	X		X			X				
D	✓	✓	✓	X	✓	X	✓	X	X	X

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A	X						X	X		
B		X	X							X
C									X	
D	✓	✓	✓	X	✓	X	✓	✓	X	✓

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Section - A	13/20
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Section - C	18/30

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Department of Periodontics

Name of Student :- Mudpe Snehal Sanjay.

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

Betterment Exam

SECTION - C

Date : 26 / 10 /2023

Time : 2:00 pm

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SAQ.

3. Def. flap & classify incisions used in periodontal
4. Steps in resective osseous surgery.

MIDSR

Page No. Date:

SAQ.

1. ENAP:

Excisional New Attachment Procedure.

Indication -

1. Suprabony pocket.
2. Adequate keratinized tissue.
3. When esthetics are not important
4. Gingival enlargement.

Contraindication -

1. An inadequate zone of keratinized tissue
2. Pockets that extend beyond mucogingival line
3. Highly inflamed tissue.
4. Edematous tissue.
5. Patients with poor oral hygiene.

Advantages -

1. Improved root of visualization.
2. Minimal gingival trauma.
3. No loss of keratinized gingiva.

Disadvantage -

1. Difficult to determine apical extent of epithelial attachment.
2. Does not result in new attachment.

Mude Snehal Sanjay.

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Page No. | Date: / /

2. LDD.

→ local Drug Delivery.

LDD aims to disinfect pathogen reservoir by delevering high concentration of antibiotics directly to the site of periodontal infection & retention of medicament.

Classification:

I) Diffusion controlled systems.

1. Reservoirs
2. Matrices

II) Chemically controlled systems

1. Bio-erodible systems.
2. Pendant chain system.

III) Swelling Controlled systems.

IV) Magnetically controlled systems.

1

MIDSR

Page No. | Date

3. Flap.

Definition :

Periodontal flap is the section of gingiva or mucosa that is surgically seperated from the underlying tissue to provide visibility & access to the bone and root surface.

Ar

Incisions used in periodontal flap :

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Page No. | Date: / /

4. Steps in Resective Osseous Surgery:

1) Vertical grooving.

2) Radicular Blending.

3) Flattening of interproximal bone.

4) Coracluating of marginal bone.

1) Vertical grooving:

It is the first step because it can define the general thickness and subsequent from alveolar housing.

It is usually done by rotary instruments as carbide or diamond burs

It is designed to:

1. Reduce the thickness of alveolar housing.
2. Provide relative prominence to the radicular aspects of the teeth
3. Provide continuity from the inter proximal surface onto the radicular surface

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Page No. | Date: / /

2) Radicular blending.

The second step of the osseous reshaping technique, is an extension of vertical grooving.

It is an attempt to gradualizing the bone over the entire radicular surface to provide the best results from vertical grooving.

It provides smooth, blended surface for good flap adaptation.

3) Flattening of interproximal bone:

- It is the step of osteotomy.
- Removal of very small amount of supporting bone.

Indications —

1walled interproximal defect

Contra-indication

Advanced hemiseptal defect.

MIDSR

Page No. | Date: / /

5. Chlorohexidine:

It is basically used in chemical plaque control with having outstanding bacteriostatic & bactericidal properties.

It is effective on both gram positive & gram negative bacteria

Active How it Act?

Uses

1) Used as an adjunct to oral hygiene

2) Post oral surgery including periodontal surgery or root planning.

3) To patients with inner maxillary fixation

4) High caries risk patied

5) Recurrent oral ulceration

6) Removable & fixed orthodontic wearers.

7) Tt of denture stomatitis & dry socket

8) For oral hygiene & gingival health.

1/12

Adverse effects :

1) Extrinsic staining.

2) Alteration in taste perception.

3) Oral mucosal erosion.

4) Enhanced supragingival calculus formation.

5) Parotid gland swelling.

½

½ + ½ + ½

2

Mude Snehal Sanjay.

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Page No. | Date: / /

6. Infrabony Defects:

Defects in interalveolar bone usually can be classified as:

I) According to Goldman:
1) Osseous craters.
2) Hemiseptal defects.
3) Infrabony defects
4) Reversed architecture.

II)
One walled defect
Two walled defect
Three walled defect
Combined defect.

III) Infrabony defect (2)

Base of the pocket is apical to crest of alveolar bone

Pattern of bone destruction is vertical.

Interproximally transeptal fibers are oblique rather than horizontal.

MIDSR

Page No. | Date

7) Methods of GCF Collection.

1) Absorbing paper strips

2) Intracrevicular washing.

3) Micropipettes

4) Twisted threads

8) Causes of Pathologic tooth Migration.

PTM refers to tooth displacement that results when balace among factors that maintain physiologic tooth position is disturbed by periodontal disease.

MIDSR

Page No. | Date: / /

Q. Non-Specific Plaque hypothesis

States that periodontal disease results from the noxious products released by entire plaque flora.

CAO.

Regeneration:

Refers to reproduction of a lost or injured tissues that the architecture and function of lost or injured tissues are completely restored.

Repair:

Describes healing of a wound in response to injury in an attempt to restore normal structure & function.

Reattachment:

Used to describe the regeneration of a fibrous attachment to a root surface surgically or mechanically deprived of its PDL tissue.

New
Re-attachment:

Was preferred in the situation where the fibrous attachment was restored, on a root surface deprived of its connective tissue attachment.

Mude Snehal Sanjay (Non Morunio)

Page No.	Date: / /

Classification of furcation:

Grade 1 - Incipient stage of furcation. Supra bony pocket.

Grade 2 - Cul - de - sac. Horizontal Component.

Grade 3 - Bone not attached to dome of furcation.

Grade 4 - Soft tissue apically receded.

(6) Tilt.

1. ANUG

→ Acute Necrotizing ulcerative Gingivitis.

It is an inflammatory, destructive disease of gingiva which presents characteristic signs & symptoms.

Etiology:

local predisposing factors:

Smoking. → Direct toxic effect of tobacco on gingiva.

Injury to gingiva.

Pre-existing gingivitis.

Systemic Predisposing factor.

Nutritional deficiency → Poor diet.
Vit B
Vit C.

Clinical features:

Intraoral signs:

lesions characterized by punched out, crater like depression at crest of interdental papilla.

Gingival hemorrhage

Fetid odor

Increased salivation

Intraoral symptoms

lesions are sensitive to touch.

Metallic foul taste present.

Pt. c/o radiating pain.

Extraoral signs & symptoms :

In mild to moderate stages of disease local lymphadenopathy.

In severe cases, high fever, increased pulse rate, leukocytes, loss of apetite.

Tt

III

Shingare Ranjeet

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Department of Periodontics

Internal Assessment Examination- VII / III

Answer Sheet No.
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Name of Examination

Subject	Paper

Roll No. (In Words)

03.

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Date 03/04/2024

Roll No: 0 1 2 3 4 5 6 7 8 9

Question Booklet Version: A B M P R S V W

Question Booklet Sr. No: 0 1 2 3 4 5 6 7 8 9

	1	2	3	4	5	6	7	8	9	10
A		X				X	X	X		X
B					X	X				
C	X		X						X	
D				X					X	X

	11	12	13	14	15	16	17	18	19	20
A		X		X	X		X			
B	X								X	
C		X		X	X	X	X	X		
D			X					X	X	

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INSTRUCTIONS

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Section - A	15
Section - B	15
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Department of Periodontics.

Name of Student :- Shingare Ranjeet Deepak.

Roll No. of Student :- 03

Name of the Examination :- **Internal Assessment Examination**

Betterment Exa

SECTION - C

Date : 23/04/24

Time :

Ranjeet.

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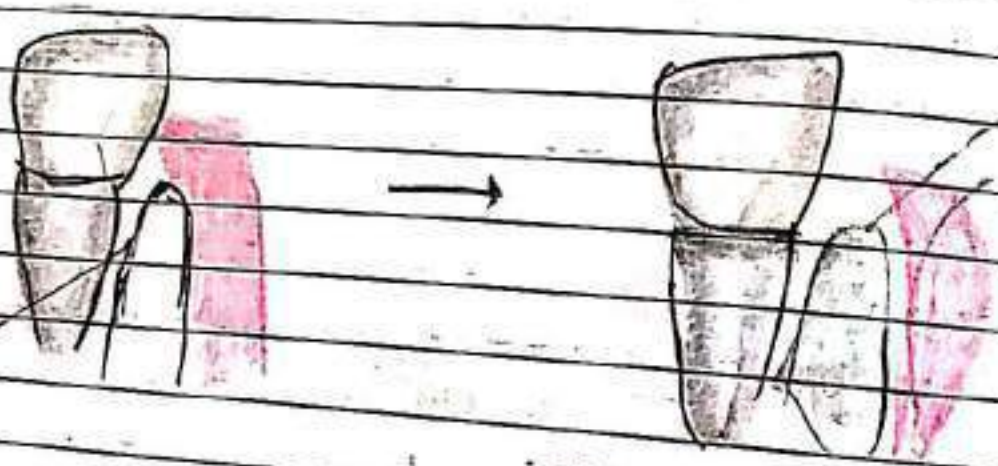
12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

1. Define
"Periodontal flap. → a soft connective tissue reflect the correction of defects"

classification of flap.

a) according to contact
i) full thickness flap.
ii) split thickness flap.

i) full thickness flap



ii) split thickness flap.

Page No | Date: / /

B) according to mangement
   i) conventional flap.
   ii) papilla preservation flap.

C) according to position.
   i) displaced flap.
   ii) apical flap.
   iii) coronal flap

modified widman flap.

it is modification of widman flap. in 1962.
~~modi~~ widman flap is discovered by scintist widman.

In modified widman flap pumps is less. conective tissue loss.

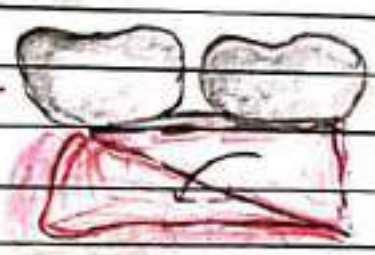


Fig modified widman flap.

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Page No.

Goals
- Pocket elimination
- Allow perio disease to heal progressively
- Self cleaning of teeth
- Regeneration of lost supportive tissue i.e. bone, cementum, PDL

Indication of flap.
- Irregular bony contour.
- Deep craters.
- Grade II & III furcation.
- Root hemisection.
- Deep pockets.

Advantages:
- Adaption of healthy connective tissue to root surface.
- Better esthetics when compared to apically positional flap.
- less potential for root Hypersensitivity as compared to apically positione flap

9/15

WHO Definition

a specific but highly variable structure entity resulting from colonization & growth of microorganism of various species & strains of bacteria on the surface of teeth / restoration & embedded in a intercellur matrix

Classification of plaque.

- Plaque
  - according to location
    - Supra gingival plaque
      - coronal → tooth associate.
      - marginal → tissue associated.
    - subgingival plaque.
  - peri implant plaque

Composition

i) organic

ii) inorganic

dental plaque → microorganisms
→ extracellular fluid
→ organic
→ Inorganic

organic → protein 65%.
carbohydrate 15%.
Lipid - 12%.

Formation of dental plaque.

1) pellicle formation
A thin bacteria free layer, for within minute on cleaned toot surface

2) Attachment.
within hour bacteria attach to the pellicle and slime layer forms around the attached bacteria

3) young supragingival plaque.

young supragingival plaque consist of
- mainly gram +ve cocci & rod

Some gram cocci & rods

4) Aged Supragingival plaque there is an increase in the percentage of gram negative anaerobic Bacteria.

5) Subgingival plaque formation.

a) tooth attached plaque. bacteria with gram cocci & rods.

b) Epithelial attached & unattached plaque. mostly gram - rods & spirochets.

Page No. | Date: / /

AQ (10)

a) Vertical Grooving.

b) Radicular Blending

c) Horizontal Grooving.

d) Scribing

e) Corgrdalizing Interproximal bone.

a) Vertical grooving.

- It is the first step because it can define the general thickness & subsequent form of alveolar housing.
- It is usually bone by rotary instrument, as carbide or diamond bur.

b) Radicular blending.

- It is an attempt to gradualize the bone over the entire radicular surface to provide the best result from vertical grooving.
- It provides smooth blended surface for good flap adaption.

c) Horizontal Grooving.

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Page No. Date: /

d) Scriding.

e) Gradualisi interproximal Bo minimal bone removal to provide a sound regular bases for gingival tissue to follow

- Hard instrument as chisel & currette are favorable over rotary instrument.

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Department of Periodontics.

Name of Student :- Shingare Ranjeet Deepak

Roll No. of Student :- 0 3

Name of the Examination :- **Internal Assessment Examination**

Betterment Exam

SECTION - B

Date : 23/04/24

Time :

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet
2. Candidates should not draw additional margins as they are provided on each page.
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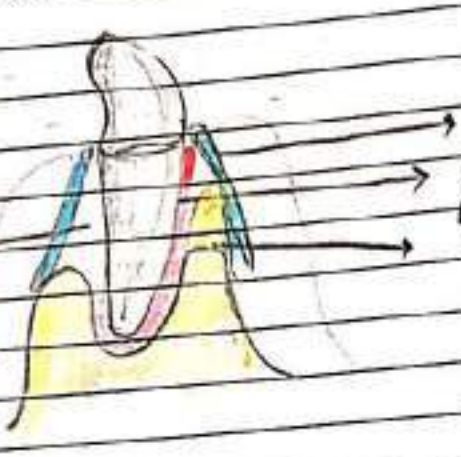
6. GTR.

Guided tissue regeneration.

GTR are used for the regenerat of tissue



Indication

1) Class II & class I gingival Recession case
2) grade I & grad II mobility case.

contraindication.

1) severe bone loss case

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Page No. | Date / /

1 gingival Recession

gingival Recession is loss of gingiva

· Following are the treatment of the gingival Recession

The Treatment plane is according to a severity of the gingival Recession.

1) Scaling & root planing
This treatment are used for a class I and class II gingival Recession
In this treatment ultrasonic scaling are done & also root planing
after that pt calling after 21 days if Recession persist then we done with surgical treatment.

2) Flap surg periodontal flap surgery.
in this treatment gingival Recession is cover with periodontal flap surgery

3) maintance phase. - Adv. pt to maintain good oral Hygen & use 0.2% CHX twice a day & Brushing with modified bass technic.

3 BANA.

- Bana test is used in Halitosis.
- It is practical test for chairside
- In Bana test various microbes are tested for the Halitosis like P. gingivalis
- Bana test is responsible for the identification of causative organsicum for Halitosis.
  a) T. denticola
  b) P. gingivals.
  c) T. Forsythesis.
- It is test strip which composed of benzoyl dl - arginine a. napthylamide & detect short chain fatty acid & proteolytic obligate fatty acid & proto obligate gram - negative anerobs. which Hydrolyze the systemic trypsin substracts. and cause Halitosis.
+presence of negative result. means - improper sample collection
- Disease is associated with the prence of non Bana organism.
Advantages - chairside
- specific.
- Inexpensive

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Page No. | Date: / /

5 Bone grafts for reconstructive surgery

Bone grafts is used for the reconstective to the Bone in oral cavity

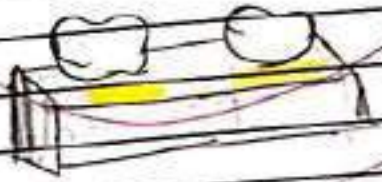
types · i) xenograft
ii) Autograft

Following are various stages of Bone grafts.

(A)

(B)

(C)



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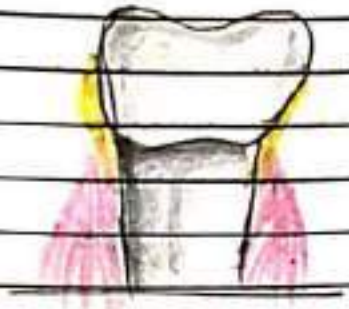
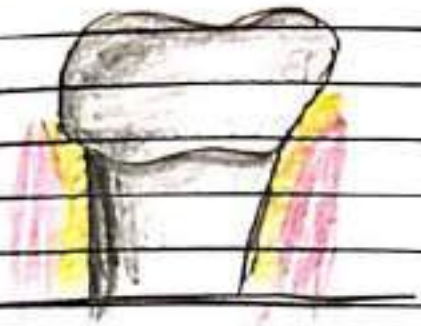
7)	Supragingival calculus.	Subgingival calculus.
		
i>	Supragingival calculus is present on superficial layr. of gingiva.	i> Subgingival calculus is present on subgingival or crown portion
	it may be localised or generalised	it may be localised or generalised.
ii>	gingival recession are not seen.	gingival recession are seen.
	No Bone loss	Bone loss are seen.
	treatment. scaling & root planing.	treatment. curretage or. scaling & root planing.

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Page No. | Date: / /

8 Factors determining individual tooth prognosis

Following are the factores

1) Pt. cooperation.
2) Bone loss
3) gingival recession.
4) any other systemic diseases.
5) age of Pt.

There are three factors determining individual tooth prognosis.

1) Good.
2) Fair.
3) poor.

1) Good. :-
- Pt is cooperative.
- No Bone loss.
- minimal gingival recession. (Grade-I or .
- No other History of systemic dis

2) Fair. -
- Pt cooperation is avarage.
- minmal interdenal Bone los
- gingival recession are seen.
- History of other systimic disease

Poor -

- No cooperative pt.
- interdental Bone loss.
- History of systemic disease.
- gingival recession are seen.
- older in age

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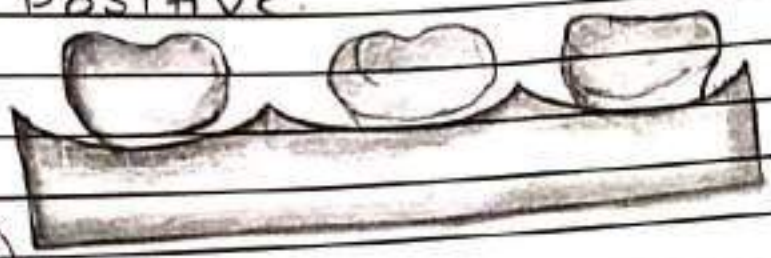
Page No. | Date: / /

9) classification of osseous defects.

a) according to form.
1) vertical.
2) Horizontal.

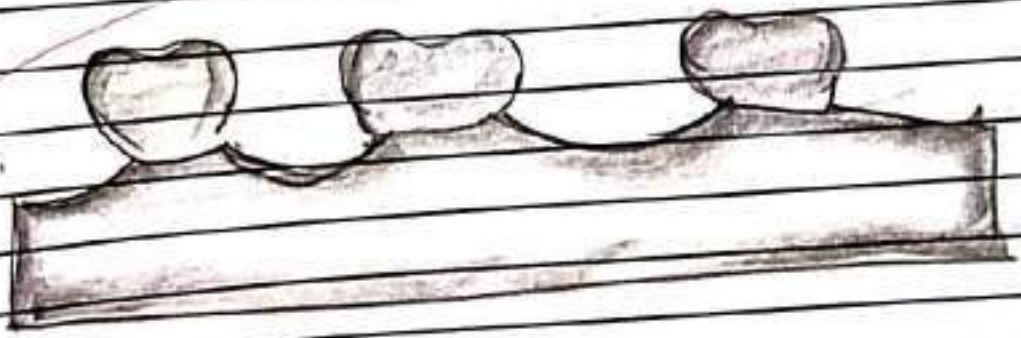
b) according to resepration.
1) Positive
2) negative.
2) flat.

a) positive.

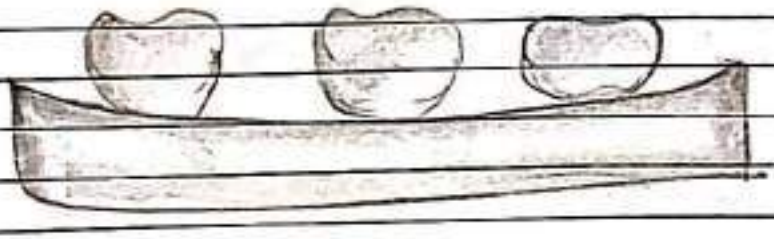


1 1/2

B) negative



c) Flat



2] ——— 2

1) reduction in number of osteoclast by inhibiting their development and including osteogensis.

2] by altering the ruffled border and, increasing the size of clear zone.

3) by decrasing the production of osteoclastic enzyme like trap & cathepsm which degrate organic components of bone.

4) Inhibits osteclastegensis.

5) elevates intracellular calcium levels which muscle the osteoclas to detach from bone resorbing side.

6) Inhibits osteoclasts collagenuse. production & also decreases acid. production.

Limitations

1) photosensitizing proper.

2) systimic lupus erythamthoss is an unexpted side effect of cmp.

3) elevated liver. function leads to and neurotoxcities.

4) cmt have shoun irregular. observation rate cytotoxic effe

4

1) caused by exssesive occlusal forces

2) under the forces of occlusion or tooth rotated around a fulcrum which creates pressure & tension on opposite side of fulcrum.

3) slightly excessive pressure - stimulate resorbtion of alveolar bone with compression of PDL fibres.

4) slightly excessive tension - cause elongation of PDL fibre & osorbtion of alveolar bone.

5] areas of increased pressure. the blood vessels are numerous and reduced in size & in increased tension they are dilated.

Stage II repair.

1] Repair is constantly occuring in the normal periodontium & TFO stimulates increased reparative activity.

2] the damaged tissue are removed & new connective tissue cell fibres bone & cementum are formed in an attempt to restore the injured periodontium.

Komal Wadekar

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Department of Periodontics

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No
26		

Answer Sheet No.
(write this no. on your question booklet)
Name of Examination

Subject	Paper
periodontology	

Roll No. (In Words)
Twenty six
Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 21/10/2023

	1	2	3	4	5	6	7	8	9	10
A						X				
B	X				X				X	X
C		X						X		
D			X	X			X			

	11	12	13	14	15	16	17	18	19	20
A										X
B		X	X	X			X		X	
C						X		X		
D	X				X					

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

7
20

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SECURED

Name of Exercise		Marks Obtained
Section - A	7/20	07
Section - B	16/30	16
Section - C	13/30	13

36/80

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(DENTAL COLLEGE), LATUR

Department of Periodontics

Name of Student :- Komal Hanmantrao Wadekar

Roll No. of Student :- | | | | 2 | 6 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 26/ 10/23

Time : 2:00 to 5:00

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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1) SAQ
2) ENAP
3) local drug delivery
4) Define flap. classify incisions used in periodontal.
5) Steps in osseous surgery.

SAQ

① ——— ?

⇒ ENAP

- Excisional New attachment Procedure,
- It is defined as subgingival curettage per with a knife.
- Internal bevel incision is made from margin free gingiva apically to a point below the bottom of the packet
- Remove the excised tissue with a curettage
- Root plane all exposed cementum
- Approximately the wound edges
- Place sutures & a periodontal dressing

② ——— ?

⇒ local drug delivary (LDD)

- LDD aims to disinfect pathogen reservoirs by delivering high concentration of antibiotic directly to the site of periodontal infection & retention of medicament long enough to ensure results.
- Principle site for local drug delivary
  1) Natural reservoir
  2) Easily accessible for insertion of devices
  3) GCF is a leaching medium or drug release
  4) Gets distributed from packet.
- Agent used in LDD →
  - Tetracyclin
  - Doxycyclin
  - minocyclin
  - metronidazol.

(3) ——— ?

⇒ Flap

Define : flap it is the cut of periodontal ligament for the surgery.

- A periodontal flap is a section of gingiva & or mucosa surgically separated from the underlying tissue to provide visibility & access to the bone & root surface.
- Two types →

1) Horizontal incision
   - Internal bevel incision
   - crenicular incision
   - Interdental incision

2) Vertical incision → oblique releasing incision.

(4) ——— ?

⇒ steps in osseous resective surgery -

- Five steps →

1) Vertical grooving
2) Radicular blending
3) Horizontal grooving
4) Scribing
5) Graduating interproximal bone.

* Resective osseous surgery as the procedure by which changes in alveolar bone can be accomplished to rid it of deformities induced by the periodontal disease process or other related factor such as exostoses & tooth supra eruption

(5) ——— ?

→ Chlorohexidine

- Chlorohexidine used in mouthwash.
- 0.2% Chlorohexidine use in all mouth
- Chlorohexidine used for the reduce mouth odor.
- And decreases plaque & calculus formation.
- and Chlorohexidine used for mainly mouth reduce mouth odor.
- Into the diabete person the mouth odor smell use occur in this condition chloro use used.

(6) ——— ?

→ Infrabony defect.

(1) classify ↦

a) Infra bony defect :

1. one wall defect
2. Two wall defect
3. Three wall defect
4. combined defect

b) Creator ↦ :

(2) This is the ~~two~~ Infrabony defect is a specific osseous defects with definite morphology.

(3) The infra bony defect is surrounded by bony wall on three sides with the tooth root forming the foweth wall.

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Page No. | Date: / /

(I) ——?

⇒ methods of GCF collection

(1) Absorbing filter paper strips →
- most common method of collection
- transulcular & Extrasulcular this two way place it.

(2) Preweighted twisted threads →
- Threads were placed in the gingival crevice around the tooth.

(3) Crevicular washing →
- Gingival sulcus is perfused with an isotonic sol^n.
- The washing are rinsing then cervicular area from one to the sou

(4) Micropipettes / capillary tabing.

(II) ——?

→ Causes of pathologic tooth migration

(1) PTM it is tooth displacement that results when the balance among the factor that maintain physiologic tooth position is distributed by periodontal disease.

(2) Causes →
- tooth morphologic features & axial inclination
- The presence of a full complement of teeth.
- A physiologic tendency towards mesial migration
- The nature & location of contact point relationship.
- Proximal, incisal & occlusal attrition.
- the axial inclination of the tooth.

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Page No. | Date: / /

(9) ——— ?

→ Non-specific plaque hypothesis.

- Periodontal diseases was believed to result from an accumulation of plaque over time in conjunction with a diminished host response & increased host susceptibility with age.
- states that periodontal diseases results from the various products released by entire plaque flora.
- limitations of Non-specific plaque hypothesis →
  - Some individuals with good amount of plaque & calculus develop gingivitis but never develop destructive
  - Same individuals with periodontitis demonstrate site specificity in the pattern of disease.

(10) ——— ?

→ Smoking & periodontium.

(1) Smoking is associated with wide spectrum of disease including stroke, coronary artery diseases, peripheral artery diseases, gastric ulcer etc.

(2) classification of smoker
1) Heavy smoker
2) light smoker
3) Current smoker
4) former smoker
5) Non-smoker

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LAQ.

(1) ——?

ANUG

(1) ANUG is acute necrotizing ulcerative gingivitis

(2) clinical features :-

-

(3) Effect of smoking :-

- changes in the epithelium - hyperkeratotic, hyperplastic.
- greyish discoloration of the gingiva.
- ↑ use of tobacco → ↑ frequency of ANUG.

(4) smoking →

↓

influence the tissue response to irritation

↓

activates the release of epinephrine

↓

Promotes contraction of peripheral vessels

↓

Reducing blood flow to the gingiva

↓

loss of vitality to the gingival inflammation

↓

onset of ANUG.

(1½)

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Page No. | Date: / /

LDQ.

1) ——— ?

⇒

ANUG)

① Acute Necrotising ulcerative gingivitis

- It is an inflammatory, destructive, disease of gingiva which presents characteristic sign & symptoms.

② Etiology :-

- local predisposing factor
  - smoking - direct toxic effect of tobacco, gingivae.
  - Pre existing gingivitis
  -

- Systemic predisposing factor

  Nutritional deficiency → poor diet
  wit B.
  wit C.

③ Clinical features

- Intra oral signs -
  - lesion characterised by punched out, crater like depression at crest of interdental papilla.
  - Gingival hemorrhage

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Page No. | Date: / /

- Fetal odor.
- Increased salivation.

- Intra oral symptom
  - lesions are sensitive to touch
  - metallic foul taste present
  - Pt c/o radiating pain

- Extra oral sign & symptom
  - In mild to moderate stages of disease local lymphadenopathy.
  - In severe cases, high fever, increased pulse rate, leukocytes, loss of apetite.

(6) + (2) (+2) = 10

(2) ——?

→

(1) Regeneration →

Reproduction or reconstruction of a lost of injured part in such a way that the architecture & function of lost or injured tissue are completely restore.

(2) Repair →

Healing of wound by tissue that does not fully restore the architecture or function of the part

(3)

(3)

Shubhangi. M. Waghmare

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Department of Periodontity.

Internal Assessment Examination- I / II / III

Roll No.

Question Booklet Version

Question Booklet Sr. No.

Answer Sheet No.
(write this no. on your question booklet.)

Name of Examination

Subject	Paper
periodontity	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature

Invigilator's Signature

Date 26/11/2023

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ☑	A ■	A ☒	A ☒
B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided.

	1	2	3	4	5	6	7	8	9	10
A		☒				☒		☒		
B				☒	☒					☒
C	☒		☒				☒			
D									☒	

	11	12	13	14	15	16	17	18	19	20
A	☒						☒		☒	
B		☒	☒					☒		☒
C						☒				
D					☒					

14	
20	

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	14/20
Section - B	14/30
Section - C	15/12/30

43 pm

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of Periodontia

Name of Student :- Waghmare Shubhangi Milind

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 26 / 10 / 23

Time : 2 to 5 PM

Sign. of Student

Sign. of Invigilator

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5. Do not waste the pages. Write on both sides of pages on the answer sheet. for short answer questions answers should be continued in sequence; do not leave blank spaces on the answer sheet.
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9. Candidates should write exam in legible hand writing.
10. If candidates want anything they should approach the supervisor without disturbing other candidates. However, they should not leave their seat on any account.
11. If candidates disobeys any instruction issued by the examiner/ supervisor or who is guilty or rude or disobedient is liable for disciplinary action to be taken against him/ her by the Principal.
12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

Q.1 Define ENAP.

→ Definition - Internal bevel incision with removal of ENAP is excised tissues followed by scalling & curettage

Indication - Supra bony pocket
- Adequate keratinized tissue
- When epithelium unimpaired
- Gingival enlargement

Advantages - Improved post visualization
- minimal gingival trauma
- No loss of keratinized gingiva

Q> LDD local drug delivery

→

1) Diffusion control system
A. Reservoir
B. matrices

2) chemically controlled system
A. Bio-erodible system
B. Pendant chain system

3) swelling controlled system

4) magnetically controlled system

3) Define flap classify incision used in periodontal flap

Definition :- A periodontal flap is a section of gingiva and ~~or~~ mucosa surgically separated from the underlying tissue to provide visibility & access to the bone & root surface.

classification of Incision used in periodontal flap

1) Internal bevel Incision
2) crevicular incision
3) interdental incision
4) envelope incision
5) Incision for partial thickness flap
6) modified incision flap

4) steps in osseous resective surgery.

→ step

1. Vertical grooving
2. Radicular blending
3. Flattening interproximal bone
4. undulating marginal bone

5) Discuss the chlorhexidine in detail

→ chlorhexidine is a mouthwash which prevent accumulation of plaque & calculus. maintain oral hygiene.
- chlorhexidine is an anticarious agent
- 2 % (10 ml) twice a day rinse a mouth.
- Antimicrobial, antiseptic, disinfectant
- It help in reduced mouth ulcer, gum disease

uses:
- treatment of gingivitis, swelling of the gingiva, including gingival bleeding
- Reduced redness of the gum

6) classify intrabony defects and discuss in detail

→ classification of intrabony defects
Defⁿ Apical location of the base of pocket concerning the residual alveolar crest.

Intra bony
1) Horizontal bone loss
2) vertical bone loss
3) ledge
4) marginal gutter
5) perforation & dehiscence
6) cavity

Intrabony
1. 1-walled
2. 2-walled
3. 3-walled
4. Combined

: 1 walled defect - only one interdental wall remains
A called semi septum is remaining wall is semi septum
2 walled defect - more prevalent bone defect found interdentally with facial / lingual wall remaining invisible
3 walled defect - occur most frequent in interdental region usually remaining bony wall facial / lingual & proximal
circumscribed defect

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Page No. | Date

7) methods of ucf collection

→ Gingival crevicular fluid is

ucf contain - epithelial cells, desquamated epithelial cell.
- Leukocytes - monocyte, Neutrophils, lymphocytes
- minerals - na, k, cat, mg, if
- Hexuronic acid and glucose is the main content 3-4 times more than serum.
Protein is 3-4 times less than the serum.
- Enzymes - lysozyme, alkaline phosphatase, acid phosphatase, β-glucuronidase.
- metabolic products - lactic acid, proline, prostaglandin

. methods of ucf collection.

1) Extracrevicular method
2) Intracrevicular method
3) preweighed twisted thread
4) micropipette / capillary tube

(1)

8) causes of pathologic tooth migration

→ causes:-

Pathologic tooth migration mostly seen in anterior teeth
- Abnormal labial frenum
- pressure produced from inflammatory tissue within the periodontal pocket
- periodontal bone loss
- trauma from occlusion
- pressure from inflamed periodontal tissue in the periodontal pocket

(1½)

9) Non-specific plaque hypothesis

→ All plaque is equally pathogenic - no qualitative diff° in plaque exist

- only certain plaque causes infections
- Diagnosis of anaerobic infect° is required
- states that periodontal disease results from the noxious products released by entire plaque flora

- entire plaque flora contribute to periodontal disease

10) smoking and periodontium

→ smoking affects the periodontium

effects of smoking on periodontal tissue

- gingival vasculature
- gingival inflammation & bleeding
- oxygen tension of gingival tissue
- Periodontitis
- ...

- influence the tissue response to irritation
- activate the release of epinephrine
- promotes contract° of peripheral vessels
- reducing blood flow to the gingiva
- loss of vitality to the gingival epithelium
- onset of ...

1 A Q.

ANUG Def^n

Acute Necrotizing ulcerative gingivitis is rapidly destructive non-communicable microbial disease of the gingiva in the context of an impaired host immune response.

- It is characterised by sudden onset of inflammation, pain & the presence of "punched-out" crater like lesion of papillary gingiva

etiology.

- smoking
- malnutrition
- Poor oral hygiene
- Psychologic stress
- reduced host resistance

clinical feature:—

- severe gum pain
- Profuse gum bleeding that required time parocatia

- interdental papilla are ulcerated with dead tissue "punched-out" crater
- Foul odour, bad metallic taste, increased salivation and regional lymphadenopathy
- pain & ulceration & necrosis of the interdental papilla

Treatment :-

- supragingival plaque control
- systemic antibiotics such as metronidazole

1st visit -

- Reduce microbial load & remove necrotic tissue
- Tt of acute lesion is pri-goal
- topical anesthetic applied
  - 2-3 min's gently swabbed
  - cleaning with warm water

2nd visit -

- 2 days after the first visit
- Pt is evaluated

a) ——— e

→ Regeneration- Repair of lost or injured tissue that the architecture lost is restored

Repair Healing of wound in response to injury in an attempt's to restore normal structure & function

Reattachment - regeneration of fibrous attachment to a surface

new attachment - New cementum formation with Identity collagen fibres on previously denuded root surface of periodontal ligament

Furcation involvement

class I - Incipient bone loss
class II - cul de sac
class III - through & through destruction involvement

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Page No. | Date

class IV - through & involvement
Soft & tissue involvement

+++ tilt plan

class I - furcation management

odontoplasty
- osteoplasty reshaping of the alveolar bone

Guided tissue regeneration
furcation plasty

class III - furcation -
open flap debridement

class III, IV - furcation

- tunnel preparation

Nath Hanale.

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

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Department of Periodontics

Internal Assessment Examination- I / II / III

Roll No. 28

Question Booklet Version: A

Question Booklet Sr. No.

Answer Sheet No. (write this no. on your question booklet)

Name of Examination

Subject	Paper
Periodontics	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature

Invigilator's Signature

Date : 20/10/2023

	1	2	3	4	5	6	7	8	9	10
A	X					X				
B					X					X
C		X	X				X			
D			✓	X	✓	✓		X	✓	✓

	11	12	13	14	15	16	17	18	19	20
A	X					X				
B			X	X						X
C							X			
D	✓	X	✓	X	✓	✓		X	✓	✓

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ☑	A ■	A ☒	A ☒
B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

12	
20	

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	12/20
Section - B	13/30
Section - C	16/30

41

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH
(DENTAL COLLEGE), LATUR

Department of Periodontics

Name of Student :- Ajit Madhavrao Wanole

Roll No. of Student :- | | | | 2 | 8 | Betterment exam

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 26 / 10 / 23

Time :

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet.
2. Candidates should not draw additional margins as they are provided on each page.
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12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

1) ENAP

2) local drug delivery

3) Define flap Classify Incisions used in periodontal.

4) Steps in osseous ~~surgery~~ resective surgery.

5) Discuss Chlorohexidine in details

6) Classify intrabony defects & discuss in detail.

7) Methods of GCF Collection

8) Causes of pathologic tooth migration

9 Non specific plaque Hypothesis.

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10) Smoking & periodontium

LAQ

1) - ANUG in detail write about clinical feat... etiopathogenesis & treatment.
2) Define Regeneration, Repair, Reattachment & New attachment classify furcation involvem... & treatment plan for furcation involvement

LAQ

1) ANUG

Acute necrotizing ulcerative gingivitis

Clinical features :

- Commonly seen in ~~female~~ male
- Ulcer present on the gingiva
- Burning sensation on gingiva
- Bleeding on probing positive

Ethelogy

- Smoking
- Tobacco chewing

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Page No. | Date: / /

* ~~Classify~~ ~~Evaluation~~ ~~Involvement~~

~~Grade~~ ~~of~~ Treatment planning

1) First visit

1) scaling & root planning.
2) Antibiotics are given
3) Topical anesthetic applied

2) Second visit

- 2 days after first visit
- patient is evaluated for resolution of sign & symptom
- Lesion erythematous without ~~suppural~~ Superfacial psuda membrane

3) Third visit

- 5 days after second visit
- Hydrogen peroxide · rinse discontinue
- Chlorhexidine mouthwash for 2-3 months
- Supportive therapy
- fluid intake · Soft nutrients diet

(6) LAG

(7) → ?

Regeneration :-

New attachment :- The union of connective tissue epithelial with the root surface that has been deprived of the original attachment

Repair :- Healing of wound by tissue that does not fully restore the architecture or function of a part.

Reattachment :- The reunion of epithelium & connective tissue with a root surface.

Classify furcation involvement

a) Glickmen classification

Grade 1 → Incipient & early stage of furcation involvement

Grade 2 → The furcation is cul de sac & has a definitive horizontal component.

Grade 3 - The bone is not attached to the bone of the furcation

→ marginal gingiva
→ Attached gingiva (non mo

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Page No. | Date: / /

Grade IV ⇒ Interdental bone is dystroid & soft tissue has been receded apically so furcation opening is clinically seen.

Treatment

a) Facilitate maintenance
b) Prevent further bone loss
c) Obliteration the furcation depth as periodontal maintenance problem

Grade I ⇒ Case are amenable to conservative periodontal treatment
- Oral hygiene maintain
- Scaling & root planing

Grade II ⇒ Osteoplasty & odontoplasty & osteotomy

Grade II to III ⇒ Non surgical treatment is usually
- periodontal surgery,
- endodontic therapy
- restoration of tooth

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Page No. | Date:

SAQs

SAQ 7 Methods of GCF Collection

1) Intracrevicular
2) Extracrevicular
3) Preweighed twisted threads
4) Micropipettes or capillary tubing
5) Gingival washing method

1/2

SAQ 8 Causes of pathological tooth migration

Two major factor play a role in maintaining the normal position of the teeth
1) Health
2) Normal height of the periodontal attachment

Factors that are important in relation to the forces of occlusion include the following
1) Tooth morphologic features and cuspal inclination
2) The presence of a full complement of teeth
3) Axial inclination of the teeth
4) Proximal, incisal & occlusal attrition

1/2

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Page No. | Date: / /

SAQ

1) ENAP

It is excubional new attachment procedure

- It is a procedure to form a new attachment
- It is a subgingival curettage performed with knife

Indication

1) Shallow pocket
2) Suprabony pocket
3) Edematous & inflammed tissue
4) Esthetics are unimportant

Advantage:

- Improved root visualization
- Complete removal of sulcular epithelium & epithelial attachment (1½)
- Minimal gingival trauma
- No loss of keratinized gingiva

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Page No. | Date: / /

SAS

(2) → ?

Local Drug Delivery

It was pioneered by Goodson.
It is available as an adjunct to scaling & root planing in order to reduce periodontal pocket depth & inflammation

Classification

Personally applied
by patient at home

A] Non-sustained subgingival drug delivery
Home oral irrigation

B] Sustained subgingival drug delivery

II professionally applied

A) Non-Sustained
professional packed irrigation delivery
Syringe with blunt end needle

B. Sustained

(1/2)

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Page No. | Date: / /

(3) → ?

Flap

Periodontal flap is a section of gingiva & or mucosa surgically separated from the underlying tissue to provide visibility & access to the bone & root surface

There are two types of periodontal flap incision

(A) Horizontal Incision
- Internal bevel Incision
- Crevicular incision
- Interdental incision.

(B) Vertical incision
1) Oblique releasing incision.

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Page No. | Date: / /

S: SAQ

(5) →

Chlorohexidine is 2nd generation chemical plaque control agent

It kills harmful microorganism that cause periodontal problem.
- It interfere with plaque formation

• Mechanism of action

CH. gets attached to salivary proteins & desquamated epithelial cells
↓
Block

(1)

MIDSR DENTAL COLLEGE LATUR
DEPT. OF PERIODONTICS
Final BDS – Betterment Examination – Summer Exam. 2023

Section A (MCQs) **(1X 10=10 marks)**

Date: 23/04/2024 **Duration: 3 Hours** **Total Marks: 60 Marks**

1.	**HIV Periodontitis is** a) Diagnostic of HIV infection b) Characterised by remissions & exacerbation. c) Characterized by necrosis & periodontal destruction. d) Periodontitis is not seen in HIV infection	6.	**Furcation is measured by** a) Naber's probe b) Fluoride probe c) Millers probe d) CPITN probe
2.	**Which of the following hematological disease is associated with periodontal disease.** a. AIDS b. Hypophosphatesia c. Wegeners Granulomatosis d. Histocytosis	7.	**When scaling and root planning, the primary objective of the procedure is to** a) Cause shrinkage of gingival tissue b) Create glass like root surface c) Remove all cementum d) Restore the gingival tissue to health
3	**The tissue response to oral hygiene instruction is best assessed by** a. Probing the base of pocket b. Changes in plaque scores c. Reduce Tendency to bleed on probing the gingival margin. d. Reduced tooth mobility.	8.	**Chlorxhexidine gluconate us used as mouthwash in concentration of** a) 0.2% b) 20% c) 2 % d) None of the above
4.	**Gingivitis appears on radiograph as** a) Loss of alveolar bone b) Pocket formation c) Change in bone trabeculations d) No observed changes.	9.	**Portion of tooth brush that assists in removal of plaque is** a) Tip of brush b) Tip of bristle c) Sides of Bristle d) Whole brush.
5.	**Radiograph are of a great value in dignosing periodontal disease because they reveal** a) Hard to soft tissue relationship b) Morphology of bone deformities c) Presence of pocket d) Widening of the Lamina Dura	10.	**Water irrigating devices is most useful in** a) Removing plaque b) Preventing plaque formation c) Diluting bacterial products d) Reducing periodontal pockets

SECTION B (SAQs) **(3X 10= 30 marks)**

1. Note on mechanism of chlorhexidine.
2. Treatment of aggressive periodontitis
3. Periodontal diseases in HIV-Positive Individual.
4. Effect of smoking on periodontal tissue
5. CBCT
6. Principles of instrumentation.
7. Clinical significance of malodor
8. Treatment of periodontal abscess.
9. Local drug delivery
10. Wasting diseases of teeth.

SECTION C (LAQs) **(2X 10=20 marks)**

1. Define prognosis, determination of prognosis, factors to consider when considering when determining prognosis.
2. Two way relationship between diabetes and periodontal disease.

MIDSR DENTAL COLLEGE, LATUR
Department of Periodontics
Betterment Examinationm
FINAL Year Winter - 2023

Date: 26/10/2023 **Total Marks: 80 Marks**

Section A (MCQs) **(20x 1 = 20 Marks)**

1. Horizontal bone loss is seen in
A. Localised aggressive periodontitis
B. Generalised aggressive periodontitis
C. Chronic periodontitis
D. ANUG

2. Birbecks granules are present in
A. Langerhans cells
B. Keartinocytes
C. Merkel cells
D. Melanocytes

3. Accurate probing force is
A. 0.25N
B. 0.5N
C. 0.75N
D. 1N

4. Gingival recession may be caused by:
A. Faulty toothbrushing technique
B. Tooth malposition
C. High frenum attachment
D. All of the above

5. Gracey curette no 11-12 are used for:
A. Anterior teeth
B. Posterior teeth mesial
C. Posterior teeth distal
D. Posterior teeth facial and lingual

6. Physiological tooth mobility is greatest in:
A. Morning
B. Afternoon
C. Evening
D. At night

7. Inflamed gingival in leukemic patients is :
A. Spongy
B. Fibrotic
C. Firm
D. Fibro-oedematous

8. Drug induced gingival enlargement starts in:
A. interdental papilla
B. attached gingiva
C. marginal gingiva
D. any of the above

9. Which of the following drug is not used locally in treating periodontal disease:
A. Tetracycline
B. Doxycycline
C. Chlorhexidine
D. Amoxicillin

10. Horizontal strokes are selectively used on:
A. CEJ
B. Line angles
C. Abraded areas
D. Eroded areas

11. The interdental aid to be used when the embrasure is filled with interdental papilla

A. Dental floss
B. Wooden tip
C. Plastic tip
D. None of the above

12. Periotriever is used for

A. Periostel elevation
B. Removal of broken tips of curettes
C. Measuring crevicular fluid
D. Local drug delivery

13. While using modified pen grasp, the index finger is bend at

A. First joint
B. Second joint
C. Both of the above
D. None of the above

14. Tetracycline is frequently used in

A. Refractory periodontitis
B. Localized aggressive periodontitis
C. Both of the above
D. None of the above

15. Root planing is:

A. Removal of material alba and stains from root surface.

B. Removal of soft tissue wall of the periodontal pocket.

C. Removal of calculus & plaque from root surface.

D. Removal of diseased cementum along with other root deposits.

16. Localized aggressive periodontitis is best treated in early stage by:

A. Tetracycline 250mg 4 times daily for fourteen days.
B. Tetracycline 250mg once daily for 7 days.
C. Tetracycline 250mg twice daily for 7 days.
D. Tetracycline 250mg 4 times daily for 3 days.

17. Ideal angulation for insertion of a curette into subgingival arch is :

A. 0^0.
B. 45^0.
C. 60^0.
D. 90^0.

18. Regional lymph node enlargement is present in:

A. Acute pericoronitis.
B. Lichen planus.
C. Pemphigoid.
D. Pemphigus vulgaris

19. Cervical enamel projections are frequently found on buccal surfaces of :

A. Maxillary first molars
B. Maxillary second molars
C. Mandibular first molars
D. Mandibular second molars

20. Average human biologic width is:

A. 3mm.
B. 2mm.
C. 4mm.
D. 1mm.

Section B (SAQ) **(10x 3 = 30 Marks)**

1. Methods of GCF Collection.
2. Gingival Fibers.
3. Steps in resective osseous surgery.
4. Define & classify trauma from occlusion.
5. LASERs
6. Define & Classify Periodontal Pocket.
7. Treatment of ANUG.
8. Halitosis.
9. Chemical plaque control.
10. Enumerate Pattern of Bone destruction.

Section C (LAQ) **(15X2= 30 Marks)**

1. Define and classify Dental plaque. Add a note on plaque formation. Discuss nonspecific plaque hypothesis.
2. Define new attachment, repair, regeneration reattachment. Discuss in Detail Graft associated regenerative surgery.

Date:- 08/03/2024

DEPARTMENT OF ORTHODONTICS & DENTOFACIAL ORTHOPEDICS

NOTICE

Dept of Orthodontics Conducting a Theory & Practical Betterment exam the IV Year BDS Summer batch 2024.

The students who have missed their Prelim Internal examination (Theory) can appear for Betterment exam.

Sr. No	Date	Time	Betterment examination
1	12/03/2024	9:00 Am – 01:00 Pm	Theory Exam

HOD
DEPT. OF Orthodontics
MIDSR Dental College, Latur.

MIDSR DENTAL COLLEGE, LATUR
DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
IV BDS (Summer) – 12/03/2024

Betterment Prelim internal assessment THEORY Mark sheet

ROLL NO	NAME OF STUDENT	Section-A	Section-B	Section-C	Total	Remark
		20	30	30	80	
1	Rajput Ashtosh	20	22	25	67	
2	Kale Pratik	18	20	25	63	
3	Ajit Wanole	18	21	24	63	

HOD
Department of Orthodontics

DEPARTMENT OF ORTHODONTICS & DENTOFACIAL ORTHOPEDICS

Betterment Examination theory paper– IV BDS Summer 2024

Date: 12/03/2024 Total Marks: 80

Instructions

- All questions are compulsory
- Draw diagrams wherever necessary.
- Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

SECTION A- **10*2=20**

1. Functional Matrix theory was given by
   a) Moss
   b) Brodie
   c) Moyers
   d) kingsley
2. Mesiodens causes
   a. Midline Diastema
   b. Crowding
   c. Rotation of teeth
   d. Supraversion
3. Which of the following causes Slow Expansion
   a. Coffins Spring
   b. Quad Helix
   c. Jack Screw
   d. All of the above
4. AQngfles Contribution to Orthodontics is
   a. Edgewise appliance
   b. Pin and Tube appliance
   c. Both a and b
   d. Saggital appliance
5. Whichof the following is not component of fixed appliance
   a. Echain
   b. Lockpins
   c. Adam's Clasp
   d. Emodoule
6. Term Orthodontics was coined by
   a. Angle
   b. Felon
   c. Deway
   d. Jackson
7. Angulation of catalan's Appliance is
   a. 45°
   b. 55°
   c. 90°
   d. 75°
8. Cybernatics was given by
   a. Alexander Pefrovic
   b. Sicher
   c. Enlow
   d. Fararar
9. Functional segment of DNA is
   a. Gene
   b. Genome
   c. Heridity
   d. Variance
10. Torsiversion is
    a. Supraversion
    b. Infraversion
    c. Rotation
    d. Mesioversion

SECTION B

3*10=30

1. Define Orthodontics, and jackson's triad
2. Define growth and development and methods of studying growth
3. Development of palate .
4. Space maintainers
5. Theories of growth .
6. Angle's classification
7. Theorem's of retention
8. Management of class II Malocclusion
9. Headgears
10. Define, classify Habits, explain thumbsucking habit

SECTION C

15*2=30

1. Prenatal and postnatal of mandible.
2. Define Classify myofunctional appliance, write in detain about Activator.

Shri Ashutosh Sanjay Betterment exam

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

MIDSR

Department of Orthodontics

Betterment Internal Assessment Examination- I / II / III

20/20

Roll No.	Question Booklet Version	Question Booklet Sr. No.
	A B M P R S V W	0 1 2 3 4 5 6 7 8 9

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination
Betterment exam

Subject	Paper
ortho	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 23/5/2024

1	2	3	4	5	6	7	8	9	10
X	X					X	X	X	
					X				
			X	X					X
		X							

11	12	13	14	15	16	17	18	19	20

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space In Question Booklet Provided

67/80

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	20/20
Section - B	22/30
Section - C	25/30

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of orthodontics & dentofacial orthopaedics

Name of Student :- RAJPUT ASHUTOSH SANJAY.

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

Betterment exam.

SECTION - B

Date : 23/5/24

Time :

Sec A $\frac{20}{20}$ + Sec B $\frac{22}{30}$ + Sec C $\frac{25}{30}$ = $\frac{67}{80}$

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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Q.1 → ?

→ orthodontics is that branch of dentistry concerned with prevention, interception of correction of malocclusion & other abnormalities of the dento-facial region.

The word orthodontic is derived from the Greek words orthos meaning to correct & odontos meaning teeth.

- The term orthodontics was first coined by Le Felon.

- The british society for the study of orthodontics has defined the speciality as orthodontics includes the study of the growth & development of the jaws & face particularly & the body generally as influencing the position of the teeth the study of action & reaction of internal & external influences on the development & the prevention & correction of arrested & perverted development.

-> Jackson's triad

The aims & objectives of orthodontics therapy have been summarised by Jackson as the jackson's triad.

a. functional effrenciency.
b. structural balance.
c. Esthetic Harmony

a. functional efficiency

- Many malocclusions affect normal functions of the stomatognathic system.

- The orthodontic treatment aim improving the functioning of the oro-facial apparatus

Structural balance

- The oro-facial region consists of the dento alveolar system the skeletal tissues the soft tissue including musculature.

Esthetic Harmony

- many ● malocclusions are associated with unsightly appearance of teeth & can thus affect the individuals self image, well being, success in society.

2.2 —>?

-> Growth

"The self multiplication of living substance"
J.S Huxley.

"An increase in size"
Todd.

Development

"Development" according to Todd "is progress towards maturity".

MIDSR

Page No. | Date: / /

According to moyes, development refers to all the naturally occuring unidirectional changes in the life of an individuals from its existences as a single cell to its elaborate.

Methods of Gathering Growth data:-

The various growth studies can be broadly grouped as:

a. Longitudinal studies
b. Cross sectional studies
c. Semi - longitudinal studies.

a. Longitudinal studies → The observation & measurements pertaining to growth are made on one person at regular intervals over prolonged period of time.

b. cross - sectional studies
- observation & measurement made on different samples & studied out different periods.

c. Semi - longitudinal studies
- combine the cross - sectional & longitudinal methods.

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Page No. | Date: / /

Q.3 Development of palate

→ the palate is formed by contribution of
a. maxillary process
b. palatal shelves given off by maxillary proces
c. fronto nasal process.

- The fronto-nasal process gives rise to the pre-maxillary region while the palatal shelves form the rest of the palate. palatal shelves grow medially, their union is prevented by the presence of the tongue.

A. Alteration in biochemical & physical consistency of the connective tissue of the palatal shelves.

B. Alteration in vasculature & blood supply to the palatal shelves.

C. Appearance of an intrinsic shelf force.

d. Rapid differential mitotic activity

e. muscular movements

f. withdrawal of the embryonic face from against the heart prominence results in slight jaws opening. This results in withdrawl of the tongue from between the palatal shelves from a vertical to a horizontal position

MIDSR

Page No. | Date: / /

Q.4 Space maintainers

→ premature loss of deciduous teeth can cause drifting of the adjacent teeth into the space. It can result in abnormal axial inclination of teeth. Spacing between teeth & shift in the dental midline. premature loss of deciduous anteriors leads to very little orthodontic changes.

Space maintainer is a device used to maintain the space created by the loss of a deciduous tooth.

A space maintainer should fulfil the following requirements.

1. It should maintain the entire mesio-distal space created by a lost tooth.

2. It must restore the function as far as possible & prevent over-eruption of opposing teeth.

3. It should be simple in construction.

4. It should be strong enough to withstand the functional forces.

5. It should not exert excessive stress on adjoining teeth.

6. It must permit maintenance of oral hygiene

It must not restrict normal growth & development & natural adjustment that takes place during the transition.

8. The space maintainer should not come in the way of other function.

Q5 → ?

① Genetic theory

- this theory simply states that all growth is controlled by genetic influence & is pre-planned by genetic influence & is pre-palned.

② Sutural theory.

- Paired parallel sutures that attach facial areas to the skull & the cranial base region pus the naso-maxillary complex forward to race its growth with that of the mandible.

③ Cartilagenous theory:

Intrinsic growth controlling factors are present in cartilage & periosteum with sutures being only secondary.

④ The functional matrix concept.

The functional matrix hypothesis claims that the origin, form, position, growth, maintenance of all skeletal tissues & organs are

always secondary, compensatory.

⑤ Van Limbergh's theory.

Five factors controlls growth

Intrinsic genetic factor, Local epigenetic factor, General epigenetic factor. Local environmt factors General environmt factor.

⑥ Enlows expanding V principle

⑦ Enlows counterpart principle.

⑧ Neutrophic process in oro-facial growth.

Q⑥ ——→ ?

→ Edward Angle introduced a system of classifying malocclusion in 1899.

① Angles class I
② Angles class II
③ class II division 1.
④ class II division II
⑤ class II subdivision.
⑥ class III malocclusion
⑦ True class III
⑧ Pseudo class III
⑨ Class III subdivision.

Angles class I → The mesio buccal cusp of the maxillary first permanent molar occludes in the buccal groove of mandibular first permanent molar.

Angles class II → The disto-buccal cusp of the upper first permanent molar occludes in the buccal groove of the lower first permanent molar.

Class II division 1 : Proclined upper incisors with a resultant increase in overjet. a deep incisor overbite.

Class II division 2 : Inwardly inclined upper central incisors.

3.7 Theorem's of retention

→ Theorem 1 : Teeth that have been moved tend to return to their former position.

Theorem 2 → Elimination of the cause of malocclusion will prevent relapse.

Theorem 3 → Malocclusion should be over-corrected as a safety factor.

Theorem 4 → proper occlusion is a potent factor in holding teeth in their corrected position.

Theorem 5 → Bone & adjacent tissues must be allowed time to reorganise around newly positioned teeth.

Theorem 6 : If the lower incisors are placed upright over basal bone they more likely to remain in good alignment.

Theorem 7 : Corrections carried out during periods of growth are less likely to relapse.

Theorem 8 The farther the teeth have been moved the lesser is the risk of relapse.

Theorem 9 - Arch form, particularly in the mandibular arch cannot be permanently altered by appliance therapy.

Theorem 10 - Many treated malocclusion require permanent retaining device.

Q-8 → ?

→ There are three basic approaches to the treatment of class II, division 1 malocclusion.

1. Growth modification.
2. Camouflage.
3. Surgical correction.

Growth modification:

correction of mandibular deficiency:

- use of myofunctional appliances such as activator or functional regulator, Herbst appliance jasper jumper.

Correction of maxillary prognathism:

class II malocclusion exhibiting maxillary prognathism can be intercepted by the use of face bow.

Camouflage

- Extraction of certain teeth & moving the rest of teeth into the space created.

Surgical correction

In patients severe skeletal malrelationship. skeletal pattern a maxillary set back or a mandibular advancement is undertaken.

Q.9 —>?

Headgears

→ Headgears are the most commonly used extra-oral orthopaedic appliance. They are used during the growth period & to intercept or correct certain skeletal malocclusion as well as to distalize the maxillary dentition & maxilla itself.

Headgears also form one of the important adjuncts to control or gain anchorage. They derive anchorage from the cervical or cranial regions.

The headgear - face bow three components

① Face bow.
② The force element
③ the head cap or cervical strap.

Types of headgears.

1. cervical headgears.
2. occipital headgears
3. combination headgears.

Uses of Headgears

① orthopaedic effect.

② Anchorage augmentation.

③ Distalization of molars

④ Molar rotation.

⑤ Space maintainance

forces applied onto the maxilla can be used to restrict its downward & forward growth. The distal force in such a case should be applied through the centre of resistance of the maxilla. It has been suggested that forces in the range of 350-450 gms on each side for a minimum of 12-14 hours/day are required. pre-adolscent years are best tapped in

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(DENTAL COLLEGE), LATUR

Department of orthodontics

Name of Student :- Rajput Ashutosh Sanjay.

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

Betterment examination

SECTION - C

Date : 23 / 5 / 24 Sec C

Time :

25/30

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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3.1 —>?

—> Perinatal embryology of mandible

About the 4th week of intra-uterine life, the developing brain & the pericardium form two prominent bulges on the ventral aspect of the embryo. these bulges are separated by the primitive oral cavity or stomodeum

The floor of the stomodeum is formed by the bucco-pharyngeal membrane. Which separates it form the foregut.

The pharyngeal arches are laid down on the lateral & ventral aspects of the cranial-most part of the foregut that lies in close approximation with the stomodeum. Initially there are six pharyngeal arches, but the fifth one usually disappears as soon as it is formed leaving only five they are separated by four branchial grooves. The first arch is called the mandibular and & the second arch hyoid arch. the other arches do not have any specific names.

1. A central cartilage rod that form the skeleton of the arch.
2. A muscular component formed as branchiomere.
3. A vascular component
4. A neural element

Meckels cartilage:

The meckles cartilage is derived from the first branchial arch around the 41st - 45th day of intrauterine life. It extends from the cartilaginous otic capsule to the midline & Symphysis & provides a template for guiding the

1) The mental ossicles
2) Incus & malleus
3) Spine of sphenoid bone
4) Anterior ligament of malleus
5) Spheno-mandibular ligament.

Endochondral bone formation.

~~endochandral bone formation~~

1. The condylar process

2. The coronoid process

3. The mental region.

condylar process - at about 5th week of intra-uterine life, an area of mesenchymal condensation can be seen above the ventral part of the developing mandible.

Coronoid process - At the 10-14 week of intrauterine life, the secondary cartilage of coronoid process is believed to grow as a response to the developing temporalis muscle

Mental region - In the mental region, on either side of the symphysis, one or two small cartilages appear & ossify in the 7th month of uterine life to form variable numbers of mental ossicles.

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Page No. | Date: / /

post natal growth of mandible

Of the facial bones, the mandible undergoes the largest amount of growth post-natally & also exhibits the largest variability in morphology. While the mandible appears in the adult as a single bone, it is developmentally & functionally divisible into several skeletal sub-units. The basal bone or the body of the mandible forms one unit, to which is attached the alveolar process.

Ramus

The ramus moves progressively posterior by a combination of deposition & resorption.

1> To accomodate the increasing mass of masticatory muscles inserted into it.

2> To accomodate the enlarged breath of the pharyngeal space.

3> To facilitate the lengthening of the mandibular body, which in turn accomodates the erupting molar.

Corpus

additional space made available by means of resorption of the anterior border of the ramus is made use of to accomodate the erupting permanent molars

Angle of mandible

On the lingual side of the angle of mandible resorption takes place on the postero-inferior aspect while deposition occurs on the anterior superior aspect.

The lingual tuberosity

- The lingual tuberosity is a direct equivalent of the maxillary tuberosity which forms a major site of growth for the lower bony arch.

The alveolar process.

- Alveolar process develops in response to presence of tooth buds.

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Page No. | Date: / /

Q.2 ——> ?

⇒ Functional appliance or myo-functional appliances as they are referred to are appliances that depend upon the oro-facial musculature for their action.

functional appliances are used for growth modification procedure that are aimed at intercepting & treating jaw discrepancy.

① An increase or decrease in jaw size

② A change in spatial relationship of jaws

③ Change in direction of growth of the jaws

④ acceleration of desireble growth.

Classification

(I) Tooth borne active appliance.
tooth borne passive appliance.
Tissue borne passive appliance

(II) myotonic appliances
myodynamic appliances

(III) Removable functional appliance
fixed functional appliance

(IV) Group I appliance
Group II appliance
Group III appliance

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Page No. | Date: / /

Activator

Kingsley in 1879 devised a vulcanite palatal plate to be used in patients having retruded mandible this vulcanite plate.

Indications

It is primarily used in actively growing individuals with favourable growth pattern the maxillary & mandibular teeth should be well aligned. the mandibular incisors should be upright over the basal bone.

Advantages of activator therapy

1. It uses existing growth of jaws
2. During treatment the patient experience improved oral hygiene
3. The intervals between appointments are long
4. The appointments are usually short due to need for minimal adjustment
5. Due to the above reasons they are more economical

Disadvantages of activator therapy

1. Requires very good patient co-operation
2. The activator cannot produce a precise detailing & finishing of the occlusion. Thus post-treatment fixed appliance therapy maybe needed. for detailing of the occlusion
3. It may produce moderate mandible rotation. Thus activators are not used in cases of excessive lower face height

Mode of action of activator

a. prevention of further forward growth of the maxillary dento-alveolar process.

b. movement of the maxillary dento-alveolar process distally.

c. reciprocal forward force on the mandible.

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Page No. | Date: / /

construction bite

~~The~~

fabrication of activator

Impressions :- (1) Study models
(2) Working models

Bite registration

(1) A horseshoe shaped wax block is prepared for insertion between the upper & lower teeth.

(2) The patient mandible is guided to sagittal position.

(3) Patient asked to place mandible at sagittal position.

12

Rohe Healthe Tanaji

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Department of Orthodontics

Internal Assessment Examination- I / II / III

18/20

Roll No.	Question Booklet Version	Question Booklet Sr. No.
	A B M P R S V W	0 1 2 3 4 5 6 7 8 9

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination
Betterment Examination

Subject	Paper
Orthodontics	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date 12/03/2024

USE BLUE BALL POINT PEN ONLY

	1	2	3	4	5	6	7	8	9	10
A	X	X					X	X		
B						X			X	
C				X	X					X
D			X							

	11	12	13	14	15	16	17	18	19	20
A										
B										
C										
D										

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ☑	A ■	A ☒	A ☒
B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

63/80

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	18
Section - B	20
Section - C	25

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Department of Orthodontics

Name of Student :- Kale Preetik Tanaji

Roll No. of Student :- | | | | | |

Name of the Examination :- Betterment **Internal Assessment Examination**

SECTION - B

Date : 12/03/24

Time :

Sec B $\frac{20}{30}$ + Sec C $\frac{25}{30}$ = $\frac{45}{60}$

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Q1.

Orthodontics

Orthodontics is that branch of chemistry concerned with prevention, interception and correction of malocclusion and other abnormalities of the dento-facial region.

Jacoson's Triad-

- Jacoson's Triad represents the three main objectives of orthodontic treatment
- They are as follows

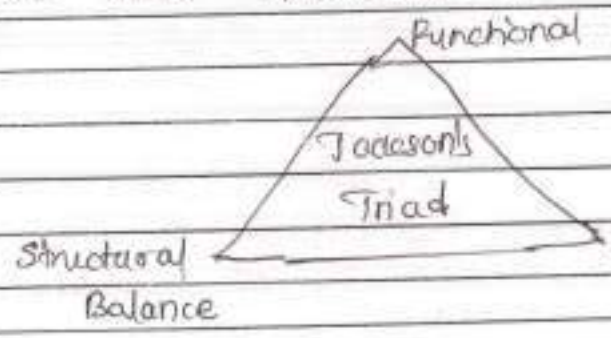
(A) Functional Efficiency:- It should be aimed at improving the functioning of orofacial appliances.

(B) Structural Balance:-

- The orofacial region consists of :(i) dentoalveolar system,
  (ii) Skeletal system
  (iii) Soft tissue including musculature.

(C) Esthetic Harmony:-

- The orthodontic treatment should aim at improving the esthetic of individual orthodontic care to improve the appearance of teeth and face



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(2) Growth & development:-

* Growth:-

- According to Huxley, "The self multiplication of living substance."
- According to Meredith, "Entire series of sequential anatomic and physiologic changes from the beginning of prenatal life to senility."

* Development:-

- According to Todd, Development is progression towards maturity.
- According to Moyers, Development refers to all naturally occuring unidirectional changes in the life an individual from its existence as single cell to its elaboration as a multifunctional unit terminating in death.

* Methods of Studying growth:-

According to Profitt there are two types of main approaches to studying physical growth.

1) Measurement Approaches:-

- Comprise of measurement technique that are carried out on living individuals.
- These methods do not harm

2) Experimentation Approaches:-

- These are destructive techniques when animal being studied is sacrificed.
- These are obviously not carried out on humans.

I) Craniometry:-
- It is study of shape and form of human head or skull.
- This practice consists of taking precise measurements using landmarks on skull.

II) Anthropometry:-
- Refers to measurement of human individual.
- Involves systemic measurement of physical properties of the human body, like body size and shape.

III) Biometric tests

IV) Vital staining

V) Radioisotopes

VI) Implants

VII) Radiographic Techniques :-

Include:-

• Cephalometry :-
Radiograph of craniofacial region is studied.

• Hand-Wrist X Rays:-
Radiographs of hands-wrist region used to study biological or skeletal age markers.

IX) Natural Markers:-
Developmental features of bone can be used to study growth by means of serial radiographs.

X) Comparative Anatomy

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Page No.	Date: / /

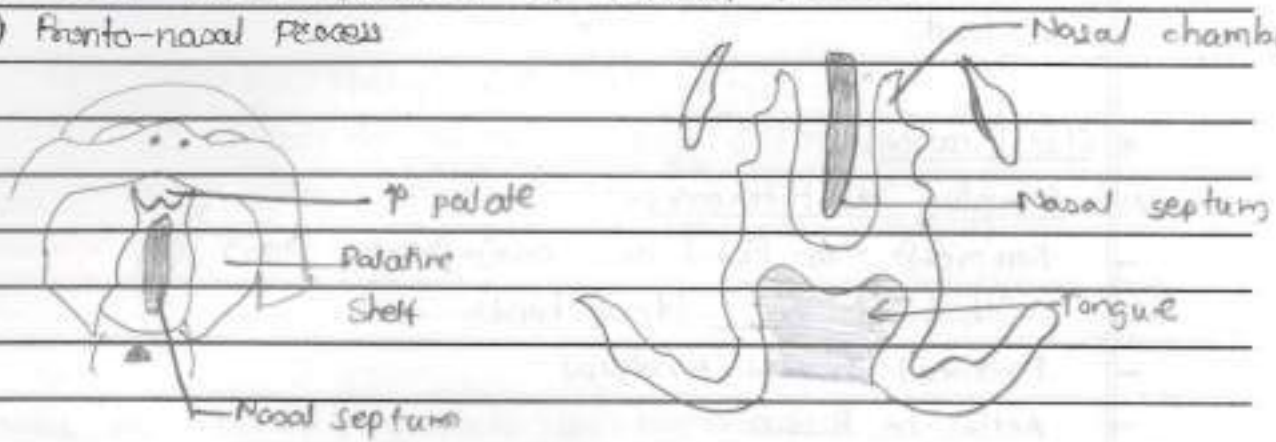
(3) Development of Palate:-

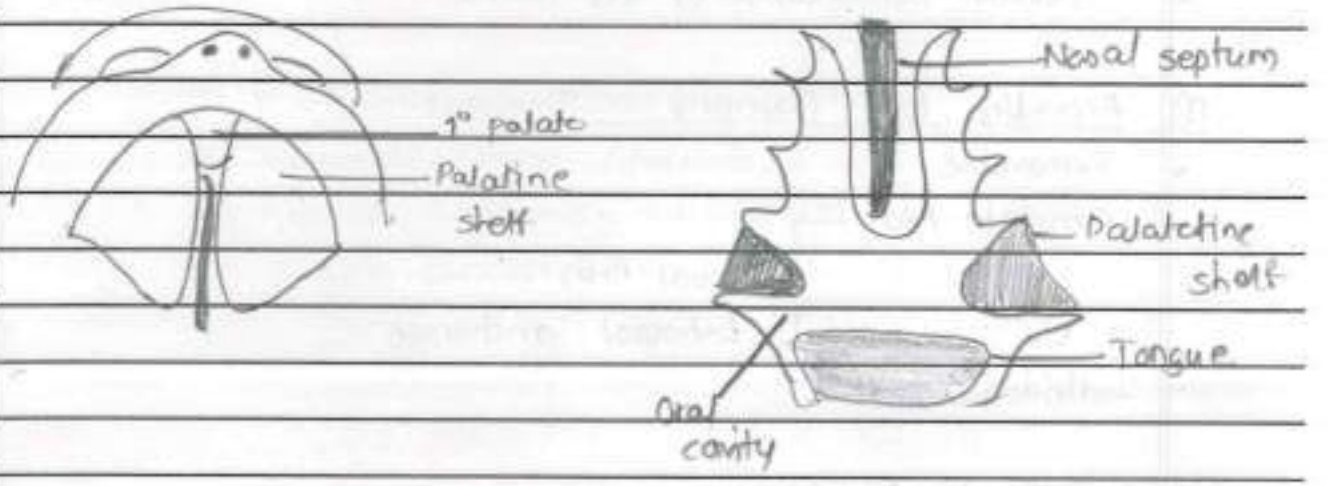
The palate is formed by contributions of the:

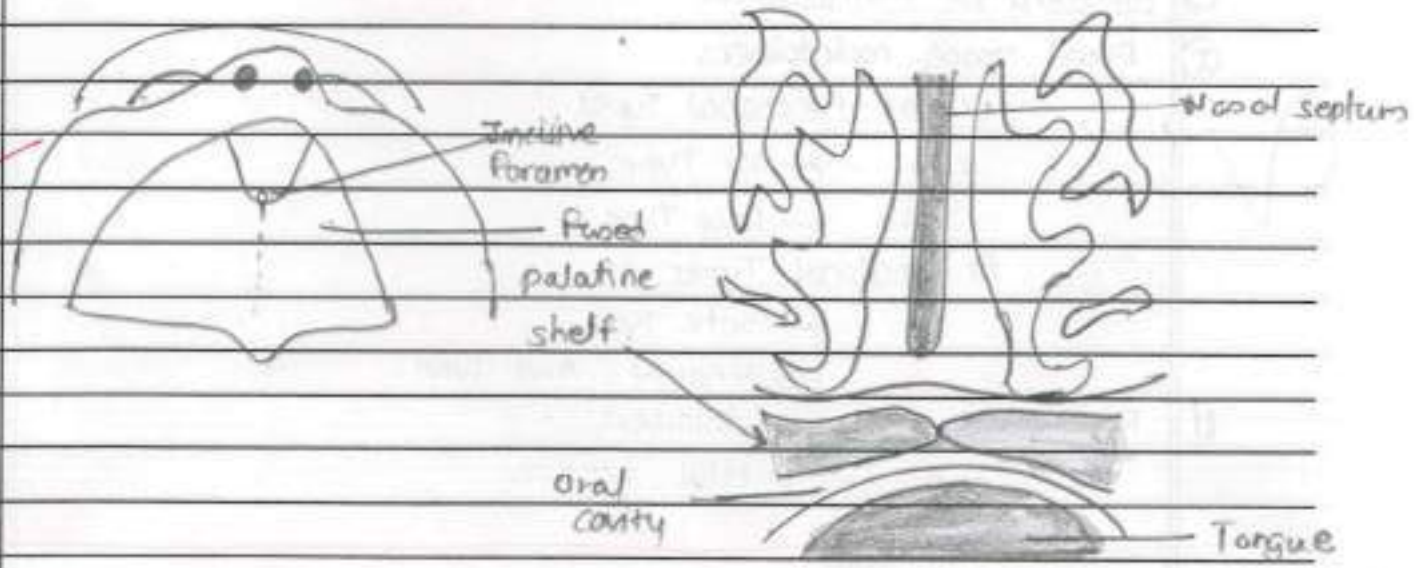
a) Maxillary Process

b) Palatal Shelves given off by maxillary process.

c) Fronto-nasal Process







(4) Space Maintainers:-

* Definitions:-

A fixed or removable orthodontic appliance placed to maintain space created by premature loss of tooth or teeth.

* Classification:-

A) According to Hitchcock:-

- Removable or Fixed or Semi-fixed
- With bands or without bands
- Functional or non-functional
- Active or Passive
- Certain combination of the above.

B) According to Raymond C. Thurow:-

- Removable
- Complete Arch
  - Lingual Arch
  - Extraoral anchorage
- Individual tooth

C) According to Henrichsen:-

(I) Fixed space maintainers

1) Non-Functional Types
   - Bar Type
   - Loop Type

2) Functional Types
   - Pontic Type
   - Lingual Arch Type

(II) Removable space maintainers
- Acrylic partial denture

⑤ Theories of Growth:-

A) Depending on the area above where growth centres occur

I) Genetic Theory (Brodie)
II) Sutural dominance theory (Sicher)
III) Functional matrix theory
IV) Cartilagenous theory

B) Based on other concepts or hypotheses - Related to the craniofacial growth

I) Von Limbargho compromise theory
II) Cybernetic theory (Petronic)
III) Hunter & Enlows equivalent growth concept theory

1/2

⑥ Anglels Classification:-

I) Anglels Class-I:-

- Characteristic :- The mesiobuccal cusp of the maxillary first permanent molar occludes in the buccal groove of mandibular first molar.

II) Anglels Class-II:-

- The distobuccal cusp of maxillary first permanent molar occludes in the buccal groove of the mandibular peermant first molar.

- Class-II malocclusion further classified into 2 divisions:

Class-II, Division-I:-

- It is characterised by proclined upper incisors with resultant increase in overjet.

Class-II, Division-II:-

- It is characterised by lingually inclined upper central incisors & labially tipped upper lateral incisor overlapping the central incisor.

III) Anglels class-III:-

- The mesiobuccal cusp of maxillary first permanent molar occludes in the interdental space between the mandibular first & second molar.

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(7) Theories of Retention :-

a) Theorem - 1 :-

- Teeth that have been moved tend to return to their former position.

b) Theorem - 2 :-

- Elimination of the cause of malocclusion will prevent relapse.

c) Theorem - 3 :-

- Malocclusion should be overcorrected as a safety fact.

d) Theorem - 4 :-

- Proper occlusion is a potent factor in holding teeth in their corrected position.

e) Theorem - 5 :-

- Bone & adjacent tissue must be allowed time to reorganize around newly positioned teeth.

f) Theorem - 6 :-

- If the lower incisors are placed upright over basal bone, they are more likely to remain in good alignment.

g) Theorem - 7 :-

- Corrections carried out during period of growth are less likely to relapse.

h) Theorem - 8 :-
The further teeth have been moved, the lesser is the risk of relapse.

i) Theorem - 9 :-
- Arch form particularly in the mandibular arch cannot be permanently altered by appliance therapy.

j) Theorem - 10 :-
- Many treated malocclusions require permanent retaining devices.

(9) Head - Gear:-

It is the orthodontic or orthopaedic appliance which deliver force intraorally or to the chin from a cranial extraoral support.

Types of Head Gear:-

- Cervical Headgear
- Occipital Headgear
- High pull headgear
- Combination Headgear

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Page No. | Date: / /

(16)

* Habit :- Habbit can be defined as a fixed or constant practice established by frequent repetition.

Classification:-

a) Useful & Harmful Habits :-
b) Empty & Meaningful Habits
c) Pressure & non-pressure habit
d) Compulsive & Non-compulsive habit
e) Kingsleyls classification
   - Functional habits
   - Muscular habits
   - Combined muscular habits

* Thumb Sucking :-

- Place of thumb or one or more fingers at varying depth into the mouth, is called thumb-sucking.

* Effects of Thumb Sucking:-

- Effects on Maxilla :- V shaped narrow palate, post. crossbite
- Effect on Maxillary teeth :- Spacing in maxillary anteriors
  Palatal
- Effect on interarch relationship :- Decreased overbite
- Effect on Upper Lip :- Short hypotonic, in-competant upper lip.
- Effect on Lower Lip :- Hyperactive lower lip with incompetant, increased mentalis activity
- Effect on Tongue :- Lower positioned tongue.
- Effect on Mandibular teeth :→
  Retroclination of mandibular anteriors.

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(DENTAL COLLEGE), LATUR

Department of Orthodontics

Name of Student :- Kale Pratik Tanaji

Roll No. of Student :- | | | | | |

Name of the Examination :- Betterment **Internal Assessment Examination**

SECTION - C

Date : 12 / 03 / 24

Time :

Sec-C

25/30

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LAQ.

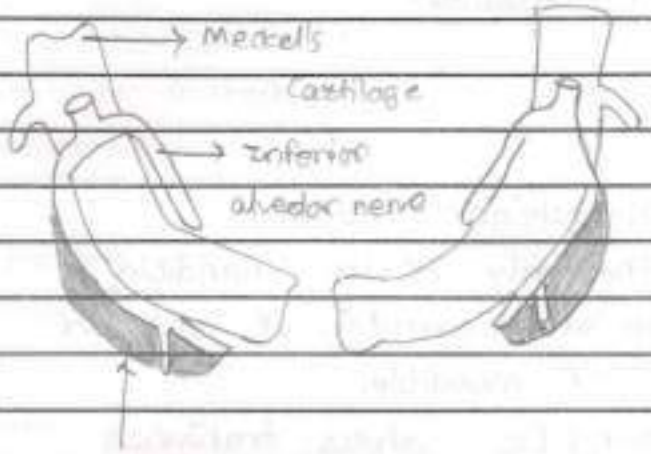
Q1. Prenatal and Postnatal of Mandible:-

(A) Prenatal embryology of Mandible:-

- About the 4th week of intra-uterine life, the developing the brain and pericardium form two prominent buldges on the ventral aspect of embryo.
- The buldges are seperated by primitive oral cavity or stomodeum.
- Initially there are six pharyngeal arches but fifth one usually disappears as soon as forming leaving only five.
- First arch is called mandibular arch
- Second arch is hyoid arch.
- Rest of the arches don't have names.

(B) Meckell's Cartilage:-

- It is derived from the first branchial arch around 41-45th day of intrauterine life.
- It provides a template for guiding the growth of the mandible.
- A major portion of the Meckells cartilage disappears
- The ossifying membrane is located to lateral to the Meckells cartilage and its accompanying neuromascular bundle.
- As ossification continues Meckells cartilage becomes surrounded & invaded by bone.



Initiation of ossification around Meckel's Cartilage

Figure:- Meckel's Cartilage

* Endotracheal Bone Formation:-

- Endotracheal bone formation is seen only in 3 areas of the mandible.
- They are as follows:

1) The condylar process

2) The coronoid process

3) The Mental Region

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Page No. | Date: / /

★ Postnatal Growth of Mandible:-

a) Body of Mandible:-

- It undergoes anteriopesterior growth,
- the length of the body of the mandible increases because of resorption of anterior border of ramus of mandible.
- Body of the mandible shows transverse expansion of the 'V' principle.

b) Ramus of Mandible

- Resorption of bone occurs at anterior border & deposition of bone at posterior border,
- Shifting of ramus of mandible occurs posteriorly & it becomes upright.
- Transverse deposition of bone occurs on medial surface & resorption over lateral surface.

c) Coronoid Process:-

- Growth pattern of anterior border of ramus is followed.
- Growth pattern of anterior border of ramus dictates the growth of coronid process.
- Transverse deposition of the bone occurs in the medial surface while the resorption occurs over the lateral surface.

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Page No. | Date: / /

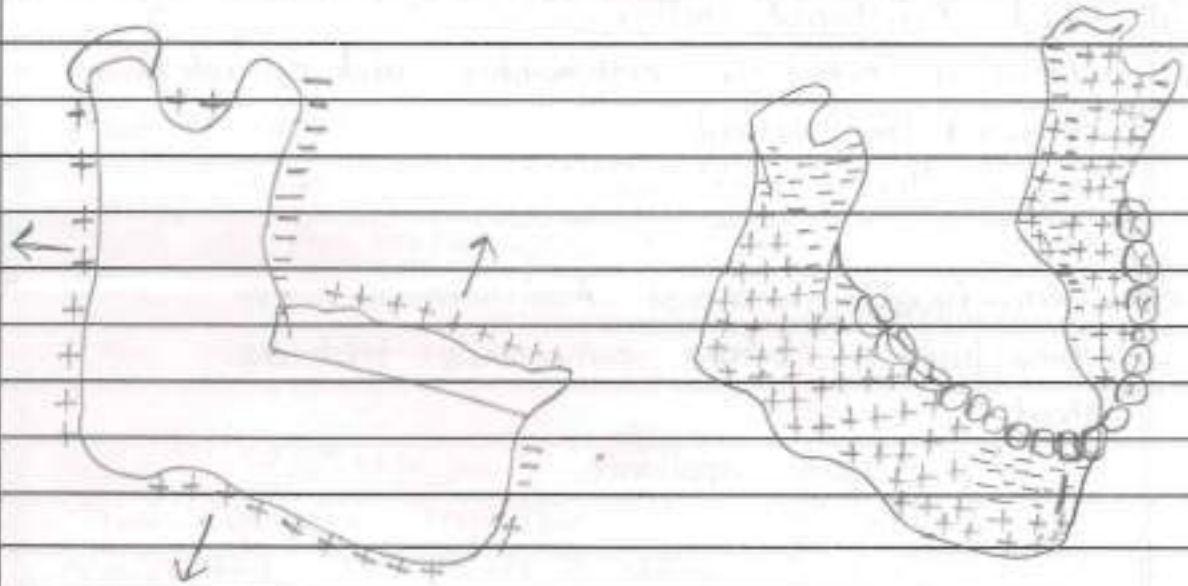
d) Condylar Process:

- Condyle of mandible grows superiorly as well as posteriorly.

- This growth occurs when there is forward change in position of mandibular by capsule of the matrix.

e) Symphysis of Mandible:-

- Symphyseal growth occurs because of resorption in alveolar bone just above the chin point at anterior border of mandible.



Bone remodelling in mandible

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Qe

* Myofunctional Appliances:-

- Myofunctional appliances are the orthodontic appliances that depend on the orofacial musculature for their action.
- The force component of Myofunctional appliances are derived from orofacial musculature.

Classification of Myofunctional Appliances:-

Based on the fixability:-

a) Removable Functional Appliances:-

These can be removed or inserted by patient at will.

e.g. Activator

b) Fixed functional appliances:-

- Fixed on teeth by orthodontist and cannot be removed by patient.

e.g. - Herbst Appliance

c) Semi-fixed Functional Appliance:-

- They have certain components that are fixed.

e.g. Bass appliance

Myotonic and Myodynamic appliances:-

a) Myotonic Appliances:-

These depend on muscle mass for action.

b) Myodynamic Appliances:-
- They are dependant on muscle activity for their function.

Classification by Profitt:-

a) Tooth Borne passive appliances:-
- These have no intrinsic force generating components like springs or screws.
- Depend on muscular stretch & muscular activity

b) Tooth borne active appliances:-
- Modifications of activator & bionator
- Has force generating components

c) Tissue Borne Appliances:-
- They are placed in vestibule
- Have no contact with dentition or little contact.

Based on the transmission of force:-

a) Group-I Appliances:-
These transmit muscle force directly to teeth

b) Group-II Appliances:-
- These reposition mandible and resultant force is transmitted to teeth & other structures

c) Group-III Appliances:-
- These also reposition mandible but they operate in vestibule, outside dental arch.

Activators:-

- Activator is an orthodontic appliance that has ability to activate muscle forces.

- Devised by Andersen and Haupl.
- Also called Norweigh appliances because they were in Norway while daveloping this appliance.

Indications:-

- Class-II, division 1 malocclusion
- Class-II, division 2
- Class-III malocclusion
- Class-I open bite
- Class-I deep bite
- As a preliminary treatment before major fixed appliance therapy to improve skeletal jaw relations.
- For past treatment retention
- Children with lack of vertical development in lower facial height.

Contraindications:-

- The appliance is not used for correction of class-I problems of crowded teeth caused by disharmony between teeth size & jaw size.

- The appliance is contraindicated in children with excess lower facial height and extreme vertical mandibular growth..

- This not used in children whose lower incisors are severely procumbent.

- This appliance cannot be used in children with nasal stenosis caused by structural problems within the nose or chronic untreated allergy

- The appliance has limited application in non-growing individuals.

* Mode of Action of Activators:-

- This appliance loosely fits in mouth.
- Patient has to move mandible forwards to engage the appliance.
- This results in stretching of elevator muscles of mastication, which starts contracting thereby setting up a myotatic reflex.
- This generates kinetic energy, which causes:

a) Prevention of further growth of maxillary dentoalveolar process distally.

b) Movement of the maxillary dentoalveolar process distally.

c) A reciprocal forward force on the mandible.

- In addition to this, myotatic reflex, a condylar adaptation by backward & upward growth occurs
- Third factor is force generated while swallowing and during sleeping.

* Advantages:-
- Uses existing growth of jaws.
- During treatment, patient experiences minimal oral hygiene problems.
- The intervals between appointments are long.
- Appointment will be short due to minimal adjustments.
- Due to above reasons, they are more economical

* Disadvantages:-
- Requires good patient co-operation.
- This cannot produce a precise detailing & finishing of occlusion.
- May produce moderate mandibular rotation

* Modifications:-
- Bow activator of A.M. Shortz.
- Wunderer's modification.
- Reduced activator or cybernator of Schmuth
- The propulsor

MAEER Pune's Ajit Madhavrao Wanole

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

MIDSR

Department of Orthodontics & Dentofacial Orthopedics

Internal Assessment Examination- I / II / III

18/20

Roll No.	Question Booklet Version	Question Booklet Sr. No.
	A B M P R S V W	0 1 2 3 4 5 6 7 8 9

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination
Betterment exam

Subject	Paper
orthodontics	

Roll No. (In Words)

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : / /20

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A	A	A				A	A	A	
					B				
			C	C					D

11	12	13	14	15	16	17	18	19	20

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A ☒	A ☒
B	B	B	B
C	C	C ☒	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

63/90

ARKED

CURED

Name of Exercise	Marks Obtained
Section - A	18
Section - B	21
Section - C	24

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of Orthodontics & Dentofacial orthopedics

Name of Student :- Ajit Madhavrao Wanole

Roll No. of Student :- | | | | | |

- Betterment exam

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : / /

Time :

Sec B 21/30 Sec C 24/30 = 45/60

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SAQ (1) → 8

Define :- In 1922 The British Society of Orthodontics proposed that Ortho has been defined orthodontics includes the study of the growth the development of the jaws & face particularly & the body generally as influencing the position of the teeth the study of action & reaction of internal & external influence on the development & the prevention & correction of arrested & perverted development

Jackson triad

1) Functional efficiency
2) Structural balance
3) Esthetic harmony.

(1) Functional efficiency :-
- The teeth along with their surrounding structures are required to perform certain & the significant function such as mastication & phonation.

(2) Structural balance :-
- The orofacial region consist of the dentoalveolar system the skeletal system and the soft tissue including musculature.

(3) Esthetic harmony :-
- The orthodontic treatment should also at improving the esthetic of the individual orthodontics care to improve the appearance of the teeth & face.

* Aim of orthodontic (Jackson triad)

AQ

(2) ⟶ ?

* Defination of Growth
  - Growth was defined by many of the researchers which is as follows
  - It is defined as "self multiplication of living substance — J-S Huxley
  - It is defined as increase in size, change in proportion over time — Krogman

* Development :- It is explained as "Development can be considered as a continum of causally related events from the fertilization of ovum onwards.

* Methods of studing growth :-

A) Measurement approaches
B) Experimental approaches
   - Craniometry
   - Anthropometry
   - Bimetric tests
   - Vital staining
   - Radioisotopes
   - Implants
   - Radiographic techniques
   - Natural markers
   - Comparative anatomy

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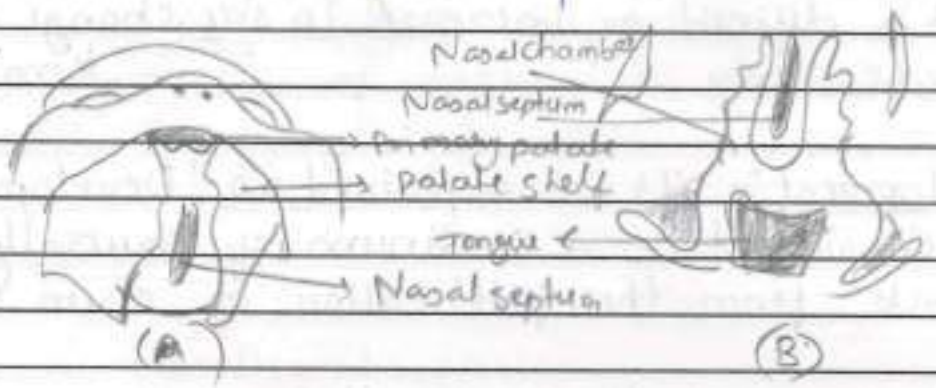
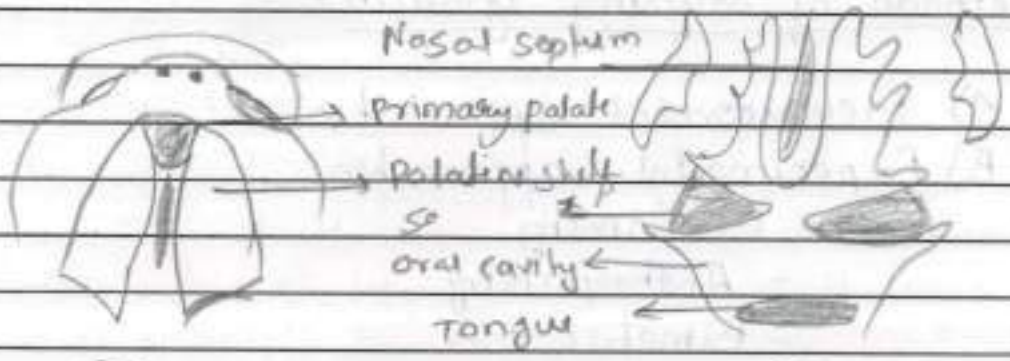
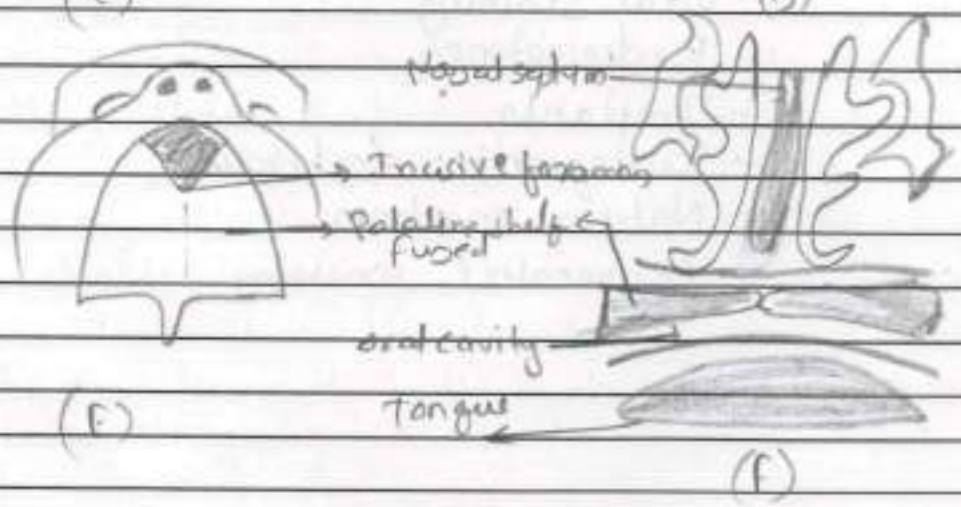
SAQ.

(3) → Development of palate.

→ The palate is formed by contribution of the
a) maxillary process
b) Palatal shelves given off by the maxillary process
c) Fronto-nasal process







AQ (1) → Space maintenero

Define :- A fixed or removable appliance placed to maintain space created by loss of a tooth or teeth.

Classification

(A) According to Hitchcock :-
- Removable or fixed or semi fixed
- With bands or without bands
- Functional or non functional
- Active or passive
- Certain combinations of the above

(B) According to Raymond C. Thurow
① Removable
② Complete arch
- Ungual arch
- Extra oral anchorage
③ Individual tooth

(C) According to Hinrichsen:
① Fixed space maintainers
Class I
a) Non-functional types
i) Bar types
ii) Loop types
b) Functional types
i) Pontic type
ii) Lingual arch type.

② Removable space maintainers
- acrylic partial dentures

SAQ (5)

Theories of Growth

A) Depending on the area where Growth Center occur

- Genetic theory (Brodie)
- Sutural dominance theory (Sicher)
- Functional matrix theory (Melvin moss)
- Cartilaginous theory (James Scott)

(B) Based on other Concepts or Hypothesis related to Craniofacial Growth

- Van Limborghs compromise theory
- Cybernetic theory (Petrovic)
- Hunter & Enlow's growth equivalent Concept

19

(6) Angle Classification.

① Angles class I

- The mesio buccal cusp of the maxillary first permanent molar occluded in the buccal groove of mandibular first permanent molar

② Angles class II

The distobuccal cusp of upper first permanent molar occludes in the buccal groove of the lower first permanent molar

class II malocclusion into 2 division

* Class II division 1 →

It is characterized by proclined upper incisors with resultant increase in overjet.

* class II division 2 →

It is characterized by lingually inclined upper central incisors & labially tipped upper lateral incisor overlapping the central incisors.

③ Class III

- The mesiobuccal cusp of the maxillary first permanent molar occluding in the interdental space blw the mandibular first & second molars

SAS

(7) — Theories of retention

1) Theorem 1
- Teeth that have been moved tend to return to their former position

2) Theorem 2
Elimination of the cause of malocclusion will prevent relapse

3) Theorem 3
Malocclusion should be overcorected as a safety factor.

4) Theorem 4
- Proper occlusion is a potent factor in holding teeth in their corrected position.

5) Theorem 5
- Bone & adjacent tissue must be allowed time to reorganize around newly positioned teeth.

6) Theorem 6
If the lower incisor are placed upright over basal bone they are more likely to remain in good alignment

7) Theorem 7.
Correction carried out during period of growth are less likely to relapse

8) Theorem 8

The farther the teeth have been moved the lesser is the risk of relapse

9) Theorem 9

- Arch form, particularly in the mandibular arch cannot be permanently altered by appliance therapy

10) Theorem 10

- Many treated malocclusions require permanent retaining devices

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SAQ.

(8) - Management of class II malocclusion

Class II malocclusion

Growing Patient

Non growing Patient

Skeletal class II

Dental class II

Dental class II

Skeletal Class II

Maxillary Prognathism

Maxillary Prognathism & mandibular Retrognathism

Mandibular Retrognathism

Mild to moderate Class II

Severe Class II

Headgear to restrict maxillary growth

Headgear and myofunctional therapy

Myofunctional therapy

Maxillary prognathism

mandi progn

Surgical maxillary set back

Surgical mandibular advancement

Orthodontic treatment as needed

Orthodontic camouflage by ~~treatment as~~ guided extraction of some teeth or by distalization

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Ans

(9) Head gear

→ The orthodontic or orthopaedic appliance which deliver force intraorally or to the skin from a cranial extra oral support.

- Type of Head gear

- Cervical head gear
- Occipital head gear
- High pull head gear
- Combination head gear

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SAQ

(10) ——→ ℓ

Habit → Habit can be defined as a fixed or Constant practice established by frequent repetition.

Classification

A) Useful & harmful Habits
2) Empty & meaningful habits
3) Pressure, non pressure & biting habits
4) Compulsive & non compulsive habits
5) Kingsley classification
   - Functional habits
   - Muscular habits
   - Combined muscular habits

- Thumb Sucking Habits
  - It is defined as placement of the thumb or one or more fingers in varying depth into the mouth

Effects of thumb Sucking

1) Effects of maxilla :- V shaped narrow palate, posterior crossbite
2) Effects of Maxillary teeth → Spacing of maxillary Anterior
3) Effects on Inter-arch relationship → Decreased overbite
4) Effects on upper lip → short hypotonic incompetent upper lip
5) Effects on lower lip → Hyperactive lower lip with increased activity
6) Effects on tongue → lower tongue position
7) Effects on mandibular teeth → Retroclination on mandibular anterior

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Roll No. of Student :- | | | | | |

– Betterment Exam

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

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LAQ

(1) About the ←→ ?

Prenatal of mandible

- 4th week of intra-uterine life The developing brain & the pericardium form two prominent bulges on the ventral aspect of the embryo

- Both initially there are six pharyngeal arches but the fifth one usually disappears as soon as it is formed leaving only five.

- They are separated by four branchial grooves
- The first arch is called the mandibular arch & the second arch hyoid arch

1) A central cartilage Rod that forms the skeleton of the arch.
2) A muscular component termed as branchiomeric
3) A vascular component.
4) A neural element.

*Meckel cartilage

- The Meckel's cartilage is derived from the first branchial arch around the 41st - 45th day of intrauterine life. It extends from the cartilagenous otic capsule to the midline or symphysis & provides a template for guiding the growth of the mandible

1) The mental ossicles
2) Incus & Malleus
3) Spine of Sphenoid bone
4) Anterior ligament of malleus
5) Spheno - Mandibular ligament

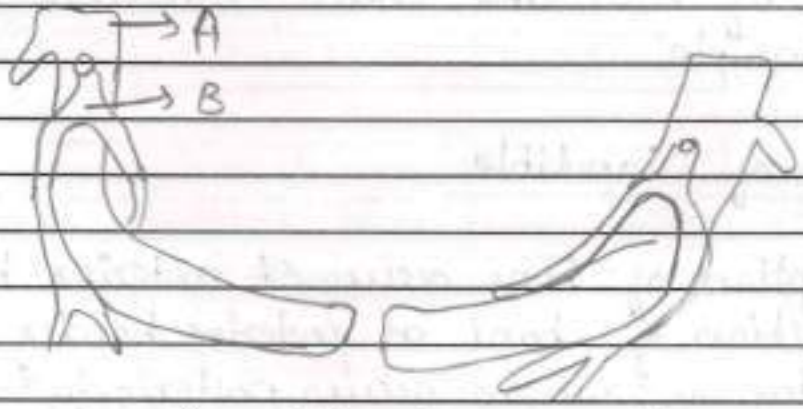

Fig. A) Meckel's cartilages
B) Inferior alveolar nerve

* Endochondral bone formation

→ Endochondral bone formation is seen only in 3 areas of the mandible.
① The condylar process
② The coronoid process
③ The mental region

Postnatal growth of Mandible

1) Body of Mandible

- It undergoes anteroposterior growth
- Length of body of mandible increases because of resorption of anterior border of ramus of mandible
- Body of mandible shows transverse expanding V principle

② Ramus of Mandible

- Resorption of bone occurs at anterior border & deposition of bone at posterior border
- Shifting of ramus occurs posteriorly & it becomes upright
- Transverse deposition of bone occurs on medial surface & resorption over lateral surface.

③ - Coronoid process

- Growth pattern of anterior border of ramus is followed

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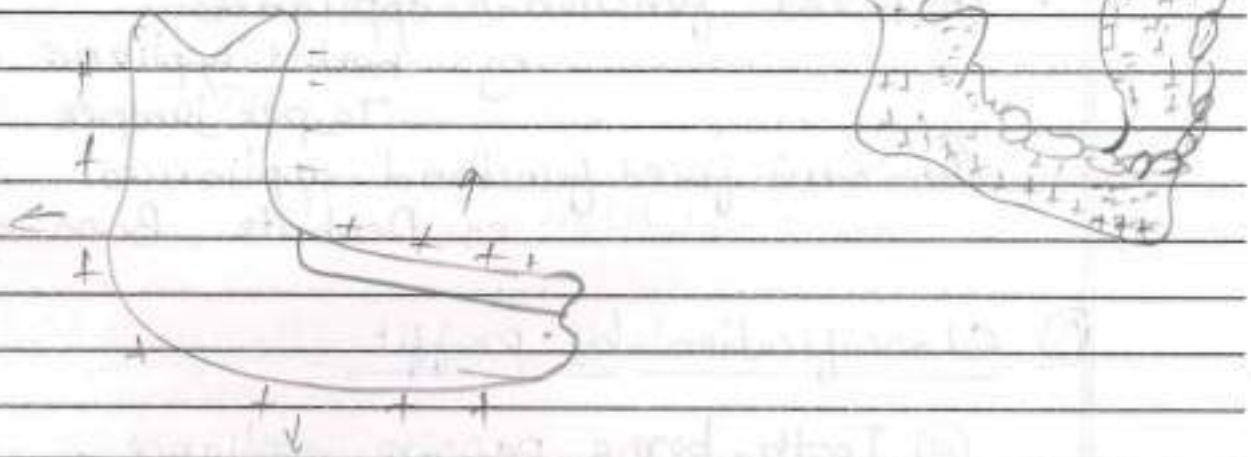
- Growth p:
- Transverse deposition of the bone occurs on medial surface while the resorption over lateral surface.

④ Condylar process

- Condyle of mandible grows superiorly as well as posteriorly
- This growth occurs when there is forward change in position of mandible by capsular matrix

⑤ Symphysis of Mandible

- Symphyseal growth occurs because of resorption in alveolar bone just above the chin point at anterior border of mandible.



* Bone remodeling seen in mandible

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Page No. | Date: / /

LAQ

(27) Myofunctional Appliances

Defin :- loose fitting or passive appliances, which harness natural forces of the oro-facial musculature that are transmitted to the teeth & alveolar bone through the medium of the appliance

Classification

A) Basic classification of functional appliances

(a) Removable functional appliances
eg. activator, Frankel

(b) Fixed functional appliances
eg. herbst appliance, Jasper jumper

(c) Semi fixed functional appliances
eg Denholte, Bass appliances

B) Classification by proffit

(a) Tooth borne passive appliance
eg: Activator, bionator

(b) Tooth borne active appliance
eg:

c) Tissue borne appliance.

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c) Classification by Tom Graber

a) Group A - eg. Catalano, inclined planes

b) Group B → eg activator, Bionator

c) Group C → Eg. Oral screens, Frankel appliance lip bumpers

D) Classification based on the transmission of Force

1) Group I appliances
eg. oral screen

2) Groups II appliances
eg. activator & bionator

3) Group III appliances
eg. frankel appliances
Vestibular screen

E) Classification into Myotonic & myodynamic appliances

(1) Myotonic appliances
(2) Myodynamic appliances

* Activator

- Kingsley in 1879 devised a vulcanite palatal plate to be used in patient having retruded mandible

Mode of action of activator

According to Andersen & Haupl the activator induces musculoskeletal adaptation by introducing a new pattern of mandibular closure.

- The appliance loosely fits into the mouth
- the patient has to move the mandible forward to engage the appliance
- This results in stretching of the elevator muscles of mastication which starts contracting thereby setting up a myotactic reflex.
- This generate kinetic energy

a) Prevention of further forward growth of the maxillary dento-alveolar process

b) Movement of the maxillary dento alveolar process distally

c) A reciprocal forward force on the mandible.

Indication

- Class II division 1 malocclusion
- class II division 2 malocclusion
  Class II malocclusion
- Class I open bite malocclusion
  Class I deep bite malocclusion

Contraindication

1) not used in correction of class I problems of crowded teeth caused by disharmony b/w ~~teeth~~ size & jaw size.

2) Contraindicated in children with excess lower facial height & extreme vertical mandibular growth

Shingare Ranjeet . Deepak

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF OMDR

MID TERM EXAMINATION

12/60

Roll No.	Question Booklet Version	Question Booklet Sr.No
0	A 0	0
	B 1	1
	M 2	2
	P 3	3
	R 4	4
	S 5	5
	V 6	6
	W 7	7
	8	8
	9	9

Answer Sheet No.
(write this no on your question booklet)
Name of Examination

Subject	Paper

Roll No. (In Words)

Question booklet version (In words)

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Candidate's Signature | Invigilator's Signature

Date : / /200

No.	1	2	3	4	5	6	7	8	9	10
A								X		X
B										
C							X			
D	X									

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A		X								
B			X							
C										
D										X

0 0 /10

USE BLUE BALL POINT PEN ONLY

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2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Wrong
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Don On This Answer Sheet Use Free Space in The Question Booklet Provided

12
60

MARKS SECURED

Betterment exam.

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of OMDR

Name of Student :- Shingare Ranjeet Deepakrao

Roll No. of Student :- | | | | | |

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : / /

Time :

03/10

Ranjeet.

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Sign. of Invigilator

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1) Apthus ulcer.

A small shallow sore inside the mouth or at the base of the gums

10

It is most common ulce

Clinical features.

- pain at that region
- difficult to swallow/
  speaking
- most common site is
  - later boarder of
  - vestibular region
  -

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Page No. | Date: / /

7)

Lichen planus

Treatment of lichen planus. corticosteroid. are used for that

topical Retinoic acid.
systemic Retinoic acid
- Antimycotic

01

9) OSMF

oral Submucous Fibrosis.

Clinical Feature of OMFS.

1)- restricted mouth opening

2) blanching are seen.

3) burning sensation on eating spicy food

Betterment

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(DENTAL COLLEGE), LATUR

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Department of OMDR.

Name of Student :- Shingare Ranjeet Deepakrao

Roll No. of Student :- 04

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : / /

Time :

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ameloblastoma

ameloblastoma is unicentric nonfunctional.

- clinical feature

  - most common seen in m aswell as female.
  - most common site is mandible
  - pain

- R/g feature
  - Soap bubble appearance seen.
  - Honey comb like appear also seen.

- treatment of ameloblastom
  - surgical removal.
  - enucleation.

MAEER PUNE's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE)

ESTD 2006

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Website : www.mitmidsr.edu.in

DEPARTMENT OF PEDIATRIC & PREVENTIVE DENTISTRY

NOTICE

This is inform that Betterment exam IV BDS Winter – 2023 Batch for Pediatric & Preventive Dentistry have been scheduled on 02/10/2023 at, 2 pm for the following students. Attendance is Compulsory.

Sr. No	Name of The Student
1	Agrawal Chetna
2	Biradar Hrushikesh
3	Gaikwad Snehalata
4	Jagtap Vaishnavi
5	Mamde Deepali
6	Wanole Ajit

HOD,

Dept. of Pediatric & Preventive Dentistry

DEPARTMENT OF PEDODONTICS
M.I.D.S.R. Dental College, LATUR

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF PEDODONTICS

IV BDS Betterment Exam -2023

Total: 60 Marks

➢ **SECTION - A MCQ** **(1 x 20= 20)**

1. Marginal gingivae of children have .....edge
   a. Knife
   b. Round
   c. Thin
   d. Flat

2. Most common cause of gingival inflammation in children is in
   a. Juvenile Periodontitis
   b. Acuteherpetic Gingivostomatitis
   c. Diphtheria
   d. Leukemia

3. Drug dosage according to Forbes rule is calculated based on.
   a. Age of the child
   b. Body weight of the child
   c. Height of the child
   d. Body surface area of the child

4. The first materials used experimentally as sealants were based on.
   a. BIS-GMA resin
   b. Cynoacrylates
   c. Urethane dimethacrylates
   d. GIC

5. Pit and fissure sealants bind to the tooth surface by
   a. Chemical bond
   b. Mechanical retention
   c. Adhesive bond
   d. Chemical & mechanical bond

6. The principal source of fluoride ingestion is
   a. Milk
   b. Plants
   c. Water
   d. Animal food

7. Percentage of fluoride used in Knutson technique is
   a. 2
   b. 3
   c. 4
   d. 5

8. Resin modified GIC is also called as
   a. Cement
   b. Incream
   c. Dicor
   d. Compomer

9. Stainless steel crown is introduced by
   a. MacDonald
   b. Humphrey
   c. Stewart
   d. Pinkham

10 All the following are used for cementation of the crown **EXCEPT**
   a. Zinc phosphate
   b. Zinc polycarboxylate
   c. Glass Ionomer cement
   d. Resin

11. Restoration of choice in endodontically treated primary second molar is
   a. Stainless steel crown
   b. Cast gold crown
   c. Amalgam
   d. Zinc oxide eugenol

12. In primary tooth, shape of pulpal floor in cavity preparation is
   a. Flat
   b. Triangular
   c. Saucer shaped
   d. Rectangular

13. Cvek's technique is

a. Partial Pulpotomy technique in non-vital permanent teeth
b. Complete Pulpotomy technique in vital permanent teeth
c. Partial Pulpotomy technique in vital permanent teeth
d. Complete Pulpotomy technique in non-vital permanent teeth

14. The failure of CaOH Pulpotomy on a primary 1st molar is due to

a. Internal resorption
b. External resorption
c. Pulp calcification
d. d. Pulp fibrosis

15. In Ellis & Davis classification, class III is

a. Only enamel is involved
b. Enamel and dentin are involved
c. Enamel, dentin and pulp are involved
d. Tooth is non-vital

16.. Parrot like repetitive speech is found in

a. Autism
b. Marfan syndrome
c. Cerebral palsy
d. Mental retardation

17. The treatment for a 3 year old child giving history of spontaneous pain at night,
& radiographically showing inter-radicular radiolucancy in 85 is

a. Apexification
b. Pulpotomy
c. Partial Pulpectomy
d. Extraction

18. Which rule is followed by majority of surgeons as a guide for cleft lip & palate repair?

a. 5
b. 10
c. 15
d. 20

19. The term battered child syndrome was coined by

a. Caffey
b. Mary elan
c. Kempe
d. Needleman

20. A child aged 4 years has symptoms of malnutrition with dirty clothes. This is classified as

a. Physical neglect
b. Emotional neglect
c. Emotional abuse
d. Physical abus

SECTION – B **SAQ** **(10 x 2=20)**

1. Food pyramid
2. Describe Home & it's variations
3. Physical retrainers
4. Ugly dugly stage
5. Distal shoe space maintainers
6. Describe dental plaque
7. Stainless Steel Crown
8. Management of tongue thrust habit
9. ART
10. Classification of cleft lip & Palate

SECTION - C **LAQ** **(10x 02=20)**

1. What are the indications & Contraindications of pulpotomy, give procedure, advantages & disadvantage of formocresol pulpotomy & discuss newer pulpotomy agents.

2. Enumerate various topical fluorides give the advantages, disadvantages, application & mode of action.

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF Pedodontics

Betterment MID TERM EXAMINATION Winter 2023

Roll No.	Question Booklet Version	Question Booklet Sr.No.
0 1	A 0	0
0 ☒	B 1	1
1 ☒	M 2	2
2	P 3	3
3	R 4	4
4	S 5	5
5	V 6	6
6	W 7	7
7	8	8
8	9	9
9		

Answer Sheet No.

(write this no.on your question booklet)

Name of Examination

Subject	Paper

Roll No. (In Words)
Chetna Agrawal
Question booklet version (In words)

This is to sertify that the entries of Roll No. Question Booklet Version Question Booklet Sr.N. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : / /200

Q.No.	1	2	3	4	5	6	7	8	9	10
A		☒		☒			☒			
B	☒		☒						☒	
C						☒				
D					☒			☒		☒

	11	12	13	14	15	16	17	18	19	20
A	☒			☒		☒				☒
B								☒		
C		☒			☒				☒	
D			☒				☒			

USE BLUE BALL POINT PEN ONLY

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Wrong	Wrong	Wrong	Wrong
A ☑	A ■	A ☒	A ☒
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16/20 MARKS + 9/20 + 11/20 = 36/60

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Department of Pedodontics

Name of Student :- Chetna Agrawal.

Roll No. of Student :- | | | | 0 | 1 |

Name of the Examination :- **Internal Assessment Examination**

Betterment Winter 2023

SECTION - B

Date : 2 / 10 / 23

Time :

9/20

Chetna
Sign. of Student

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8.

Ans: Management of tongue thrust habit:

① Orthodontic elastic exercise.

Tongue tip is held against palate using 1/16" orthodontic elastic

② 4S exercise:

spot, salivate, squeeze and swallow.

Using tongue spot is identified tongue tip pressed against this spot and child is asked to swallow keeping tongue at same spot.

③ Whistling & reciting count from 60 to 90 are useful.

④ Lip exercise:

Tug of war & Button pull exercise.

⑤ Sublingual therapy:

(1) Sublingual therapy

(6) pre-orthodontic trainer :

Acts as reminder.

(7) Tongue crib -

Reminds patient where to place the tongue.

(8) Lingual oral screen -

prevents contact with teeth.

1½

5.

Ans: Distal shoe space maintainer:

- Also called as Hybrid appliance

- Early design - Willet's distal shoe

Current - Roche's distal shoe.

Distal surface of second primary molar provides a guide for unerupted first permanent molar

When second primary molar is removed prior to eruption first permanent molar, the distal shoe space maintainer provides greater control of path of eruption of unerupted tooth.

- Indicated when second primary molar is extracted or lost before eruption of first permanent molar.

- Contraindications -

- multiple loss of teeth.
- Congenital heart disease
- Kidney problems.

- Juvenile Diabetes.

-

It is used to guide eruption of first permanent molar after lost of second primary molar.

1/2

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Page No. | Date: / /

6.

Ans: Dental plaque -

It is a soft amorphous, granular deposits which accumulate on surface of teeth, dental restoration and dental calculus.

- Glickman

Dental plaque formation -

- Pellicle is the initial organic structure that forms on surface of teeth & artificial prosthesis.

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Page No. | Date: / /

9. Ans: ART

Atraumatic Restorative treatment :

It is a procedure based on removing carious tooth tissues using hand instruments along & restoring the cavity with an adhesive material.

Advantages -

- It makes restorative treatment accessible for all population groups.
- Biological approach that requires minimal cavity preparation & conserves sound tooth tissue.

Principles -

① Removing carious tooth lesions using hand instruments only.

② Restoring the cavity with an adhesive material. (glass ionomer).

Indications - Small cavities.

Contraindications - pulp is exposed.

7. Stainless steel crown -

Ans:

Classification of stainless steel crown -

Based on shape :

1. Untrimmed.
2. Pretrimmed.
3. Precontoured.

Indications of stainless steel crown -

- If extensive abrasions.
- Temporary restoration of fractured tooth.
- In severe cases of bruxism.
- For teeth with hypoplastic defect.
- Single tooth cross bite.

Contraindications of stainless steel crown.

- Tooth exhibits excessive mobility.
- Partially erupted teeth
- Where conservative restorations can be placed.
- Evidence of radicular pathology.

1

Co.
dus:

Classification of cleft lip -

Veau's classification.

Class I - Unilateral notching of vermillion border, not extending into lip

Class II - U/L Cleft extending into lip but not including floor of nose.

Class III - U/L Extending into floor of nose.

Class IV - Bilateral cleft of the lip wether incomplete or complete.

Classification of cleft palate -

① Group 1 - Cleft involving soft palate only

② Group 2 - Cleft of Hard & Soft palate extending upto incisive foramen.

③ Group 3 - Complete unilateral cleft involving soft palate, hard palate, lips and alveolar ridge.

④ Group 4 - Complete bilateral cleft affecting soft palate, hard palate, lips & alveolar ridge.

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Page No. | Date: / /

4.

Ans: Ugly Duckling stage :

- Around 8-9 years of age.
- Seen as a midline diastema in upper arch.
- Typical features are.
  - Flaring of lateral incisors.
  - Maxillary midline diastema.
- It is a self correcting malocclusion.
- Distal divergence of crowns of maxillary central incisors causes a midline spacing.
- First described by Broadbent.
- This condition usually corrects by itself when the canines erupt.
- The pressure of erupting canines is transferred from roots to the crowns area of the incisors.

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Department of Pedodontics

Name of Student :- Chetna Agrawal

Roll No. of Student :- | | | | 0 | 1 |

Name of the Examination :- **Internal Assessment Examination**

Betterment Winter 2023

SECTION - C

Date : / /

Time :

11/20

Chetna

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1. pulpotomy

Ans:

Indications -

- Cariously exposed primary teeth, when their retention is more advantageous than their extraction
- vital tooth with healthy periodontium
- Pain if present
- Tooth which is restorable
- presence of atleast 2/3rd root length
- Absence of internal root resorption

Contraindications -

- Evidence of internal resorption
- Presence of inter radicular bone loss.
- Radiographic sign of calcific globules in pulp / chamber
- Canals penetrating floor of pulp chamber

- Tooth close to natural exfoliation.
- periapical radiolucency.

- pulpotomy procedure -

① Rubber dam isolation.

② Remove caries.

③ Open pulp chamber and de roof

④ Amputate pulp with sound bur in slow speed running in reverse.

⑤ Control hemorrhage with dry cotton pellet.

Formocresol pulpotomy -

formocresol pulpotomy indications are as given below -

① Vital primary tooth with cessions or accidental exposure.

② Clinical signs of normal pulp canal.

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Page No. | Date: 1.1

Formocresol pulpotomy - disadvantages & contraindications -

① spontaneous pain
② swelling
③ fistula
④ percussion tenderness
⑤ pathological mobility.
⑥ External or internal root resorption.
⑦ pulp calcification

pulpotomy procedure -

- The tooth is isolated using rubber dam.
- Then caries are removed from tooth.
- Pulp is exposed, pulp chamber is opened and debrided

- Amputate pulp with round burs in slow speed running in reverse

- Hemorrhage is controlled using dry cotton pellet.

6

2.

Ans: Topical fluoride -

Topical fluorides are applied directly to tooth enamel. Strengthens teeth and makes them more resistant to decay.

Topical fluorides include toothpaste, mouth rinse fluoride treatment in dental office.

Professionally applied topical fluorides -

- Stannous fluoride.
- Sodium fluoride.
- Fluoride varnishes.
- Neutral NaF.
- Acidulated fluoride.

Self applied -

- Tooth brushing dentifrices
- Tooth brushing solutions or gels
- Mouth rinses

Varnish containing fluoride -

NaF

SnF_2

APF

Advantages of fluoride -

- prevents and reverses early signs of decay.

- Makes tooth structure stronger and more resistant to acids formed from bacteria.

- Remineralizes areas in which acid attacks have already begun

Indications -

- Caries active Individuals
- Post periodontal surgery when roots are exposed.
- Shortly after periods of tooth eruption.
- Those who are on medications for reduced salivary secretion.

Methods of application:

- professionally applied
- Self applied
- fluoride supplements

Mode of action:

The fluoride ion in the flouride agents reacts with the hydroxyapatite crystal of enamel.

The reaction between the fluoride and enamel forms a protective layer on surface of tooth.

They form fluorohydroxyapatite crystals layer.

This protective layer protects the tooth from decay & prevents caries.

(E)

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF Pedodontics

MID TERM EXAMINATION

Roll No.	Question Booklet Version	Question Booklet Sr.No.
0 0 0 0 0 3		

Answer Sheet No.
(write this no.on your question booklet)

Name of Examination
Betterment exam.

Subject:	Paper
Pedo	

Roll No. (In Words)
three

Question booklet version (In words)

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Candidate's Signature | Invigilator's Signature

Date : 2 / 10 /2023

Q.No.	1	2	3	4	5	6	7	8	9	10
A		X		X			X		X	
B										X
C						X				
D	X		X		X			X		

Q.No.	11	12	13	14	15	16	17	18	19	20
A	X									
B			X							X
C		X			X		X			
D				X		X		X	X	

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10/20 + 17/20 + 10/20 = 27/60

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MIDSR

Department of Pedodontics

Name of Student :- Biradar Hrushikesh Prabhakar

Roll No. of Student :- 0 0 0 0 3

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date 02 / 11 / 23

Time :

7/20

Biradar

Sign. of Student

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Page No. | Date: / /

4) ugly dugling stage

This is self correction anomaly it occurs in mixed denitition period

When the eruption of 2nd canine permanent canine the they give pressure on erupted lateral incisor

it will cause the shifting of the lateral incisor on the distal side

The midline diastema is used After that the pressure When the

canine eruptes fully then it will causes the relased press on the root so fuell

the the After erepting the later incisor the the pressure on the lateral incisor on distal side so fuell it called as self coming anomaly

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Page No. | Date: / /

5) Distal shoe space maintainer

Distal shoe space maintainer is used in case premature loss of the 2nd primary molar before eruption of permanent 1st molar

Distal shoe space maintainer is used in case when the.

- Primary 2nd molar grossly decay
- Ankylosis of 2nd primary molar
- The root resorption of primary 2nd molar
- The malerruption of the 1st permanent molar
- Internal resorption of root of 2nd molar
- If the tooth is removed then it will causes the

mesial migration of 1st permanent molar so that space for 1st pmo is lost

So crowding may occur in arch
Arch length discrepancy may occurs

The distal shoe space maintainer is bandless space maintainer used to prevent the space loss.

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Page No. | Date: / /

6) Dental plaque

It defined as sequential colonization of the microbes and food debris on the surface of teeth called as dental plaque

Dental plaque is highly specific entity

It is contain food debris & microbes the undying is bacterial are anaerobic in nature & Overtime bacterial is aerobic in nature

The dental plaque is element which cause the various diseases & and the periodontal & gingivitis in the oral cavity

The microorganism in Dental plaque cause the demineralization of enamel & cause the dental caries

If the dental plaque colonize in the pocket which cause inflation to gingiva & cause periodontal disease

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Page No. | Date: / /

8) Tongue thrusting Habit

The tongue thrusting is pressure Habits which cause the pressure on the teeth & malocclusion in oral cavity occurs

The spacing in teeth protrusion in upper incisor Anterior open bite

In Management of tongue thrusting

The tongue crib are used Pa the appliance used Bluegrass appliance is used

The oppose the tongue to give pressure on the anterior ~~appl~~ pedal so that it prevent pressure on it & prevention of anomaly

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Page No. | Date: / /

8) Tongue thrusting Habit

The tongue thrusting is pressure Habits which cause the pressure on the teeth & malocclusion in oral cavity occurs

The spacing in teeth protrusion in upper incisor Anterior open bite

In Management of tongue thrusting

The tongue crib are used Pt the appliance used Bluegrass appliance is used

The oppose the tongue to give pressure on the anterior ~~teeth~~ palate so that it prevent pressure on it & prevention of anomaly

Page No. | Date: / /

MIDSR

9) ART

Atraumatic Restorative Treatment

The Atraumatic Restorative Treatment is taken in Rural area where dental equipment are less

In the this caries Removed by hand instrument by spoon excavator then restoration of the caries by the GIC.

ART — easy to used
it economical
it can cause quick treatment
it less harmful & chance of pulp exposure is less
it is effective

10) classification of cleft lip & palate:-

(a) Veau classification

class I - incomplete cleft involving only soft palate

class II - cleft involving the hard & soft palate

Class III - complete unilateral cleft involving lip and palate

class IV - Compete bilateral cleft

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of Pedodontics

Name of Student :- Bradar Hrushikesh

Roll No. of Student :- 0 0 0 0 3

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 02 / 11 / 13

Time :

10/20

Sign. of Student

Sign. of Invigilator

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Page No. | Date: / /

1) Topical Fluorides

The fluorides which are applied on tooth surface are called as topical fluorides

The topical fluorides cause the reduction in cause in oral caries

If the index of caries are high then After the application of fluride for long interval of time it reduce the caries

If the fluoride applied on the developing teeth it will cause the maturation of teeth in oral cavity

So After the maturation of tooth in oral cavity it cause reduction in occurs in oral cavity

Topical fluride are applied in
1) NaF
2) SnF2
3) APF

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Page No. | Date: / /

NaF → Neutral soln applied on tooth

200mg NaF in 1000ml of water

. It applied by Knutson method

applied at age 3, 7 11 13

It cause reduction in caries by 30%

it form the Hydroxy fluoride layer on teeth surface which cause the contact bacteria with tooth surface

When fluoride release in oral cavity which act as bacterial static & high conc cause bactericidal in nature

which cause the ↓ in caries in oral cavity

SnF_2 → Stannous fluoride It caused 8% & 10% conc

It mainly used in 8% conc.

It will cause the reduction in caries about 32%

It give the metallic taste in oral cavity & irritation to gingiva occur.

When it used for long time it will cause the Brown pigmentation of the teeth & gingival irritation.

Another method is used for application of the SnF2

it cat on reacting with enamel surface & cause the reduction of fluoride content of the oral cavity & tooth surface.

Acidulated phosphate fluoride

It is in oral cavity.

5

MIDSR

Page No. | Date: / /

1) Pulpotomy

Pulpotomy is removal of coron al pulp inder conserve the vitality of the radicular pulp.

When only coronal pulp is defect then the pulpotomy is done & filled resorbable restorative material in tooth.

it done to preserve the primary teeth primary teeth and the space maintain in natural space

if the ~~seen~~ could complete removal of the primary teeth then it will cause the damage ~~of the~~ space needed is used. At space

it we save teeth till the time of ~~pulp~~ eruption of the Primary teeth it will save the time inorder to preserve the space

contraindication pulpotomy

when internal resorption of teeth grossly decayed teeth surface

DEPARTMENT OF Pedodontics

MID TERM EXAMINATION

Question Booklet Version	Question Booklet Sr.No.
05	

Answer Sheet No.
(write this no on your question booklet)

Name of Examination
Betterment exam

Subject	Paper
Pedodontics	

Roll No. (In Words)
five
Question booklet version (In words)

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Candidate's Signature | Invigilator's Signature

Date : 2/11/2023

Q.No.	1	2	3	4	5	6	7	8	9	10
A	X	X	X	X						
B							X			
C						X			X	
D					X			X		X

Q.No.	11	12	13	14	15	16	17	18	19	20
A				X		X	X		X	X
B	X							X		
C		X	X		X					
D										

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B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

3. Cross only Block Provided Do not Make Any sure Marks On The Answer Sheet.

4. Rough Work Must Not Be Don On This Answer Sheet Use Free Space In The Question Booklet Provided

14/20 + 6/10 + 10/20 = 30/60

MARKS SECURED

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Department of Pedodontics

Name of Student :- Gaikwad Snehalata Harshchandra

Roll No. of Student :- | | | | 0 | 5 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C Section - B

Date : 2 / 11 / 23

Time : 2 to 5 pm

6 / 20

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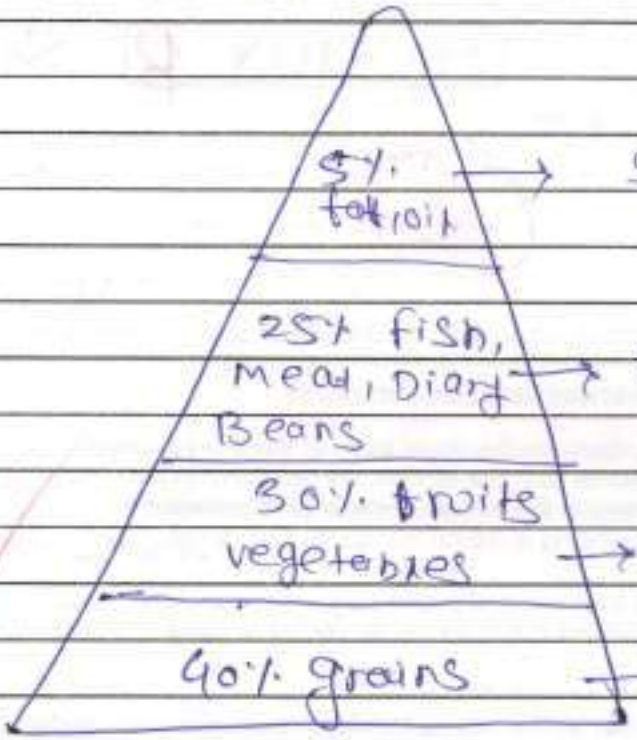
SAQs

(1) —— 9.

⇒

Food Pyramid



(1)

(2) —— ?

Physical retainers

There are three types of retainers

- Hawley Retainers
- Vacuum retainers
- permanent retainers

Resin bonded retainers

(1) - Rochette Bridge.
- Maryland Bridge.
- cast metal FPD
- Virginia bridge.

(4) ——— &

ugly - duckling Stage.

- It is transient / self correcting malocclusion in the maxillary incisor region between 8-9 yrs of age.

- Erupting permanent canines displace the roots of lateral incisors mesially resulting transition of force.

- After complete eruption of canines gap between incisors automatically closed.

- That's why it is called self correcting malocclusion.

9) —9.

→ Distal shoe space maintainers.

- Distal shoe space maintainer is used to maintain space due to extraction or premature loss of primary molar.

- It is used in posterior back teeth region.

- Guides eruption of permanent molars.

(7) —— ξ

Stainless steel crown

- Stainless steel crown is placed as a permanent restoration of teeth.

- After pulpectomy procedure stainless steel crown is placed.

- To protect underlying structure and to perform functions as a teeth for mastication.

(1)

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Page No. | Date: / /

(8) —— 9.

Management of tounge thrust habit

- posterior bite plane is used to deprive tounge thrusting habits

- Various ERBs can be used

- oral gymnastic appliances such as oral screen also used for growth and development of perioral musculator.

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Department of Pedodontics

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Roll No. of Student :- | | | | 0 | 5 |

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LA9s

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(1) — ?

Pulpotomy

* Indications

- Carelessly exposed primary teeth. when their retention is more advantageous
-
- Vital tooth with healthy periodontium
- Tooth which is restorable.
- Tooth with 2/3rd of root length.
- Haemorrhage from amputation site is pale

* Contraindications.

- Evidence of internal resorption
- Presence of inter-radicular bone loss
- Abcess, fistula.

- Radiographic sign of calcific globus in pulp chamber.

- Caries penetrating the floor of pulp chamber.

- Tooth close to natural exfoliation.

* procedure.

Anesthetize the tooth and isolate with rubber dam

↓

All carious material is removed with excavator at slow speed round bur

↓

Coronal pulp is removed

↓

After arrest of hemorrhage, $Ca(OH)_2$ is applied to the exposed pulp, ensuring that there is no blood clot.

↓

ZOE or GIC applied

↓

Then permanent restoration done.

* Advantages

- commonly available medicament.
- Stable at room temperature.
- Long shelf life.
- High clinical and radiographic success

* Disadvantages

- It is a very caustic medicament
- In high dose it is toxic.
- Potential systemic absorption and distribution throughout the body.
- It has mutagenic and carcinogenic potential:

(5)

2) —— ?.

Topical fluorides

Professionals

- Neutral Sodium fluoride
- Stannous fluoride
- Varnish

Self applies

- Dentifrices
- Mouthwashes
- fluoride gels

* Mechanism (mode) of action.

NaF → Hydroxyapatite crystals

↓

Calcium fluoride

↓

Checking off effects

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Page No. | Date: / /

* Advantages

- Requires only two application in a year
- The gel preparation can be self applied and thus the cost of application gets reduces
- It has the ability to deposit fluoride in enamel to a deepee depth

* Disadvantages

- Practical difficulties like the teeth should be kept wet for 4 minutes
- It is acidic, sour and bitter in taste
- It cannot be stored in glass containers

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MID TERM EXAMINATION

Roll No.	Question Booklet Version	Question Booklet Sr.No.
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Subject:	Paper
Pedo	

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06
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C						X				
D					X			X		X

	11	12	13	14	15	16	17	18	19	20
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B								X		
C		X	X		X					
D									X	

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$\frac{15}{100} + \frac{9}{20} + \frac{6}{20} = \frac{37}{60}$

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Department of _____

Name of Student :- Vaishnavi Jagtap

Roll No. of Student :- | 0 | 0 | 0 | 0 | 6 |

Name of the Examination :- **Internal Assessment Examination**

Betterment

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9.

4. Ugly - Dugly Stage.

1. Around the age of 8-9 yrs, a midline diastema is commonly seen in the upper arch, which is usually misinterpreted by parents as a malocclusion.

2. As the developing canines erupt, they displace the roots of the lateral incisors mesially.

3. This results in the transmitting the force on to the roots of central incisors which also displaced mesially.

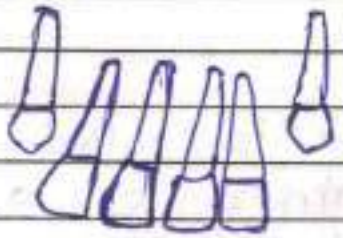
It's typical features are :

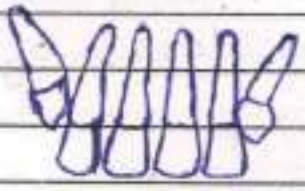
(1) Flaring the lateral incisors.

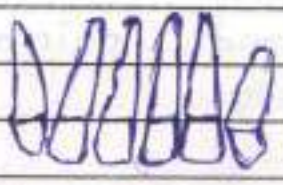
(2) Maxillary midline diastema

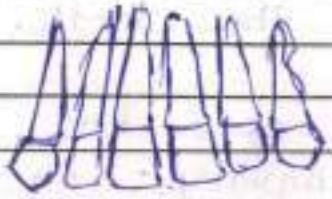
(3) Crowns of the canines on young jaws impinge on developing lateral incisor roots, thus driving the roots medially and causing the crowns to flare laterally.

(4) The roots of the central incisors are also forced together, thus causing a maxillary midline diastema.









5. Distal shoe space maintainers -

Introduction :-

This appliance is called a distal shoe space maintainer or a distal extension space maintainer.

It is used to prevent first permanent molars from moving mesially with the premature loss of second primary molars.

Indications :-

1) The distal shoe is indicated in case where the second primary - molar is lost prematurely.

2) This appliance guides the first permanent molar into place and prevents mesial drifting of the tooth.

3) The distal shoe has an extension going sublingually to a location mesial to the unerupted first permanent molar.

Contraindications :-

1. Systemic diseases.
2. Immunocompromised individuals.
3. Missing permanent molar
4. Inadequate abutment due to multiple loss of teeth.

Functions :-

1. Improves speech
2. Prevents movement of adjacent teeth
3. Provide masticatory functions
4. Improves esthetics
5. Maintain space.

(1½)

6.

Dental plaque

* Defination :-

"It is a specific but highly variable structural entity, resulting from sequential colonization of microorganisms on tooth surfaces, restorations & other part of oral cavity composed of salivary components like mucin, desquamated epithelial cells, debris & microorganisms, all embedded in extracellular gelatinous matrix."

- It is a host-associated biofilm.

* classification.

A. Coronal plaque.

B. Gingival plaque

C. Sub-gingival plaque

D. Fissure plaque

Control of plaque –

- Some of plaque removed by the saliva by movement of cheek and tongue

Regular brushing and flossing everyday is necessary.

- Regular professional cleaning by dentist is best way.

Composition .

1) Microorganisms

2) Inter-microbial matrix.

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Page No. | Date: / /

7.

Stainless steel crown -

1. These are metal crowns made of stainless steel, nickel and chrome.

2. They are used to restore back teeth i.e. molars that are decayed, broken down and / or which never formed correctly in the first place.

Types

1) Untrimmed crown

2) Pretrimmed crown

3) pre-contoured crown.

Composition -

- chronium
- Nickel
- Iron
- minor element

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Page No. | Date: / /

8.

Tongue thrust habit :-

1. " Tongue thrusting is the motion of pushing your tongue forword, against the back of the teeth or between the top and bottom teeth.

2. It is the persistence of an infantile swallow pattern during late childhood.

3. This leads to
   - ↳ breathing difficulties
   - ↳ speech difficulties
   - ↳ open bite
   - ↳ protruded teeth.
   - ↳ Nasal congestion
   - ↳ frequent sore throats
   - ↳ tonsils
   - ↳ adenoids.
   - ↳ large tongue.

Classification.

1. Physiologic tongue thrust
2. functional tongue thrust
3. Habitual tongue thrust
4. Anatomic tongue thrust.

Management of tongue thrust habit.

1. Correction by Myo-functional therapy.
2. Tongue therapy.

- Tongue thrusting often self-corrects by 8-9 years of age by the time permanent teeth erupt.

1/2

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Page No. | Date: / /

10.

Classification of cleft lip and cleft palate.

Cleft lip.

1. Class I

Notching of vermillion border, not extending into the lip.

2. Class II

Cleft extending into the lip, but not including the floor of the nose.

3. Class III

Extending into the floor of the nose.

4. Class IV :-

Cleft of the lip, whether incomplete or complete.

1½

Cleft palate.

1. Group 1 :- Cleft involving soft palate only.

2. Group 2 :- cleft of hard and soft palate extending upto incisive foramen.

3. Group 3 :-
Complete unilateral clefts involving soft palate, hard palate, lips & alveolar ridge.

4. Group 4 -
Complete Bilateral clefts affecting the soft palate, hard palate, lips & alveolar ridge.

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Department of Pedo

Name of Student :- Vaishnavi Jagtap

Roll No. of Student :- 0 0 0 0 6

Name of the Examination :- **Internal Assessment Examination**

Bettermend.

SECTION - C

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LAQ.

1.

* Pulpotomy :-

" It is the complete removal of the coronal portion of the pulp and followed by placement of medicament and dressing that will promote reling of teeth.

* Indication :-

1. Coronaly exposed of the primary teeth.
2. Where retention is more advantageous than extractor.
3. Vital tooth with healthy periodontium.
4. Pulp if present non spontaneous after removal of stimulus.
5. When tooth length is 2/3rd.
6. Hemorrhage.

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Page No. | Date: / /

- Mixed dentition stage of primary tooth loss to space maintainer.
- Absence of interradicular bone loss
- Absence of internal root resorption.

* Contraindication :-

1. Evidence of internal root resorption.
2. Presence of interradicular bone loss.
3. Abscess fistula, in relation to teeth
4. Caries penetrating floor of pulp chamber.
5. Tooth close to natural exfoliation.
6. History of prolonged pain.
7. Purulent drainage.
8. Periapical radiolucency.
9. Mobility
10. Swelling
11. Radiolucency in periapical region.

Procedure.

- Anesthesizes tooth and isolation with rubber dam

↓

Access cavity preperation, removal of caries

↓

Entire pulp of root chamber is removed

↓

All coronal pulp is emputed with spoon excavator

↓

Pulp chamber is washed with saline.

↓

Hemorrhoge controlled.

↓

Applied formocresol to the pulp.

↓

Cavity filled with ZOE paste

↓

Stainless steel crown packed.

MIDSR

Page No. | Date: / /

• Advantages

- Commonly available medicament.
- Stable at room temp.
- Long shelf life
- high clinical & radiographic success of pharmacresol pulpotomy
- Excellent antimicrobial
- less necrosis
- Rapidly metabolised.

* Disadvantages

- Solution is unstable
- Very curative medicament.
- high doses are toxic
- Mutogenic and cariogenic potential.

Newer pulpotomy agents

1. Tricalcium silicate.
2. Bismuth oxide
3. Tetracalcium alumina
4. Calcium sulphate dehydrate.

(b)

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DEPARTMENT OF Pedodontics

Betterment Exam MID TERM EXAMINATION

Roll No.	Question Booklet Version	Question Booklet Sr.No.
0 0 0 0 1 6		

Answer Sheet No.
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Name of Examination

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Subject:	Paper
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A				X			X			
B	X	X							X	
C						X				
D			X		X			X		X

Q.No.	11	12	13	14	15	16	17	18	19	20
A	X			X		X				X
B								X		
C		X			X				X	
D			X				X			

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below.

Wrong	Wrong	Wrong	Wrong
A ✓	A ■	A ☒	A ☒
B	B	B	B
C	C	C ☒	C
D	D	D	D

3. Cross only Block Provided Do not Make Any sure Marks On The Answer Sheet.

4. Rough Work Must Not Be Don

$\frac{16}{20} + \frac{9}{20} + \frac{10}{20} = \frac{35}{60}$

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH
(DENTAL COLLEGE), LATUR

MIDSR

Department of Pedodontics

Name of Student :- Deepali Hanumant Mande

Roll No. of Student :- | 0 | 0 | 0 | 1 | 8 |

Name of the Examination :- **Internal Assessment Examination**

Betterment Exam

SECTION - B

Date : 2 / 11 /2023

Time : 2:00 pm

9/20

Deepali

Sign. of Student

Sign. of Invigilator

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Page No. | Date: / /

SAQ's

5) ——?

→

Distal shoe space maintainer

introduced by willets in (1932)

- It is used to maintain the space of primary second molar that has been lost before the eruption of the permanent first molar.

Indications —

- If the space shows signs of closing
- If the use of space maintainer will make the future orthodontic less complicated.
- If the need for treatment of malocclusion at a later date is not indicated.
- To avoid supra eruption of opposing teeth.
- When the space should be maintained for two year or more.

Contraindications -

- If the radiograph shows one third of the root is already calcified.
- When the space left is greater than the needed for permanent as indicated from radiographically.
- If the space shows no signs of closeing. when the succedenous tooth is absent

Commonly used space maintainers -

1) Band & loop
2) Crown & Loop
3) Lingual arch holding device
4) Nanedi palatal hoding device
5) Distal shoe
6) Removable space maintainer.

7) ——— ?

→ Stainless steel crown

A crown is a tooth shaped covering which is cemented to the tooth surface structure & its main function is to protect the tooth structure & retain the function.

Classification –

- Stainless steel crown
- Nickel - Base crowns
- Tin base crown
- Aluminium base crown

Indications –

- If restoration is needed to last > 24 Rs
- If Restoration of carious primary molars wher more than two surfaces are affected,
- child < 6 yrs SS crown preferable to restoration
- following pulpotomy procedures.
- extensive root surface loss
- high caries susptibility
- abutment
- single tooth cross bite

Contraindicated –

- Tooth exhibits excessive mobility
- primary molar is close to exfoliation with more than half the roots resorbed or exfoliated within 6-12 months.

8)

→ Management of tongue thrust habit

Def:→ placement of tongue tip foswards between Incisors during swallowing.

Management-

- Removable rubber splints can be worn at night to immobilize the jaws.

- If the underlying cause of the bruxism is an emotional one, the nervous factors must be corrected if the disease is to be cured.

- Vinyl plastic bite guard that covers the occlusal surfaces of all teeth.

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Page No. | Date: / /

10)

→ Classification of cleft lip & palate

Definition →

Cleft lip → It is a birth defect which results in a unilateral or bilateral opening in the upper lip bet^n the mouth & nose.

Cleft palate → 'A breach in continuity of palate' or 'A furrow in the palatal vault.'

Classification:-

Veau classification:

Class I - Incomplete cleft involving the soft palate

Class II - Cleft involving the hard & soft palate

Class III - Complete * unilateral cleft involving the lip and palate.

Class IV - Complete bilateral cleft.

Group I - Defects of the lip or alveolus.

Group II - Cleft of the 2° palate

Group III - Any combination of clefts involving primary & secondary palates.

4)

→ Ugly dugly stage

It is also called as a mixed dentition stage.

The period which both primary & secondary teeth are in the mouth together is known as a mixed dentition period.

Successional teeth - Those permanent teeth that follow into a place in the arch once held by primary tooth.

Accessional teeth - Those permanent teeth that erupt posteriorly to the primary teeth.

Phases of mixed dentition -

1) first transitional period
2) Inter transitional period
3) second transitional period

Changes in occusion -

1) Flush terminal plane
2) mesial step
3) Distal step

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Page No. | Date: / /

6)

→ Dental plaque

DefN → Soft deposits that form the biofilm adhering to the tooth surface or other hard surfaces in the oral cavity, including removable, fixed & restoration

Dental plaque -

Is a specific but highly variable structural entity, resulting from sequential colonization of microorganisms on tooth surfaces, restorations & other parts of oral cavity.

Composed of salivary components like mucin, desquamated epithelial cells, debris & microorganisms, all embedded in extracellular gelatinous matrix.

Dental calculus -

It is an adherant calcified or calcifying mass that forms on the surface of natural teeth.

Material alba -

Is a deposit composed of aggregate of microorganisms leucocytes & dead exfoliated epithelial cells, randomly organized & loosely adherant to the surface of the teeth, plaque & gingiva.

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3) ——— ?

→ Physical retainers

also known as personal restraint
personal restriction that reduces the ability of the child to freely move his or her arms, legs, or head.

Types –

1) Lap belts

2) Recliners that lean back

3) side rails

4) concave mattresses that prevent the patient from getting out of bed.

5) vests or belts on the wrists

6) Trays or other devices that can prevent rising from a chair.

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Page No. | Date: / /

9)

→ ART

Atraumatic restorative treatment

ART is based on removing decalcified tooth tissues using only hand instruments & restorating the cavity with an adhesive filling material.

- A minimaly invasive approach to both prevent dental carious lesions & stop its further progression

It consists of two components -

1) Sealing of carious prone pits & fissure

2) Restoration of caviated dentin lesions with restrations.

(1)

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(DENTAL COLLEGE), LATUR

MIDSR

Department of Pedodontics

Name of Student :- Deepali Hanumant mande

Roll No. of Student :- | 0 | 0 | 0 | 1 | 6 |

Name of the Examination :- **Internal Assessment Examination**

Betterment Exam

SECTION - C

Date : 2 / 11 /2023

Time : 2:00pm

10/10

Deepali
Sign. of Student

Sign. of Invigilator

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LA@S

1) Pulpotomy

→

Defn → Pulpotomy is defined as a complete removal of coronal portion of the dental pulp, followed by placement of suitable dressing or medicament that will promote healing & preserve vitality of the tooth.

Indications -

- vital tooth is with healthy periodontium
- carriously exposed primary teeth, when the retention is more advantageous than extraction
- Tooth with 2/3rd root length
- Hemorrhage from the amputation site is pale red & easy to control.
- In mixed dentition stage primary tooth is preferable to a space maintaince.

Contraindications–

- Evidence of internal resorption
- Presence of intet radicular bone loss
- Abscess, fistula, in relation to teeth.
- Caries penetrating the floor of the pulp chamber
- Tooth close to natural exfoliation.
- Radiographic sign of calcific nodules in pulp chamber.

procedure–

- Pre-operative radiograph & clinical assessment are premount.
- Non-End cutting bar
-

fitsty –

- Area around affected tooth will be numbed with LA.
- Any decay is removed
- Pulp chamber is opened by drilling through enamel & dentin.
- Coronal pulp will be removed.
- Tooth extraction is performed when there is no pulp.
- Pulp chamber is sealed & tooth is restored with a crown.

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Page No. | Date: / /

Formocresol pulpotomy –

first advocated by SWEET

formocresol solution – 19% formaldehyde
35% cresol
15% glycerine

Advantages –

- commonly available medicament
- stable at room temperature.
- Long shelf life
- High clinical and radiographic success of formocresol pulpotomy.
- Better handling
- Induce pulp repair
- Replaces natural dentin with the same ~~material~~ mechanical properties.

Disadvantages -

- It is very caustic medicament
- It is high doses it is toxic.
- Potential systemic absorption and distribution throughout the body.
- It has a mutagenic and carcinogenic potential.

New er pulpotomy agents -

- MTA consist of tricalcium silicate, bismuth oxide, tetracalcium alumina, ferrite, calcium sulphate dehydrate
- Formocresol, calcium hydroxide, & glutaraldehyde.

2)

→ Topical fluoride

It selective action on the hard tissue of the body attributes significantly to prevention and control of dental caries.

- Topical fluorides are placed directly on the teeth.

- Some preparations provide high or low concentration of fluoride over a short period of time.

Advantages -

- Requires only 2 application in a year

- The gel preparation can be self applied & thus the cost of application also gets reduced.

- It has the ability to deposits fluoride in enamel to a deeper depth.

Disadvantages -

- Practical difficulties like the teeth should be kept wet for for 4 minutes.

- It is acidic sour and bitter in taste

- It cannot be stored in glass containers.

Application -

Procedure for application of sodium fluoride (Knutsons technique)

oral prophylaxis done

↓

teeth isolated either by quadrant or by half mouth.

↓

2% NaF soln is painted on the air dried teeth so that all surfaces are visibly wet.

↓

allowed to dry for 3-4 minutes.

↓

2nd, 3rd, 4th NaF application, each not preceded by a prophylaxis, is scheduled in intervals of approximately one week.

Mode of action -

APF applied

↓

Initially leads to dehydration & shrinkage of hydroxyapetite crystals.

↓

Dicalcium phosphate dihydrate

↓

fluride prevents into crystals deeply through openings procedured by shrinkage and leads to formation of fluoroapetitte.

(5)

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF Pedodontics

Betterment **MID TERM EXAMINATION**

Roll No.	Question Booklet Version	Question Booklet Sr.No.
2 8	A B M P R S V W	

Answer Sheet No.
(write this no.on your question booklet)

Name of Examination
Betterment

Subject:	Paper
Pedodontics	

Roll No. (In Words)
28 Twenty eaight

Question booklet version (In words)

This is to sertify that the entries of Roll No. Question Booklet Version Question Booklet Sr.N. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 2/ 18/2023

Q.No.	1	2	3	4	5	6	7	8	9	10
A		X		X						
B	X		X				X		X	X
C						X		X		
D					X					

Q.No.	11	12	13	14	15	16	17	18	19	20
A	X								X	X
B						X		X		
C		X	X		X					
D				X			X			

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C	C	C X	C
D	D	D	D

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4. Rough Work Must Not Be Don On This Answer Sheet Use Free Space in The Question Booklet

$\frac{18}{20} + \frac{9}{20} + \frac{8}{20} = \frac{30}{60}$

MAEER Pune's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of Pedodontics

Name of Student :- Ajit Madhavrao sonole

Roll No. of Student :- | | | | 2 | 8 |

Name of the Examination :- **Internal Assessment Examination**

Betterment

SECTION - B

Date : 2 / 10 / 23

Time :

19/20

Sign. of Student

Sign. of Invigilator

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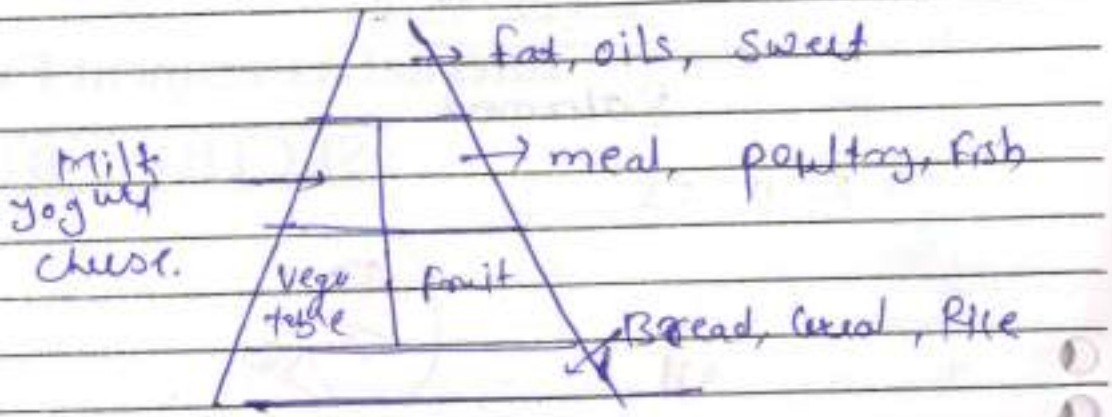
Page No. | Date: / /

SAQ ①

Food pyramid



1/2

① Hand & its Variations

- Dr Evangeline Jordan first described this technique in 1920
- Used in a healthy child who is able to understand & co-operate but who exhibits defiant or hysterical behaviour.
- A Hand is placed on child's mouth & behavioral expectations are clearly explained
- To gain child's attention enabling communication with the dentist
- To eliminate inappropriate avoidance behavior to dental treatment
- It is also called as
  - Aversive conditioning by Teacher wright

Variations →

a) Hand over mouth with airway unrestricted
b) Hand over mouth Nose with airway restricted
c) Towel held over mouth Nose
d) Wet towel held over mouth & nose

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Page No. | Date: / /

③

Physical Restraints

Type
1) mouth restraint
2) Elbow restraint
3) Extremity restraint
4) Abdominal restraint
5) Finger restraint
6) Jacket restraint

use :-
To keep one or both extremity restrained or limited in motion
- Age group Neonatal / Infant / Toddler

- It must be padded to prevent undepressure construction or tissue injury & the extremity must be observed frequently your signs of irritation or impaired circulation

1) → 2

Ugly duckling stage

It is a broad bent's phenomenon.

- Around the age of 8-9 years a midline diastema is commonly seen in the upper arch, which is usually misinterpreted by parents as malocclusion.

→ It ~~for~~ feature are :-

- Flaring of lateral incisors
- Maxillary midline diastema

→ Eruption of canine in early mixed dentition period of developed lateral incisor roots.

- Thus there is driving force of roots medially and causing the crown to flare laterally

- With the eruption of canine the impinged from the roots shift incisally thus giving the incisor crown medially resulting in closure of the diastema.

→ And therfore correction of the flaring of the lateral incisors

2)

Page No. | Date: / /

Q5

Distal shoe space maintainer.

Space maintainer - It is defined as the process of maintaining a space in a given arch previously occupied by a tooth or group of teeth.

- used when the primary second molar is lost before the eruption of permanent first molar.

- Introduced by willers with bar type gingival extension & modified by Rich with V-shaped gingival extension

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Page No. | Date: / /

Q 6

Dental plaque :- It is adherent intercellular matrix
Consistens primarily of proliferation
microorganism along ~~&~~ a scattering of
epithelial cells, leukocytes & microphages

Classification.

A] Coronal
b] Gingival
c] Sub-Gingival
D] fissure

1/2

7) Stainless steel Crown

- It is a semi permanent restoration
- used in primary & permanent dentition

Composition

72% Nickel
14% Chromium
6-10% Fe
0.04% Carbon

Classification

1) Untrimmed

2) Pre trimmed

3) Pre contoured

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Page No. | Date: / /

Q.8 M/g of Tongue Thrust Habit

- It is the habit of touching the upper & lower anterior teeth with the tongue.
- It cause flaming of teeth in anterior direction there is proclination of teeth
- Correction of tongue posture is done

Management

- Use of removable appliance i.e tongue crib
- Simple tongue thrust - It can also be due to mouth breathing
- Interception of Habit
- Various muscle exercise
- myofunctional appliance

(1)

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Page No. | Date: / /

(10) Cleft lip & palate classification

Veau Classification →

Group 1 :- Cleft involving soft tissue only

Group 2: Cleft of hard & soft palate extending upto incisive foramen

Group 3- Complete Unilateral cleft ~~involving~~ affecting the soft palate hard palate & Alveolar ridge

Dewi & Pitche

Group 1 - prealveolar Involving only lips & Subclassified as
- Uni
- Bi
- median

Group II - Post Alveolar . Comprises hard & soft palate

Groups III - Alveolar cleft Complete clefts involving palate, Alveolar ridge & lips

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH
(DENTAL COLLEGE), LATUR

Department of Pedodontics

Name of Student :- Ajit Wanole.

Roll No. of Student :- | | | | 2 | 8 |

Name of the Examination :- **Internal Assessment Examination**

Betterment

SECTION - C

Date : 2 / 11 / 23

Time :

8/20

Sign. of Student

Sign. of Invigilator

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LAB

Page No. | Date: / /

Q.1

Formocresol pulpotomy - was invented by Buckley who contended that equal parts of formation & tricresol would react chemically & the intermediate & end product of pulp inflammation to form a New colorless non injective compound & harmless h

Indication

- Vital tooth with healthy periodontium
- Pain if present not Spontaneous nor persists after removal of the stimulus.
- Tooth which is restorable
- Tooth ≥ 2/3rd of root length
- Haemorrhage from the amputation site is pale red easily to control

Contraindications

1) Where there is evidence of intraoral resorption
2) In presence of interradicular bone loss
3) In case of abscess or fistula associated with teeth
4) When caries penetrates the floor of pulp chamber
5) When tooth is close to natural exfoliation
6) Radiographic sign of calcific globules are seen in pulp chamber

Technique

- Tooth should be anesthetized & isolated with rubber dam
- Remaining dental caries removed & overhanging enamel should be placed back to provide good access
- Remaining dental caries removed
- Entire roof of chamber is removed

- Amputate Coronal pulp Chamber is removed
- Amputate Coronal pulp with excavation
- Pulp is Cleaned excised & the remnants
- moist cotton pellet place in pulp chamber

(5)

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Page No. | Date: / /

Topical fluorides

- NaF, SnF_2 APF, Na, MPD amine fluoride & Varnish containing floride

Two ways to apply -

- Professionally applied
- self applied

Advantages

- using 8% Stannous fluoride solution at 6-12 months intervals conforms to practiced dentistry would pt - recall system
- Administrative difficulties are avoid

Disadvantages

In aqueous solution the med is not stable

- 8% soln in quite astringent & disagreeable in taste its application is unpleasant
- Causes pigmentation of teeth which has a characteristic light brown colour

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Page No. | Date: / /

Application

Knutson Technique

Oral prophylaxis done

teeth isolated either by quadrant or by half mouth

↓

2% Naf solution is painted on the air dried teeth so that all surf. are visibly wet

↓

allowed to dry for 3-4 min

↓

Repeated for each of the isolated segments untill all teeth are treated.

Mode of action

APF applied

↓

Initially leads to dehydration & shrinkage of hydroxyapatite crystal

↓

Dicalcium phosphate dihydrate

↓

Fluoride penetrates into crystals deeply through openings produced by shrinkage & leads to formation of fluoroapatite

MAEER PUNE's

MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE)

ESTD 2006
MIDSR

Address : Vishwanathpuram Ambajogai Road, Latur. 413531 (Maharashtra)
Tel : (02382) 228063, 227703, 227424
Fax : (02382) 228063
Email : principal@mitmidsr.edu.in
midsr.latur@gmail.com
Website : www.mitmidsr.edu.in

DEPARTMENT OF PEDIATRIC & PREVENTIVE DENTISTRY

IV BDS WINTER 2023 BATCH

BETTERMENT EXAM RESULT

Sr. No	Name of The Student	Maximum Mark	Section A	Section B	Section C	Marks Obtained
1	Agrawal Chetna	60	16	9	11	36
2	Biradar Hrushikesh	60	10	7	10	27
3	Gaikwad Snehalata	60	14	6	10	30
4	Jagtap Vaishnavi	60	16	9	6	31
5	Mamde Deepali	60	16	9	10	35
6	Wanole Ajit	60	13	9	8	30

HOD,
Dept. of Pediatric & Preventive Dentistry

HEAD
DEPARTMENT OF PEDODONTICS
M.I.D.S.R. Dental College, LATUR

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE)

ESTD 2006

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Tel : (02382) 228063, 227703, 227424

Fax : (02382) 228063

Email : principal@mitmidsr.edu.in
midsr.latur@gmail.com

Website : www.mitmidsr.edu.in

DEPARTMENT OF PEDIATRIC & PREVENTIVE DENTISTRY

Notice

This is infrom that Betterment exam IV BDS Summer - 2024Batch for Pediatric & Preventive Dentistry have been scheduled on 31/05/2024 at, 02.00pm for the following students. Attendance is Compulsory.

Sr. No	Name of the Student
01	Chavan Ajit S
02	Shingare Ranjeet

HEAD
DEPARTMENT OF PEDODONTICS
M.I.D.S.R. Dental College, LATUR

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF PEDODONTICS

Betterment Examination IV BDS (SUMMER – 2024)

Date:

➢ **SECTION - A MCQ** **(1 x 20= 20)**

1. Cognitive theory of child development was given by

a. Sigmund Freud
b. Jean piaget
c. Erik Eriksson
d. Bunner C

2. By the age of---------- the full compliment of deciduous dentition is present

a.1 & 1/2 to 2 years
b.2 & 1/2 to 3 years
c.3 & 1/2 to 4 years
d.4 & 1/2 to 5 years

3. Drug dosage according to Forbes rule is calculated based on.

a. Age of the child
b. Body weight of the child
c. Height of the child
d. Body surface area of the child

4. Whice of the following materials is the most ideal for indirect pulp capping

a) Calcium hydroxide
b) Zinc oxide eugenol cement
c) Zinc oxide powder only
) None of the above

5 Pulpotomy in non-vital tooth is called as

a. Devitalization Pulpotomy
b. Mortal Pulpotomy
c. Electrosurgical Pulpotomy
d. Laser Pulpotomy

i. The principal source of fluoride ingestion is

a. Milk
b. Plants
c. Water
d. Animal food

7. Around what pulp pressure is pulp inflammation considere irreversible?

a) 5mm of Hg
b) 20mm of Hg
c) 14mm of Hg
d) 35mm of Hg

8. Resin modified GIC is also called as

a. Cement
b. Incream
c. Dicor
d. Compomer

9. Stainless steel crown is introduced by

a. MacDonald
b. Humphrey
c. Stewart
d. Pinkham

10 All the following are used for cementation of the crown **EXCEPT**

a. Zinc phosphate
b. Zinc polycarboxylate
c. Glass Ionomer cement
d. Resin

11. Restoration of choice in endodontically treated primary second molar is

a. Stainless steel crown
b. Cast gold crown
c. Amalgam
d. Zinc oxide eugenol
e.

12. The tooth present at the time of birth is known as

a. Neonatal
b. Perinatal
c. Natal
d. Prenatal

13. Cvek's technique is

a. Partial Pulpotomy technique in non-vital permanent teeth
b. Complete Pulpotomy technique in vital permanent teeth
c. Partial Pulpotomy technique in vital permanent teeth
d. Complete Pulpotomy technique in non-vital permanent teeth

14. Theory **NOT** related to Dental caries is

a. Worm
b. Acidogenic
c. Genetic
d. Autoimmune

15.In Ellis & Davis classification, class III is

a. Only enamel is involved
b. Enamel and dentin are involved
c. Enamel, dentin and pulp are involved
d. Tooth is non-vital

16.. Parrot like repetitive speech is found in

a. Autism
b. Marfan syndrome
c. Cerebral palsy
d. Mental retardation

17. The % of Idoform in KRI paste is

a. 85.8
b. 86.8
c. 87.8
d. 88.8

18.Which rule is followed by majority of surgeons as a guide for cleft lip & palate repair?

a. 5
b. 10
c. 15
d. 20

19. Apexogenesis of incompletely formed root is to

a. Induce the formation of apical 1/3 of the root
b. Closure of apical foramen in a developing tooth
c. Induce formation of apical 1/3 of the root
d. Deposition of cellular Cementum at open apex

20. A child aged 4 years has symptoms of malnutrition with dirty clothes. This is classified as

a. Physical neglect
b. Emotional neglect
c. Emotional abuse
d. Physical abus

SECTION – B SAQ

1. Define and Classify dental caries
2. Diagnosis of pulpul diseases
3. Physical retrainers
4. Self correcting anomailes
5. Space regainers in early mixed dention phase.
6. Describe dental plaque
7. Describe serial extraction and write in detail about Tweed's method.
8. Tongue thrust habit
9. ART
10. Describe Pilpotomy procedure with diagram.

SECTION - C LAQ

1. Define ECC. Describe stage of ECC. Write about Management of ECC.

2. Write in detail about Development of Occlusion in Children.

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF Pediatric & Preventive Dentistry

Betterment Exam

MID TERM EXAMINATION

Roll No.	Question Booklet Version	Question Booklet Sr.No.
0 1 2 3 4 5 6 7 8 9	A B M P R S V W 0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

Answer Sheet No.
(write this no.on your question booklet)

Name of Examination

Subject:	Paper
Pedo	

Roll No. (In Words)
01
Question booklet version (In words)

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Candidate's Signature | Invigilator's Signature

Date : 31/5/2024

Q.No.	1	2	3	4	5	6	7	8	9	10
A		X	X	X						
B					X		X		X	
C	X					X				
D								X		X

Q.No.	11	12	13	14	15	16	17	18	19	20
A	X					X				
B				X				X		
C		X	X		X		X		X	
D										X

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below.

Wrong	Wrong	Wrong	Wrong
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do not Make Any sure Marks On The Answer Sheet.

4. Rough Work Must Not Be Don On This Answer Sheet Use Free

14
20

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MIDSR

Department of _____

Name of Student :- Chavan Ajit

Roll No. of Student :- | - | - | - | 0 | 1 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 31 / 5 / 2024

Time : 2pm - 5pm

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Sign. of Invigilator

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1) _____ ?

→ Defination

- Microbial disease of calcified tissue of teeth that leads to demineralized of inorganic components and breakdown of organic components of enamel and dentin.

classification:-

A) According to occurance
1) primary caries
2) Secondary caries
3) Residual caries

B) According to Rate
1) Acute
2) Chronic

C) According to location
1) pit & fissure
2) smooth surface
3) Root surface

D) According to type
1) occlusal caries
2) proximal caries.

E) According to Age.
1) Early childhood caries
2) Adolscent caries

2) ——— 9

→ Diagnosis of pulpal disease

A) Reversible pulpitis	B) Irreversible pulpitis
1) mild to moderate Sensitivity	1) Pain might be Absent
2) small duration	2) Long duration
3) Response to cold stimuli	3) Response to Hot & cold stimuli
4) pain may be Removed after Stimuli remove	4) pain continues after stimuli removed.
5) Throbbing pain	5) Sharp, Severe pain
6) It can progress to irreversible pulpitis	6) It can progress to lead the periapical abscess/ periapical tissue

✓

(1)

3) ——— ?

→ physical Restrains

Stabilise the patient for Conti

1) Mouth:
   1) Tongue blades open wide mouth prop
   2) Mouthmouth prop
      → Very Helpful
   3) Rubber bite blocks →
      Available in various size to fit on occlusal surface
   4) Finger gurds

2) Extremities
   1) posey straps
   2) Towel & tape

3) Body → papoose board
   2) Triangangular sheet
   3) pedi-wrap

4) Head → Head positioner

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Page No. | Date: / /

B) Self correcting anomalies :→

Anomaly	Corrected by Mechanism
1) Predental period	
1) Retrognathic mandible	→ differential and forward growth of mandible
2) Ant open Bite	→ Eruption of primary incisors
3) Infantile swallow pattern	→ Eruption of teeth.

Deciduous

1) Ant. Deep bite → when attrition of incisal edge of incisor occurs

2) Physiological spaces → when permanent incisors erup they use spaces

3) primate space → early mesial shift

4) Flush terminal → early mesial shift.

Page No. | Date: / /

Mixed dentition →

1) Ant. deep bite →
Supraeruption of permanent molars and premature of pads of tissue

2) mand. Ant. crowding
· Intercanine width get increased

3) Ugly duckling stage · Eruption of max. canine

4) End on molar Relation →
During late mesial shift by using leeway space of Nance

5) _____ ?

→ when space is lost progressively space maintainer is given. Space Regainer have to used to Regain the lost space for the

Example - Fixed
- Jakes
· pendulum
removable
- Hawley's
- Sling shot

6) Dental plaque :-

→ A sticky film of bacteria that constantly forms on teeth

- Causes - Cavities
  - gingival disease

- Biofilm of micro-organism.

7) Senile extraction.

- Orderly Removal of selected deciduous & permanent teeth in determined Sequence.

Tweed's method

At 8 years

1st 1° molar extraction (0)

1st premolar extraction (4)

Deciduous canine extraction (C).

8) Tongue thrusting Habit

Classification :→ profit

1) Physiologic
2) Habitual
3) functional
4) Anatomic

CLF :→

- Ant. open bite
- proclination of Ant teeth.
- midline diastema
- post. cross bite

Treatment :→

1) myofunctional therapy
   1) 45 exercise
   2) 25 exercise

2) other exercise
   1) subconscious
   2) speech

3) oral screen.

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Page No. | Date: / /

9) ART

→ Procedure →

the tooth isolated with cotton rolls

↓

Tooth surface cleaned with cotton pellet

↓

Entrance of lesion slightly widened with the help of Hand instrument

↓

dental caries Removed either small or medium size spoon excavator

↓

Apply calcium Hydroxide paste

↓

cavity acid etched

↓

Gic cement is mixed

↓

Insert in the cavity.

↓

petroleum jelly applied over the restoration

↓

Bite is checked & excess is Removed

↓

petroleum gelly applied again.

10) pulpotomy :)

→ Definition → Complete Removal of coronal portion of dental pulp, followed by placement of suitable dressing or medicament that will promote Healing and preserve vitality of remaining

Indications :→
Vital tooth with Healthy periodontium

Procedure :→

1) Tooth first anesthetize and isolated with rubber dam.
2) All Remaining dental caries should be removed and overhanging enamel should be planed back to provide
3) entire roof of pulp chamber should be removed with a bur.
4) A sharp discoid spoon excavator may be used to amputate the coronal pulp
5) pulp chamber should then irrigated with light flow of water from water syringe
6) If the Hgemorrage is controlled readily and pulp stump appears normal, pulp chamber dried with sterile cotton pellet

6) Pellet of cotton moistened with 1:5 concentration of Buckley's formocresol and blotted with sterile gauze to remove the excess is placed in contact with pulp stump and allowed to Remain 5 min.

7) Thick paste consisting of zinc oxide and eugenol is prepared. A zinc-polycarboxylate cement is placed over paste and tooth Restored with stainless steel crown.

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MIDSR

Department of _____

Name of Student :- Charan Ajit

Roll No. of Student :- | - | 7 | - | 0 | 1 |

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

10

Date : 31/5/24

Time : 2pm - 5pm

Sign. of Student

Sign. of Invigilator

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1) ECC

2) Definition →

Complex disease involving maxillary primary incisors within a month after eruption and spreading rapidly to other primary teeth to childhood caries.

Stages of ECC

1) Stage I :→

- initial irreversible stage

Age group → 10-18 months

features :→

1) cervically and occlusally interproximal area of chalky white.

2) No pain

3) lesion in more ant. teeth may spread to dentin and dislocated

2) stage II :→

- Damaged carious stage

Age group - 18-24 months

features is

1) In the terms of cold food

as lesion more ant. teeth may spread to dentin

3) stage III

- Extensive caries

Age group - 1 - 2 years

- features

lesion spread into pulp & thus

And tooth is grossly decayed

- pain is continuous.

- Management of ECC:→

- It can be devided into 3 stages

1) First visit:→

1) Identification of cause and counselling the patient

2) All lesions should be excavated & Restored

3) Indirect pulp capping after further investigation

4) salivary flow determine

5) Topical flouride applicab

Second visit :-

- One week after 1st visit
- Analysis of diet chart and explanation of disease process of the child teeth
- Isolate sugar factor in the diet
- Caries activity test

Third visit :-

- Restoring all the grossly decayed teeth
- Endodontic treatment
- Crowns can be given to endodontically treated teeth
- Recall after 3 months
- Parent counselling

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Page No. | Date: / /

Parent counselling:

Q. Development of occlusion in children:

(1) Predentate period:

- It's time of birth
- alveolar process at time of birth is called gum pads
- They are Horshoe-shaped pink, firm and Covered with layer
- divided → Buccolingual / lingual
- Divided into 10 segments in groove
- Transverse groove bet^n canine and first molar.
- maxillary gum pad are wide and longer than mandibular

(2) Deciduous dentition period:

primary teeth occurs during first 6 weeks of intrauterine life.

- 1st primary teeth erupts - 6 months

- Primate space:→
  Max. lateral and the canine and mandibular canine to 1st deciduous molar
  · Also called antropoid space

- physiologic space:→
  present bet^n all primary teeth
  - 4mm - maxillary
  - 7mm - mandible

Terminal planes:→

① Flush terminal plane:→
distal surface of maxillary and mandibular teeth in same plane

② mesial step:→
Distal surface of lower molar to mesial to distal surface of upper molar

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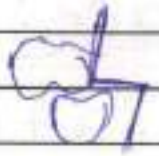
Page No. | Date: / /

B) Distal step



B) mixed dentition periodity

- Eruption of 1st permanent molar
- Exchange of deciduous incisors with permanent incisors

2) Interstransitional period

3) Second transitional period

1) Emergence of cuspids & Bicuspids

2) Establishment of occlusion

4) Ugly - duckling stage

→ canine erupts of permanent

Permanent dentition period

Leeway Space :-

- (C + D + E) = (3 + 4 + 5)

Mesiodistal width of permanent canine is less than the deciduous canine is called leeway space.

6

MIDSR DENTAL COLLEGE, LATUR

DEPARTMENT OF Pediatric & Preventive Dentistry

MID TERM EXAMINATION

Betterment Exam

Roll No.	Question Booklet Version	Question Booklet Sr.No.
0	A 0	0
1	B 1	1
2	M 2	2
3	P 3	3
4	R 4	4
5	S 5	5
6	V 6	6
7	W 7	7
8	8	8
9	9	9

Answer Sheet No.
(write this no.on your question booklet)

Name of Examination

Subject:	Paper
PEDO	

Roll No. (In Words)
03
Question booklet version (In words)

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Date : 31 / 5 /2024

Q.No.	1	2	3	4	5	6	7	8	9	10
A		X	X	X						
B					X				X	
	X					X	X			
D								X		X

Q.No.	11	12	13	14	15	16	17	18	19	20
A	X					X			X	X
B							X	X		
C		X	X		X					
D				X						

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INSTRUCTIONS

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Wrong	Wrong	Wrong	Wrong
A ☑	A ■	A ☒	A ☒
B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☒	C ☐
D ☐	D ☐	D ☐	D ☐

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4. Rough Work Must Not Be Don On This Answer Sheet Use Free

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MIDSR

Department of _____

Name of Student :- Shingare Ranjeet

Roll No. of Student :- 0 3

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 31 / 5 / 24

Time : 2pm . 5 pm

(8)

Sign. of Student

Sign. of Invigilator

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ECC

1] Definition

Various disease involving maxillary 1° incisors within a month after eruption & spreading rapidly.

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Stages

Stage I:- Initial Irreversible stage

- 10-18 months.
- Chalky white demineralizat" in mak. ant.
- No pain

Stage II:- Damaged carious stage

- 18-24 months
- lesion spread into dentin & show yellowish brown discolorat" ~~food~~.
- Pain on consuming cold items

Stage III :- Extensive Carious stage.

- 1-2 yrs
- lesion spread into pulp & ~~show~~ tooth is grossly destructed.
- Pain is continuous

Management

1) First visit

- Identificatn of lesion
- Lesions should be excavated & restored.
- Indirect pulp capping
- If abcess → should be drained
- Determine salivary flow rate
- Topical fluoride application.

2) Second visit

- Diet chart analysis
- Reassess restoration
- Caries activity tests

(3) Third visit

- Restoring all decayed teeth.
- Endodontic treatment
- In unrestorable → Extraction followed by space maintainer
- Crown placement should be done.

(4) Parent counselling

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Development of Occlusion

1) Pre-dentate period

- Alveolar process at time of birth are Gum pads

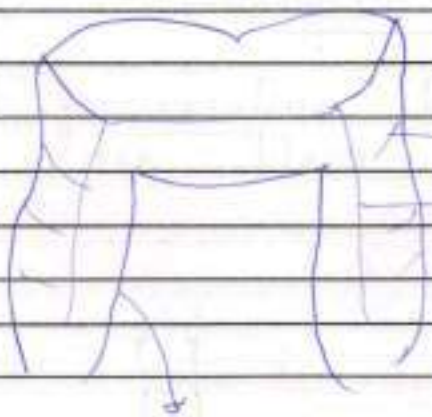
- Horse-shoe shaped, pink & firm.

- Dental groove : Divides gum pads in labial & lingual side.

- Transverse groove : Divides into 10 segments which has develop^n tooth sac.

- Lateral sulcus : Bet^n canine & first molar.

- Maxillary gum pad is larger.



(2) Deciduous Dentition

(6 weeks IUL – 2.5-3.5 yrs)

- Primate spaces : → Betn maxillary lateral incisor & canine
  → Betn mand. canine & first 1° molar.
  → AKA Simian spaces

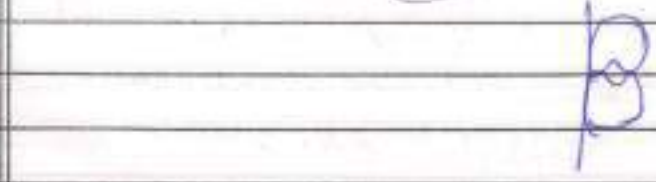
- Physiologic spaces : +Nt betn all teeth.
  Maxillary arch = 4mm
  Mandibular arch = 3mm

- Terminal planes : Distal surface of lower 2nd molar in relⁿ ⁻ upper

① Flush teriminal :-

Distal surfaces of both lower & upper molar are in the same plane.

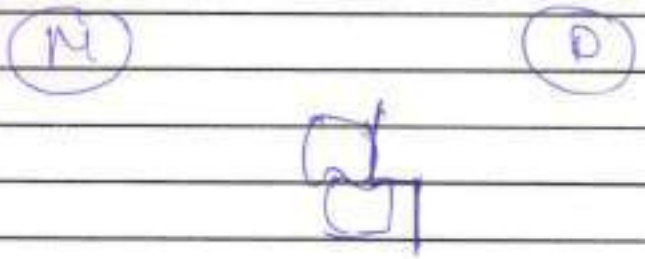
(D) (M)



(2) Mesial step

Distal surface of lower molar is mesial to distal surface of upper molar.

(3) Distal step



Mixed Dentition

- 1st transitional : eruption of first permant molar.

  exchange of incisors.

- 2nd transitional : eruption of cuspids bicuspids & 2nd permant molar

Broadbent Phenomenon

Permanent Dentition

Leeway Space

= Space for [C+D+E] − Space for [3+4+5]

Maxillary arch = 1.8 mm (0.9 mm on each side)

Mandibular arch = 3.4 mm (1.8 mm on each side).

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of _____

Name of Student :- Shingare Ranjeet

Roll No. of Student :- 0 3

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 3 / 5 / 24

Time : 2pm - 5pm

12

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Sign. of Invigilator

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17

Definition :-

Microbial disease of calcified tissue of teeth leading to demineralisation of inorganic & organic components of enamel & dentin.

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Page No. | Date: / /

Classification

(1) A/C to occurence :-
- → Primary
- → Secondary
- → Residual

(2) A/C to location :-
- → Pit & fissure
- → Smooth surface
- → Root

(3) A/C to direction :-
- → Forward
- → Backward.

(4) A/C to age :-
- → ECC
- → Adolscent
- → Senile.

(5) A/C to extent :-
- → Incipient
- → Cavitated.

2] Diagnosis of Pulpal diseases.

- Reversible pulpitis :- pain is spontaneous sharp
  - due to cold stimulus.
  - sets after removal of stimulus
- Irreversible pulpitis :- pain is dull aching continuous
  - due to hot & cold stimuly
  - Night pain.
  - doesn't ~~set~~ remains even after removal of stimulus.
- Thermal tests can be done to check vitality of pulp.
- Chr hyperplastic pulpitis :- pain on mastication
  - inflamatory growth of pulpal tissue

- Periapical abscess :- pain is dull aching continuous
  - p'apical radiolucency & discontinuous lamina dura.
  - Swelling intraoral.

- Apical periodontitis :- pain is sharp
  - widening of PDL space
  - Continuous lamina dura

3] Physical Restrainty

⇒ Used to stabilize the patient for continuation of T/t.

- Types :-

(1) Mouth → Tongue blades
→ Rubber bite blocks.

(2) Extremities → Posey straps
→ Towel & tape
→ Extra assistent.

(3) Body → Papoose board
→ Triangular sheets

4] Self Correcting Anomalies

- Pseudentate Period

(1) Retrognathic mandible → Differential growth

(2) Ant. open bite → Eruption of primary incisors

(3) Infantile swallow → Eruption of teeth

- Deciduous dentition

(1) Ant. deep bite → Eruption of permanent molars

(2) Physiologic spaces → Eruption of permanent incisors

→ Max = 7mm
Mand = 5mm

(3) Primate space → Early mesial shift

(4) Flush terminal plane → Early & late mesial shift

Mixed Dentition

(1) Ant deep bite → Supraeruption

(2) Mand. ant. Crowding → ↑ in intercanine width

(3) Ugly duckling stage → Eruption of maxillary canine

(4) End on molar relation → Late mesial shift

5] Space Regainers

⇒ When space is lost progressively when space maintainer is not given, space regainers have to used to regain the lost space for Tt.

Ex:- Fixed
- → Taffe's
- → Pendulum
- → Lip bumper

Removable
- → Hawley's
- → Sling shot

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Page No. | Date: / /

6] Dental Plaque

⇒ • A sticky film of bacteria that constantly forms on teeth

• Causes → Cavities
→ ~~gum~~ gingival diseases.

• Biofilm of microorganisms.

7] Serial Extraction

⇒ Orderly removal of selected deciduous & permanent teeth in a determined sequence.

• Tweed's Method (1906)

At 8 yrs

↓

1st 1° molar extraction (D)

↓

1st Premolar extraction (4)

↓

Deciduous canine extraction (C)

8] Tongue thrust habit

- Classification A/C to Profit
  1. Physiologic
  2. Habitual
  3. Functional
  4. Anatomic.

- C/F :-
  - → Ant open bite.
  - → Proclinatn of ant. teeth
  - → Midline diastema.
  - → Posterior cross-bite.

- T/t
  - → Myofunctional
    - ↳ 4S exercise
    - ↳ Lemon candy exercise
    - ↳ 2S exercise.
  - → Speech therapy
  - → Lip exercises.
  - → Oral screen.

6] Dental Plaque

=> • A sticky film of bacteria that constantly forms on teeth

• Causes → cavities
→ ~~gum~~ gingival diseases.

• Biofilm of microorganisms.

7] Serial Extraction

=> Orderly removal of selected deciduous & permanent teeth in a determined sequence.

• Tweed's Method (1906)

At 8 yrs

↓

1st 1° molar extraction (0)

↓

1st Premolar extraction (4)

↓

Deciduous canine extraction (C)

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Page No. | Date: / /

9] ART (Atraumatic Restorative Treatment)

- Indication - Camp
  - Mobile areas

- Done with hand instruments -
- Procedure

Tooth is isolated & dried c cotton pellets

↓

Carier is removed by spoon excavator

↓

If req. pulpal protection is provided

↓

Cavity prepared is cleaned

↓

Cavity is acid-etched

↓

GIC is placed in cavity & slightly overfilled

↓

Petroleum jelly is applied over the restoration

↓

Bite is checked & excess is removed.

↓

Petroleum jelly is applied again.

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Page No. | Date: / /

10] Pulpotomy

=> • Removal of coronal pulp followed by placement of dressing that promotes healing.

• Indications :-

- Vital radicular pulp.

• Procedure :-

Tooth anesthetized & isolated

↓

Caries excavation

↓

Deroofing of pulpal chamber

↓

Complete removal of coronal pulp.

↓

Irrigation of pulpal chamber.

↓

Pulpal Chamber dried thoroughly ē cotton pellet

↓

Cotton pellet moistened ē 1:5 conc^{n} of Buckley's sol^{n} (formocresol) placed in contact ē pulp stump for 5 min.

↓

Thick paste of ZOE placed followed by temporary dressing

↓

After 8-10 days tooth is delivered ē stainless steel crown.

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ESTD 2006
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DEPARTMENT OF PEDIATRIC & PREVENTIVE DENTISTRY
IV BDS SUMMER 2024 BATCH
BETTERMENT EXAM RESULT

Sr. No	Name of the Student	Maximum Mark	Section A	Section B	Section C	Marks Obtained
01	Chavan Ajit S	60	14	10	10	34
02	Shingare Ranjeet	60	16	12	8	36

HEAD
HOD
DEPARTMENT OF PEDODONTICS
M.I.D.S.R. Dental College, LATUR

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH (DENTAL COLLEGE), LATUR

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Department of DADH.

Internal Assessment Examination- I / II / III

Roll No. 0 0 6 0 4 1

Question Booklet Version: A

Question Booklet Sr. No.

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination: Betterment Exam.

Subject	Paper
DADH.	

Roll No. (In Words): four four one

Question Booklet Version (In Words):

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 22/08/2024

	1	2	3	4	5	6	7	8	9	10
A	X		X	X	X		X			X
B						X				
C		X		X	X					
D			X					X	X	

	11	12	13	14	15	16	17	18	19	20
A			X		X				X	
B				X		X	X	X		X
C	X									
D		X								

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

13/20

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	
Section - B	
Section - C	

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(DENTAL COLLEGE), LATUR

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Department of DADH.

Name of Student :- Shravani Santosh Joshi

Roll No. of Student :- 4 1

Name of the Examination :- ~~Internal Assessment~~ Betterment Examination

SECTION - B

Date : 22 / 08 / 2024.

Time :

19.5/25

Sign. of Student

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

1. Enter your seat number, name, subject, on the cover page of the answer sheet
2. Candidates should not draw additional margins as they are provided on each page.
3. Candidates should not write anything in the margin, except question number.
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12. Questions shall be solved serially or section wise i.e. answers should be written as per serial of questions.

SAQ.

Q.1.

a) → Difference between Cellular & acellular Cementum.

	A Cellular Cementum	Cellular cementum
(1)	This is the primary cementum	(1) This is the secondary cementum
(2)	Cementocytes are absent	(2) Cementocytes are present.
(3)	This is the slow forming Cementum.	(3) This is the fast forming cementum
(4)	The incremental lines are close to each other.	(4) The incremented lines are far away from each other.
(5)	function of this cementum is Anchorage Mainly.	(5) function of this cementum is Adaptation & repair mainly
(6)	This Cementum is present in apical 1/3rd of root area.	(6) This cementum present in cervical 2/3rd of root area.

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Page No. | Date: / /

(1) Extrinsic fibres are present

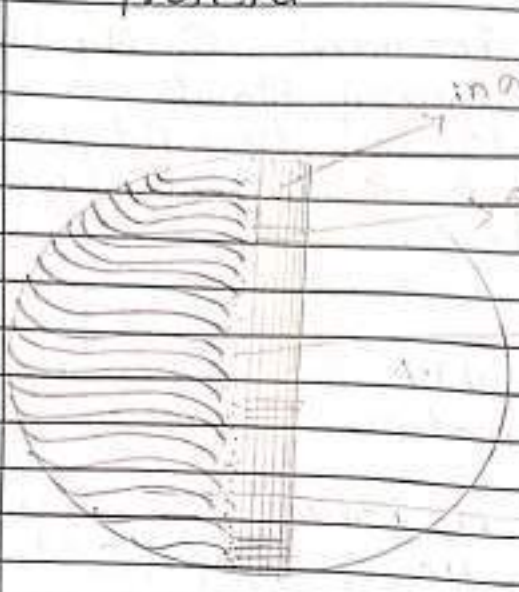

fig: Acellular cementum

(2) Intrinsic fibres are present.

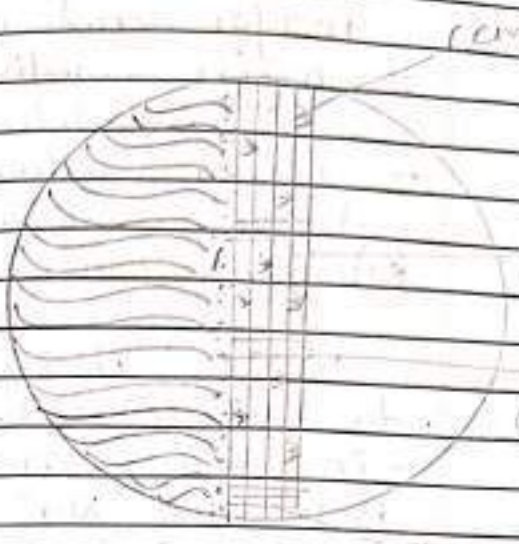

fig: Cellular cementum

2 x 2

(b) → Composition & fun^{n} of Saliva.

- Saliva is secreated in oral cavity by major and minor salivary glands.
- major salivary glands are parotid gland, Submandibular gland & Sublingual gland
- minor salivary glands are named according to their location.

(1) Composition :-

- Saliva 99% is made up of water. it's liquidy nature & fluidity is due to 99% water.
- in other one percent it contains various ions like Na^{+}, K^{+}, Cl^{-}, HCO_3^{-}, HPO_4^{-}, Ca^{2+} etc. which indeed found in human body.
- it also contains some enzymes important for the digestion & protection of oral cavity
- it contains α-amylase which converts primarily starch a polysaccharide into disaccheerides.
- 30% of the starch digestion occurs in oral cavity duets α-amylase.
- it also contains lysozymes which needed for maintaining sterile environment in oral cavity.
- it protects the oral cavity.
- it also contain some organic compounds like carbohydrates & proteins

(2) function :-

Saliva has various functions in our day to day life such as protective, deglutiontion & mastication, speech, lubrication, digestion.

(1) protection :

lysozymes present in saliva protects oral cavity from infection. and maintain infection free environment in oral cavity.

(2) deglution & mastication :

Saliva helps in mastication of food by acting as lubricant which prevents spillway of food in teeth and other structures. It helps in deglutition by converting food into bolus.

(3) Speech :

lubricating property of saliva helps in easy speech and movement of tongue & teeth

(4) lubrication :

Saliva acts as lubricating agent in oral cavity which prevents dryness of oral cavity.

(5) digestion :

α-amylase present in saliva digests 30% of starch in oral cavity.

c) → Enumerate stages of tooth development ----

→ - development of tooth occurs from dental lamina
- there are 5 main steges of tooth developme

1. Bud stage
2. Cap stage
3. Early bell stage.
4. Advanced bell stage.
5. Root formation.

This all are the physiological stages.

① Bud stage:

in Bud stage the Bud of the Crown formed presence of inner enamel epithelium, outer enamel epithelium & Dental lamina are the specifications of this stage.

② Cap stage:

in Cap stage. form" of stellate reticulum is the specification of this stage. the shape of the bud. turns like cap. in the concavity of cap presence of dental papilla. which inturn forms dentin & pulp

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Page No. | Date: / /

(3) Early bell Stage:

- the shape of bud changes in Bell like shape. Stellelete reteculum are present inner enamel epithelium starts converting into ameloblast & dental papilla into odontoblas... formⁿ of Stratum intermedium.

(4) Advanced bell Stage:

- in this Stage Stellate reticulum starts to collaps. Stratum intermedium forms 2 layers. shape and size of Crown is completely determined in this stage. In this stage formation of Enamel is started followed by the formation of dentin.
- in this Stage the size of the enamel organ is largest. Root formation is initiated in this Stage i.e. formation of HERS.

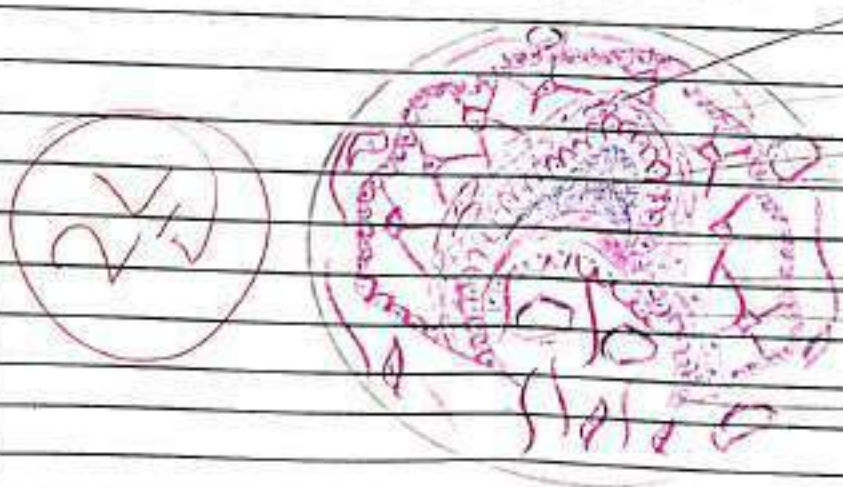

Fig: Advanced bell stage.

d) ⇒ Fixatives:

- Fixation is the 2nd stage of tissue processing
- After obtaining tissue specimen. the section is dipped in fixative agents for fixation.
- the minimum time for fixation is 24 hrs
- It varies according to size of specimen and nature of tissue.
- the fixative agents are
  (1) 10% buffered formaline
  (2) ethyl alcohol
  (3) methyl alcohol.
- 10% buffered formalin is the most widely used fixative agent.
- It is suitable for almost all of the tissue
- But in some cases different fixative agents are used for different tissues.
- after the fixation washing is done.

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Page No. | Date: / /

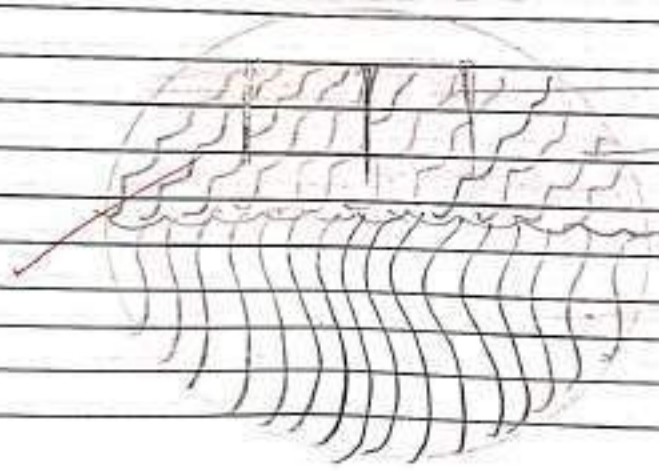
e) → Hypocalcified structures of enamel.

- there are some structures are enamel which are hypocalcified which means there is less formation of enamel.
- following are the hypocalcified structures of enamel.

1. Enamel lamellae
2. Enamel tufts
3. incremental lines of retzius
4. Neonatal line
5. Enamel spindle.
6. Ginaoled Enamel.

(1) Enamel lamellae :

this are seen as Cracks in enamel. they are present from surface towards Dentino enamel Junction



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Page No. | Date: / /

2) Gnarled Enamel.
~~Enamel Rods~~ is the hypocalcified structure of enamel.

fig: Gnarled Enamel

3) Enamel tufts

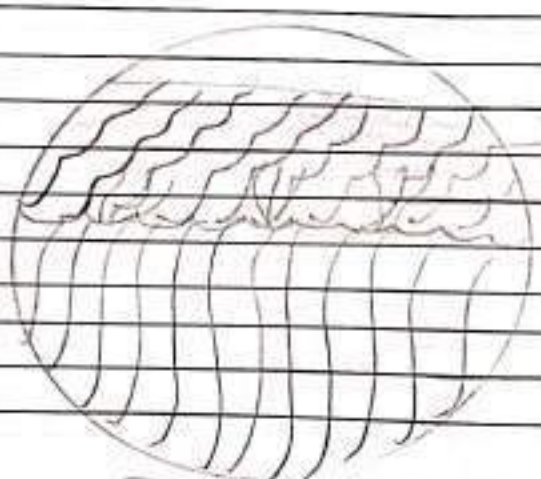

fig: Enamel tufts

Section-B

Page No. Date: / /

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Page No. Date: / /

(4) Incremented lines of retzius & neonatal line.
Neonal line. divides prenatal & postnatal enamel.

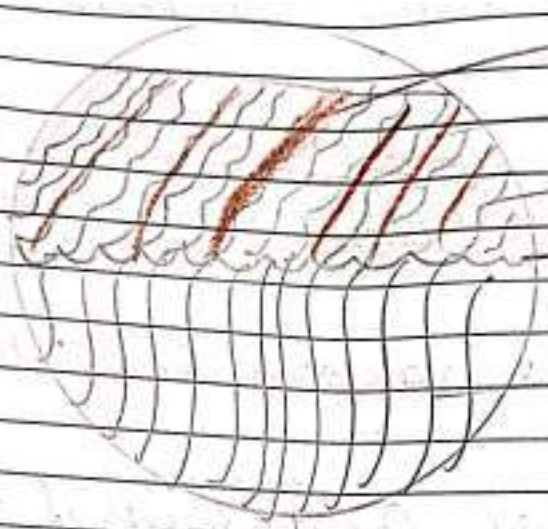

fig: Neonatal line.

(5) Enamel spindle:

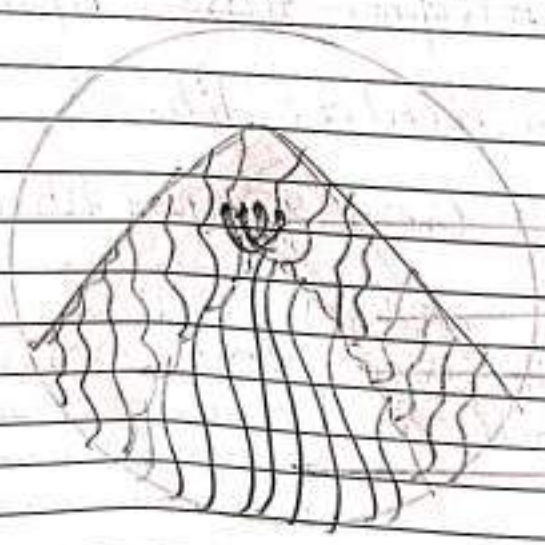

fig: Enamel spindle.

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Page No. | Date: / /

LAQ

Periodontium:

Periodontium in which the bone, gingiva and the periodontal ligaments are included.

- Periodontal ligaments are formed by the fibres which helps attaching bone, tooth & gingivae
- there are various principle group of fibres.
  1. Alveolar Crest group of fibres
  2. Oblique fibres.
  3. ~~Horizontal transverse~~ fibres
  4. ~~oblique fibres~~ Apical fibres
  5. ~~inter~~ Radicular fibres

1. Alveolar Crest group of fibres:

this group of fibres attaches the Alveolar bone to the gingiva. this is one of the principle fibres of the periodontal ligament.

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(2) oblique fibres:
this are present obliquely after horizontal fibres. they bears oblique forces of on teeth and supports

(3) Horizonal fibres:
this fibres are present 90° to the tooth surface line. this bears the Horizontal forces of the tooth surface.

(4) APical group of fibres:
This are present on the apex of the crown they bear the apical forces on the crown and helps the stability of the tooth.

(5) interradicular group of fibres:
this are present in between interadicular region bears forces applied on tooth. & protects tooth from shedding.

Shravani Joshi
4H
~~Section B~~

Page No. | Date: / /

functions of PDL:

periodontal ligament mainly act as shock absorb or and anchor. the helpsin anchorage of tooth.

fun^{n}:

1. ~~Protection~~ Supportive.
2. Homeostasis
3. Sensory
4. Anchorage.
5. protective

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Section - B

Page No. 2 | Date: / /

(1) Supportive:
Periodontal ligaments supports tooth and act as shock absorber they helps in anchorage of the tooth.

(2) Sensory:
Various nerves present in perio-dontal ligament helps in transferring pain sensation to the brain.

(3) Homeostasis:
periodontal ligaments helps in formation of Cementum & ~~Dent~~ pulp in. Extreme Conditions

(5) protective:
It helps or protects the tooth from shedding off. holds the tooth tightly it acts as shock absorber

(6) Anchorage:
It anchors the tooth. attaches bone to the tooth to the gingiva & bone.

7

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Department of DADH.

Name of Student :- Bhavani Santosh Joshi

Roll No. of Student :- 4 1

Name of the Examination :- Internal Assessment Examination (Betterment)

SECTION - C

Date : 22/08/2024.

Time :

Sign. of Student

16/25

Sign. of Invigilator

SPECIAL INSTRUCTION TO CANDIDATES

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a) Embrassure :

Embrassures are the spillway or a V shaped valley between two teeths.
- when two teeth of same arch are in contact with each other there is formation of some V shaped spaces between them mostly present in posterior teeth.
- they are known as embrassures.
- from viewing from occlusal aspect we can see. lingual or palatal & labial or buccal embressures.

- from viewing from labial aspect we can see occlusal and gingival embrassares
- this are the spaces between tooth.
- present in the tooth of same arch,

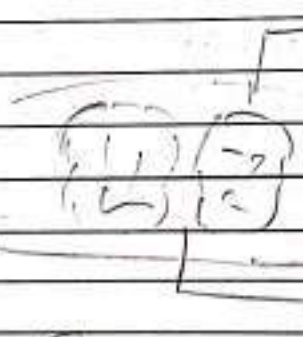

fig. Viewing from occlusal aspect.

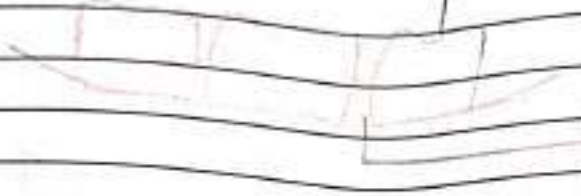

fig: viewing from labial aspect

Embrassure prevents spillway of food.

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Page No. | Date: / /

b) → Arch traits of permanent Canines

Permanent maxillary Canine	Permanent mandibular Canine.
→ it is more well defined and Sharper.	→ It is not as well defined as maxillary and a bit rounder
→ it's root is longer as compare to mandibular Canine. (17mm)	→ it's root is shorter as compare to maxillary Canine (16mm)
→ it's Crown is wider mesiodistally than mandibular Canine	→ it's Crown is not as much as wider as maxillary Canine
→ it's Crown's shorter Cervico occlusally	→ it's Crown's longer Cervico occlusally
→ root to Crown ratio of both the Canines are same	
→ Distal Slope is more than mesial Slope	→ Mesial slope is more than Distal Slope.

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Page No. | Date: / /

Maxillary Canine	Mandibular Canine
→ Maxillary Canine's pointed and sharp.	→ it is less pointed.
→ lingual fossa & well defined Cingulum present	→ lingual fossa present but cingulum is not well defined.
→ it's primate spaces present mesial to canine	→ its primate spaces present Distal to mandibular Canine.
→ Mesial developmental groove absent on root.	→ Mesial developmental groove present on root.

(27)

c) → Muscles of mastication:

muscles of mastication are the muscles which helps in masticatory movements of maxilla and mandible. Such as elevation, downward movements, ~~forda~~ protrudtion etc.

Here are the muscles of mastication.

1. Temporalis
2. masseter
3. Median pterigoid
4. lateral pterigoid.

(1) Temporalis:

is the muscle originates from the temporal bone and attaches to the ramus of mandible it helps in the elevation of the mandible and backward & forward movement of mandible.

(2) Masseter:

is the muscle attaches to the ramus of mandible and maxilla it helps in downward movements of mandible.

③ Median pterigoid :

This muscle is present below temporalis and attaches to the neck of mandible. it helps in protrudes the mandible

③ lateral pterigoid :

This muscle present downward to the mandible attaches angle of the mandible and helps in downward movements of the mandible.

Q

d) ⇒ define:

① Cusp: This is the elevation of the occlusal surface of the tooth. This are pointed elevations helps in mastication & interdigitation of the jaws. incisor does not have any cusp Canines have one cusp. Premolars have 2 or 3 cusps and molar have 4 or more cusps. the heps in applying force on opposite arch's tooth.

② Cingulum:

this is the small elevation present on anterior tooth. Cingulum present only in incisors and Canines Cingulum mainly highlights the Cervical area of the tooth.

③ fossa:

fossa is the irregular depression present on the occlusal surface of the tooth. it may be triangular, Centreal, mesial, distal. it is present in Canine known as Canine fossey it helps in interdigitation and bears the forces applied by opposite arche's tooth

(4) Ridge :

Ridge is the linear elevation present on tooth. present in all the teeth in incisors known as incisal ridge. on the occlusal surfaces they are present as Mesial marginal ridge
Distal marginal ridge
palatal/buccal ridge.
- If it is present transversly known as trasverse ridge
- if it is present obliquely known as oblique ridge.

(5) Groove :

This is the linear depression present on the occlusal surface.
Groove can be central groove, develop- -mental groove etc.

(6) Pit : -

This is the pin point depression present at occlusal surface. most of the grooves arises from here. central pit is the example.

e)

Permanent dentition	deciduous dentition.
→ more well defined larger tooth present	→ not as well defined and smaller tooth present
→ premolars present	→ premolars absent
→ mamelons are present on incisors.	→ Mamelons present
→ not as white, yellowish tooth present	→ whiter tooth present.
→ roots are more longer	→ roots are shorter
→ Shedding does not happens.	→ Shedding happens.
→ More defined occlusal surface in molars	→ less defined occlusal surface in molars
→ first molar is larger than second molar and is larger than third molar	→ first molar is smaller than second molar

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Page No. | Date: / /

Permanent dentition	Deciduous dentition
→ incisors are larger and rounded	→ incisors are perfect square
→ flare of root of molars is less as there is no next tooth to erupt and no shedding.	→ flare of root of molars is more as they have to save spaces for permanent premolars
→ Pulp chamber is smaller	→ pulp chamber is larger
→ Root trunk present	→ Root trunk Absent

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Page No. | Date: / /

LAQ

Central incisor	lateral incisor.
→ Central incisors have large Crown.	→ Crown of lateral incisor is smaller
→ It is wider mesiodistally	→ It is narrower mesiodistally
→ Both the crowns are trapezoid in shape	
→ Both the Crowns Contains mamelons.	
→ root length is larger.	→ Root length is smaller
→ FDI = 11 or 21 31 or 41	→ FDI = 12 or 22 32 or 42
→ This are the first tooth in the arch	→ This are the 2nd tooth in the arch

Shravani Santosh Joshi
41
Section-C

→ Maxillary Central incisor:
- is the widest anterior tooth mesio distally. trapezoid in shape.
- fun^n of the Central incisor is cutting.
- mamelons are present on the incisal aspect

- labial aspect:
It is convex slightly from
- labial aspect. trapezoid in the shape.
It contains mamelons which are present and viewed from labial aspect.
- traces of developmented lobes are seen.
- This is a slightly distally tilted.

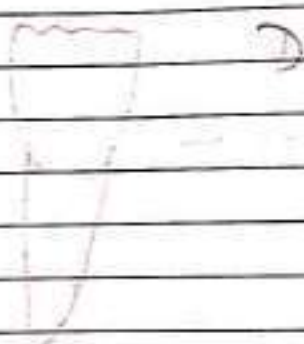

fig: labial aspect

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Page No. | Date: / /

(2) lingual aspect:

Here a fossa is present on lingual aspect.

- presence of cingulum is the main on lingual aspect.
- Cingulum is the small elevation which is present on the cervical region of tooth.
- a 'W' shaped fossa present.
- this part is a bit distally tilted.
- trapezoid in shape after viewing from lingual aspect.

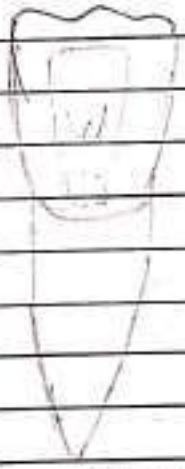

fig. lingual aspect

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(3) Mesial aspect:

from the mesial aspect the Crown is no more trapezoid. it is some what Conical in nature.
- the Convexities and concavity present on labial and lingual aspect are seen.
- the cervical line is convex towards the Crown tip and concave towards the Root apex.
- the root is visible from this aspect.

fig: Mesial aspect

(4) Distal aspect:

- the Shape of the crown is not trapezoid is somewhat conical.
- the convexities & concavities on labial & lingual aspects are visible.
- the fossa is visible
- the whole crown is tilted distally
- the cingulum is visible from this aspect
- the cervical line is concave towards Root apex and convex towards cusp tip.
-

Fig: Distal aspect.

→ This is the single rooted tooth
→ FDI = 11 or 21
Palmer = ⌝1 or ⌜1
Universal = 8 or 9

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH
(DENTAL COLLEGE) , LATUR

MIDSR

Department of Dental Anatomy & Histology.

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
00052		

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination
Betterment examination

Subject	Paper
DAD H	

Roll No. (In Words)
Fifty two

Question Booklet Version (In Words)

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 22/08/2024

	1	2	3	4	5	6	7	8	9	10
A	X		X		X		X	X	X	
B				X		X				
C		X								X
D										

	11	12	13	14	15	16	17	18	19	20
A	X		X						X	
B				X	X	X				
C							X			
D		X						X		X

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

11
20

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	
Section - B	
Section - C	

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MAHARASHTRA INSTITUTE OF DENTAL SCIENCES & RESEARCH

(DENTAL COLLEGE), LATUR

Department of Dental Anatomy & Histology.

Name of Student :- Kunal N. Lahane

Roll No. of Student :- 0 0 0 5 2

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

Date : 22/08/2024.

10/25

Time :

Sign. of Student

Sign. of Invigilator

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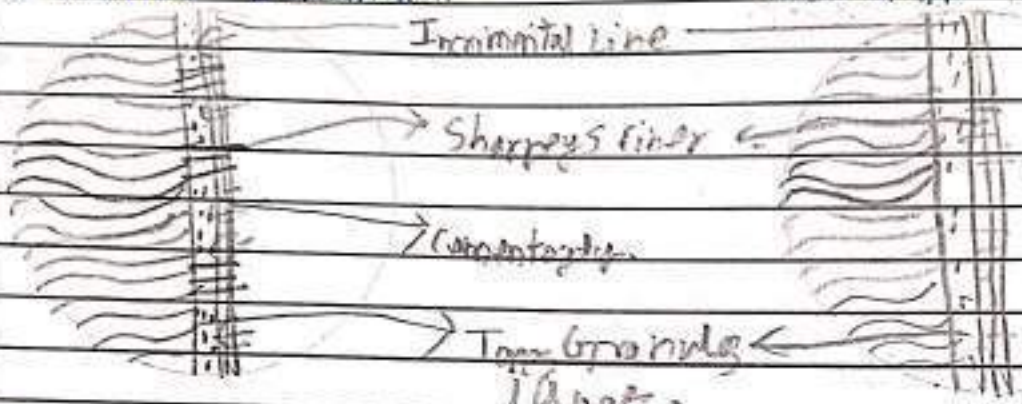
Page No. | Date: / /

Q1 ——— ?

a) Difference b/w cellular & acellular cementum?

→

	Cellular cementum.	Acellular cementum
		
Position:	Present on apical 3rd region of root	Present on coronal 2/3rd portion of root.
Rate of formation:	Fast	Slow
	Cementocytes present.	Cementocytes are Absent
Cementoid.	Are Present	Are absent.
	Incrimental lines are not regularly formed	Incrimental lines are regularly formed.
	Incrimental lines are far apart	Incrimental lines are closer to each other.
	Apical.	Helps in Anchorage.

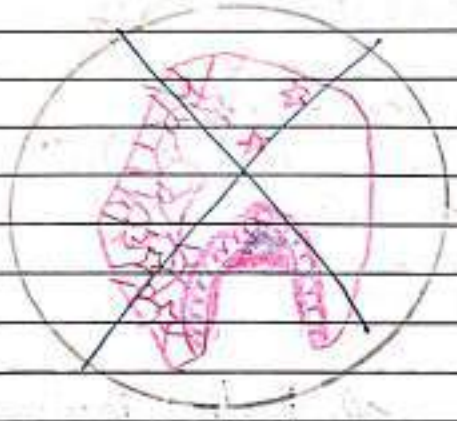
(2)

MIDSR

Page No. | Date: / /

Q() Enumerate stages of tooth Development Write. a short note on Advanced bell stage with well labeled digram.

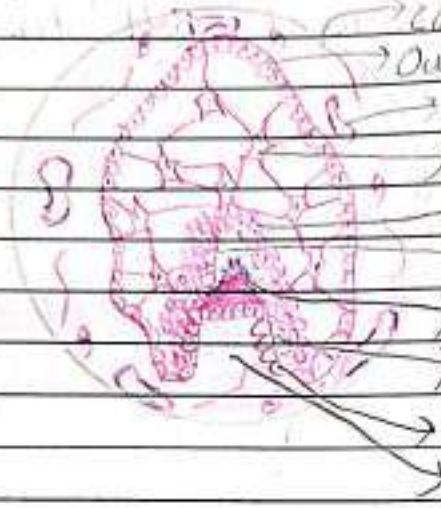
→



Stages of tooth development :-

- Bud stage
- Cap stage
- Early bell stage.
- Advance bell stage.

Advanced bell stage



It is final stage of tooth development

- Types of cell present :- outer enamel epithelium
  Inner enamal epithelium
  stellet reticulum
  stratum intermedium
  odontoblast.
- In this stage odontoblast form the 1st layer of dentin.
- Nucleus of inner enamal epithelium becomes basal.

- Dental lamella is completely degenerated.
- Outer enamel epith composed of flat cuboidal cells
- Inner enamel epith composed of columnal cells.
- Pulp is also formed.

12/2

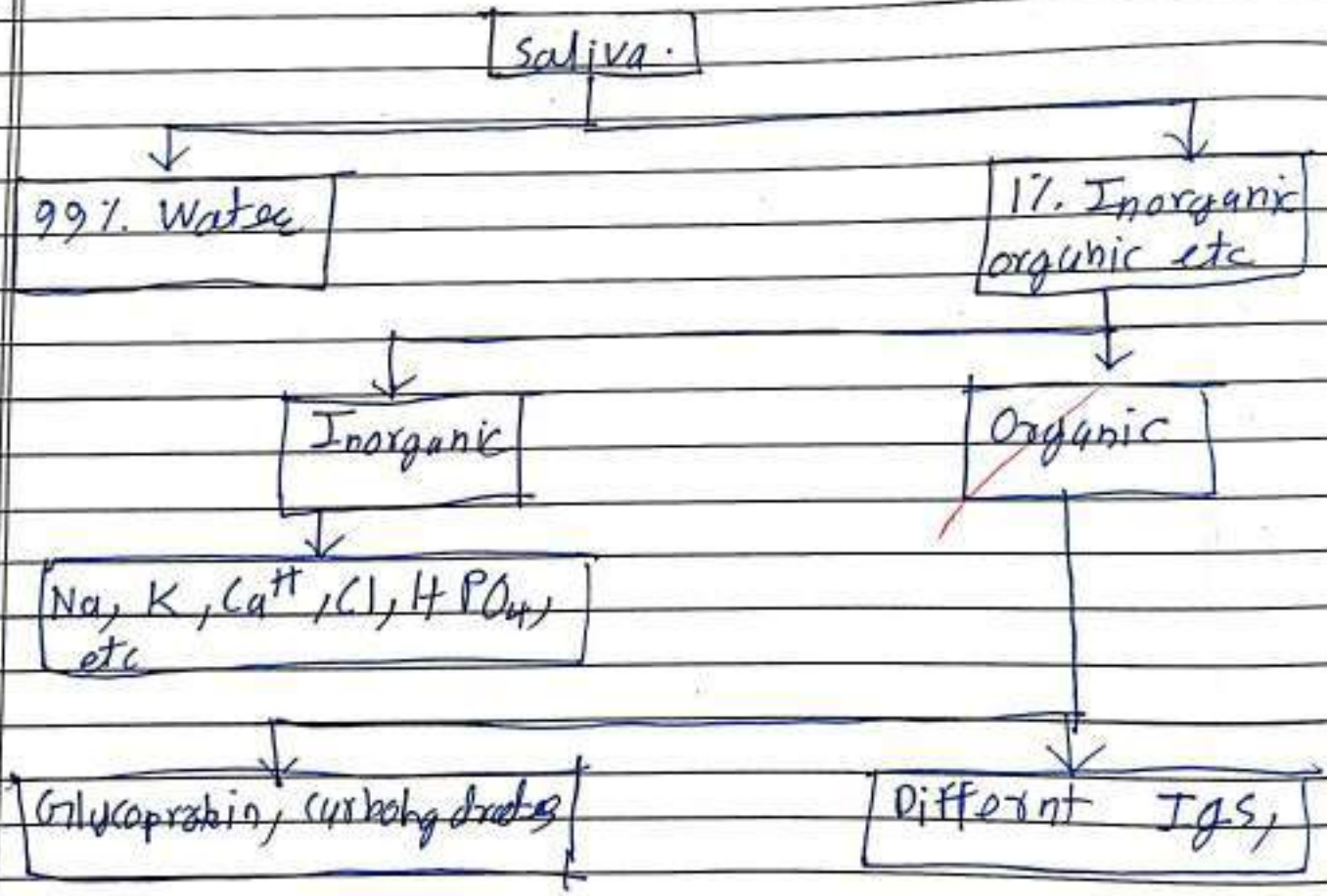
b Composition & Function of saliva.

→ Saliva.

Composition:-

It's primary role is protection of oral cavity.

It usually composed of water 99% & 1% composed of organic, inorganic & other substance.



Sulika composit of amylase. lasosime, etc.

It consist of antibacterial compounds.

Function:-

- Saliva's main function is protection of oral cavity.
- It helps in speech mastication / deglutition, test, swallowing, antibacterial lubrication, antimicrobial etc.
- Saliva keeps oral cavity moist which helps in speech prespective.
- Excretion:- Various substance from blood enter into saliva. thus it help in excretion.
- Clinical:- Thus, drugs or other substance present in body can be tested through saliva.
- Dilution:- saliva. help in lubrication thus.
- Digestion:- Various component of saliva. get mixed into food & break down at it occurs.
- Taste:- After break down test sensitions can be present.

Saliva removes non-adherent bacteria from mouth

It helps in prevention of decay of tooth by doing it.

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Page No. | Date: / /

d) Fixatives:

→ Fixative:-

They are use for function of tissue.

Ideal ~~from~~ fixitive should be:- cheap.
easialy availible
No discolouritution on tissue.
No residue on tissue
quickly usable (never dening.)

They help in sectioning of tissue by making it hard

Varias types:- ① simple fixative. (formalin)
② compound fixative (Bovien's soln)
③ Immunoglobin fixative:- antibacterial etc
④ Cytological fixative:- ~~etc~~ cytoplasum. Protection.
⑤ Histo chemical:- Keeps histology of tissue

Most commonly used fixative:-

① formalin.
② Bovien's soln (picric acid):- renal & testicular tests.
③ Alchol

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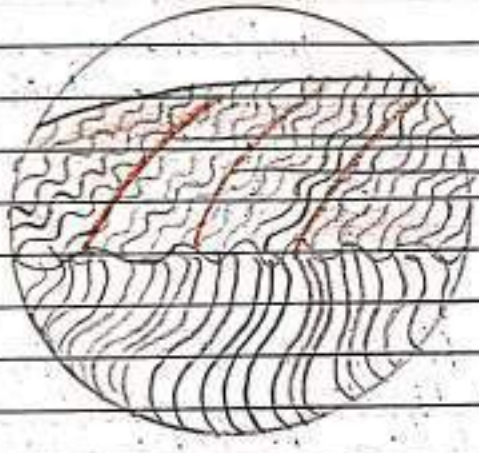
Page No. | Date: / /

e→ Hypo calcified structure of enamel are:-

1. Incrimental line of retizius.
2. Neonatal line
3. Enamel Tufts.
4. Enamel spindle
5. Enamel lamellae.

1. Incrimental lines & Neonatal lines [Hexagus]:-



- Incrimental lines are formed after rythamic deposition of enamel.
- Neonatal line is dark line representing pre natal enamel
- Prenatal enamel is more mineralised as it is extremly protected

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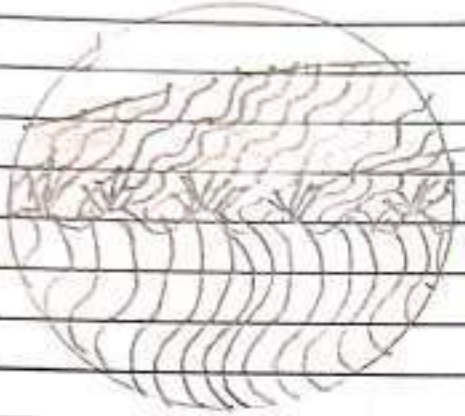
Page No. | Date: / /

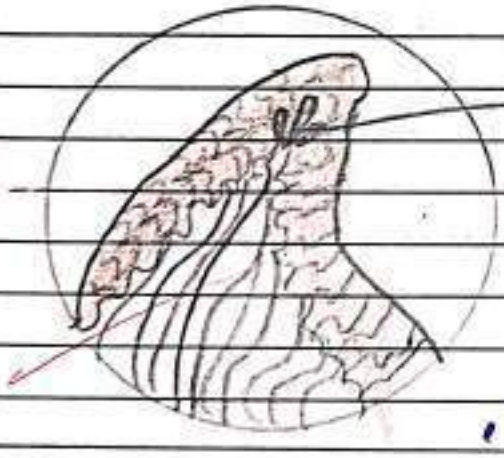
Enamel Tuft. [Ross, G.S].



→ Enamel spindle

- They are rainbow like structure. Extending from dento enamel junction towards enamel surface
- They are gross shaped structures.

Enamel spindle. [Ross. G.S]



→ Enamel spindle

- They are extended portion of odontoblast process that extend from dentine.
- They are drop like structure
- They are usully present on the cusp tip

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Department of _____

Name of Student :- Kunal N. Lahane.

Roll No. of Student :- 6 0 0 5 2

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 22/08/24

Time :

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12/25

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SPECIAL INSTRUCTION TO CANDIDATES

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Page No. | Date: / /

Q1 ——?.

a) Short note on embrasures.

Embrasures :-

→. When two teeth of same arch comes together they form 4 consecitive spaces adjecent to the contact are. They are known as embraseres.

They are traingular or V-shaped spaces. Embrasure are named according to their location & form the aspect from which they are viewd.

When viewed from buccal aspect :-

2 embrasures are see :- Incisal / occlusal.
cervical / gingival.

From Incisal aspect :-

2 embrasures are seen :- buccal / labial.
lingual

Gingival embrasures are the spaces present b/w the two teeth.

Physiological uses:-

- Embersures are used as spill ways during mastication.
- They also help in self cleaning of teeth.

Incisal Embresure:-

Their size increases from anterior towards posterior teeth

Grevical Embrasure:-

Their size decreases from anterior towards posterior teeth.

Labial & lingual embrasures are of same size in anterior teeth.

While their size differ in posterior teeth.

Q) Muscle of Mastication:-

→ Muscle of Mastication:-

Mastication is the process used for chewing of food particles. mixing of saliva breakdown of food particles etc.

There are 4 types of muscles used in mastication:-

① Massater.
② Temporalis
③ Medial pterygoid
④ Lateral pterygoid.

① Massater:-

- It is the strongest muscle used in mastication

Origin:- zygomatic arch.

Incersion:- angle of ramus of mandible

Nerve supply:- Massater nerve.

Function:- Forceful chewing & closing of mouth.

MIDSR

Page No. | Date: / /

② Temporalis :-

- It is a fan shaped muscle
- It is the largest muscle

Origin :- Temporalis fossa.

Incersion :- Anterior body of ramus of mandible.

Nerve supply :- Temporalis branch of mandibular nerve.

③ Medial pterygoid :- It runs ∥ to mass ater fasem inner aspect.

Origin :- Medial side of lateral pterygoid plate.

Inersion :- Inner side of mandibular

Nerve supply :- Nerve present on mandibular arch.

Function :- Elevation & protrusion

④ Lateral pterygoid :-

Origin :- Sesamoid bone.
Function :- depression & retraction.

Page No. | Date: / /

MIDSR

Q d Define the following:-

→ Cusp:- They are the elevation or mount present on the occlusal surface of crown

- They are named according to their location present on the teeth
- No. of cusps varies of different teeth:-

Canine:- 1 cusp

Maxillary premolar:- 2 cusps

Mandibular 2nd premolar:- 3 cusps

Maxillary 1st molar:- 4 functional cusp

Mandibular 1st molar:- 5 cusp.

- Non function cusp are also present, cusp of Carabelli
- Cingulum:-

~~They are found present on~~

- It is known as girdle.
- It is present on anterior teeth.
- It is present on lingual aspect.

They are present at cervical 3rd region

- cingulum are also known as lingual lobe present on anterior teeth.

☆ Fossa:- It is concavity present on the occlusal surface of teeth.

ridge:- are the linear elevation present on the surface of tooth.

- They are named according to their location
- Every cusp has two ridges mesial & distal.
- Every tooth has marginal ridge present on them :- Mesial marginal ridge
  Distal marginal ridge.

☆ Groove:- they are linear depression present on surface of tooth.

- they are named according to their position :- central groove.
  mesial or distal groove.
  buccal groove etc.

Supplementary ~~grooves~~ grooves are also present:-

according to shape:- triangular groove.
Mesial & distal triangular groove

☆ Pit:- It is a depression present on the junction of 2 leaves.

• Name according to location:- central pit.

(2)

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Page No. | Date: / /

Q2 ——?

Introduction :-

- It is the 1st tooth from the medial surface of teeth.
- Its root to crown ration is some what similar
- Root is conical in shape.

Notation :-	Right	Left
Universal :-	8	9
Palmer :-	1|	|1
FDI :-	11	21

Age of eruption :- 7-8 years.

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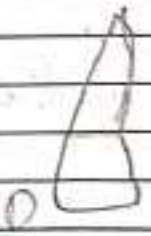
Page No. | Date: / /

Aspects :-

☆ Buccal Aspect :-



- Crown is rectangular in shape.
- Crown is wider mesiodistaly.
- Root is coonical.
- Root is apicaly blumd.

23

MIDSR

Page No. | Date: / /

Q2.b

Canine is present on 3rd position of tooth.

- Maxillary canine have longer roots compair to mandibular.
- The proximal ridge present on baccal aspect More prominent on maxillary canine
- Fossa of maxillary canine deep mandibular is plane
- Maxillary canine singulum is centrally present. Mandibular canine singulum is distally present.

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Department of DADH

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
0 0 0 0 7 2	A	

Answer Sheet No
(write this no. on your question booklet)

Name of Examination: Betterment Exam

Subject	Paper
DADH	

Roll No. (In Words): Seventy two

Question Booklet Version (In Words):

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Candidate's Signature | Invigilator's Signature

Date : 22/08/2024

USE BLUE BALL POINT PEN ONLY

	1	2	3	4	5	6	7	8	9	10
A	X				X			X		
B				X		X				
C		X	X				X			X
D									X	

	11	12	13	14	15	16	17	18	19	20
A	X				X		X			
B				X						
C								X	X	X
D		X	X			X				

INSTRUCTIONS

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D	D	D	D

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Section - A	
Section - B	
Section - C	

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(DENTAL COLLEGE), LATUR

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Department of Dental anatomy & Dental histology

Name of Student :- Rajwade Aditya Balaji

Roll No. of Student :- 0 0 0 7 2

Name of the Examination :- **Internal Assessment Examination**

SECTION - B

12/25

Date : 22/08/2024

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Q.1 ——?

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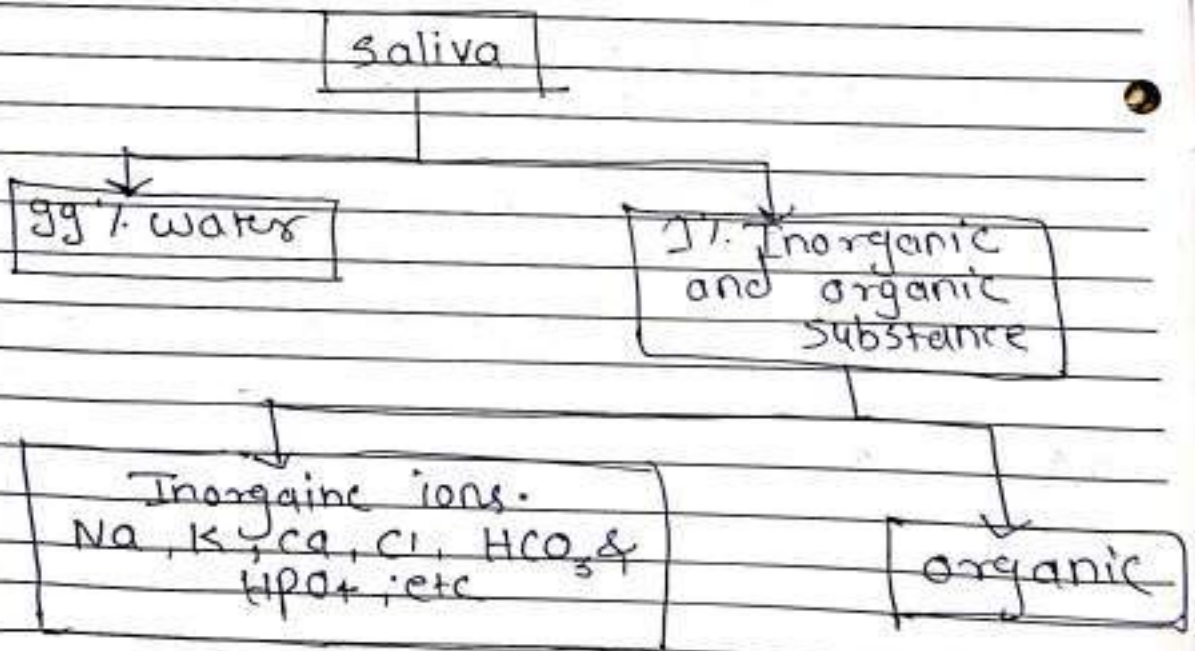
Page No. | Date: / /

b] composition & function of Saliva.

⟹ composition of Saliva.

- most important function of the salivary gland is the production and secretion of saliva protection of oral cavity is the major function of saliva through it also serves other function such as digestion speech, mastication, taste, and tissue repair.

- Saliva consist of 99% water Inorganic ions, secretory glycoproteins. of sodium consistuent and other substance accounts for 1% or less.



Inorganic

- Secretory proteins
- Enzymes, mucin containing carbohydrates, proline rich proteins, glycoproteins

- Secretory Igs
- Blood clotting factors
- Amino acids
- Urea
- Uric acid
- Glucose
- Lipids & hormones

Q.2. ——— ?

Q. W

2

MIDSR

Page No. | Date: / /

Q.2 ——— :

Q. What is periodontium. Describle in the detail principle fibre groups of periodontium. write down functions of periodontal ligament

- Periodontal ligament (PDL) is a fibrous connective tissue which provides continuity between cementum and alveolar bone and primarily serves to support the teeth in the bony socket.
- It is a soft, fibrous, vascular and cellular connective tissue that surrounds the roots of the teeth and joints the root cementum with the socket wall. The extracellular substance of the PDL comprises of fibres are mainly collagenous but there are small amounts of oxytalan and reticulum fibres.

Extra cellular substance of PDL

fibres	ground substance
1. collagen	1. Glycosaminoglycans
2. Elastic oxylatin	2. Proteoglycans
3 Reticular	3. Glycoproteins.
4. Secondary.	
5. indifferent fibre plexus.	

- collagen principle fibres of the PDL
- The connective tissue fibres of PDL are mainly collagenous.
- the collagen fibrils in PDL are of mean diameter 45-55 mm. They are gathered in form bundles of 5um in diameter. The main types of collagen in PDL are type I & type II
- Bundles of 5um in diameter
- The main types of collagen in PDL
- Bundles of collagen fibres in PDL are termed principle fibres
- alveolodental ligament which consist of five fiber groups.

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Page No. | Date: / /

1. Alevolar ~~group~~ crest group.
2. Horizontal group.
3. oblique group.
4. Apical group
5. Interradicular group in multirooted teeth.

1. Alvelor crest group.

- Extend obliquely from the cementum just beneath the junctional epithelium to the alvelor crest.
- These fibres resist tilting, intrusive extrusive, and rotational forces.

2. Horizontal group

- They are immediately apical to the alvelolar crest fiber group and run at right angles to the long axis of the ~~both~~ tooth from cementum to bone.
- The pass from their cemental attachment across the periodontal ligament space to ingested in the alveolar process as Sharpey's fibres.

3. oblique group.

- These are the most numerous and occupy nearly two-thirds of the ligament.
- They run obliquely and coronally from cementum to alveolar bone
- They resist vertical and intrusive forces.

4. Apical group.

- They transverse from the cementum at the root tip through the periodontal ligament space to the fundus of the bony socket.
- They resist forces of luxation, may prevent tooth tipping and protect delicate blood and lymph vessels and nerves.

5. Interradicular group.

- They are inserted into the cementum from the crest of interradicular septum in multi-rooted teeth.
- They resist tooth tipping, torquing and luxation.
- They are lost in age related gingival recession when the furcation area is exposed.
- In chronic inflammatory periodontal disease, there occurs total loss of the fibres.

• functions of the PDL.

- Periodontal ligament is a fibrous connective tissue which provides continuity between cementum and alveolar bone, and primarily serves to support the teeth in the bony socket.

It has following functions.

1. Supportive.
2. Sensory
3. Nutritive.
4. Homeostatic
5. Eruptive.

① Supportive -

PDL collagen fibres, Vasculature and its ground substance, all contribute to the tooth support. When a tooth is moved in its socket as a result of forces acting on it during mastication part of the periodontal space will be narrowed and periodontal ligament contained in these areas will be compressed.

② Sensory -

PDL through its nerve supply provides a most efficient proprioceptive mechanism. PDL can detect the application of the most delicate force to the teeth and very slight displacement of the teeth.

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Page No. | Date: / /

3. ~~Nutritive~~ nutritive :-

PDL contains blood vessels which provide nutrition to its cell cementocytes and superficial osteocytes of alveolar bone.

4. Homeostatic.

PDL has the capacity to resorb and synthesized the extracellular substance of the connective tissue of the ligament, alveolar bone and cementum.

5. Eruptive -

The cells, vascular elements and extracellular matrix proteins of the PDL function collectively to enable eruption.

8

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Page No. | Date

Q stages of tooth development.

- Bud stage
- cap stage
- Early bell stage.
- Advanced bell stage.

* Advanced Bell stage :- forms dentin and enamel

- forms dentinal layers of enamel organ and cellpress of stellate reticulum.

- Denth layer of odontoblast
- Distinct Dental sac.

1½

d7

Introduction

- chemical process which liquefy tissue are produced from decay
- Autolysis of putrefaction.
- features
- Digestive Intrusics biomolecule.
- Dilution

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Department of Dental anatomy dental Histology

Name of Student :- Rajwade Aditya Balaji

Roll No. of Student :- 0 0 0 7 2

Name of the Examination :- **Internal Assessment Examination**

SECTION - C

Date : 22/ 08 / 2024

Time :

Sign. of Student

12/25

Sign. of Invigilator

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Q.1 ——?

c] muscles of mastication.

→ - The masticatory muscles surrounding the joint are groups of muscle that contract and relax in harmony so that the jaws function properly.

- There are four pairs of muscles of mastication, masseter, temporalis medial pterygoid, and lateral pterygoid.

• masseter.

- It is principle and strongest muscle of mastication, which stems from the temporal bone and extends down the out-side of the mandible to its lower angle. It consist of two overlapping heads:-

- origin - Zygomatic arch
- Insertion - lateral Surface of ramus angle and broarder of mandible.
- Nerve supply - Masseter Nerve.
- functions - To close the jaw and apply power in crushing food.

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Q.2.

a. write the class traits of incisors describe in detail morphology of permanent maxillary central incisor.

* permanent maxillary central incisor

- permanet maxillary central incisor labial side.
- Labial surface - smooth convex, both cervico incisally and mesiodistally.
- Trapezoidal
- mesioincisal angle - sharp
- Distoincisal angle is a rounded
- incisal ridge very straight
- Height of labial contour at cervical third.

Labial side.

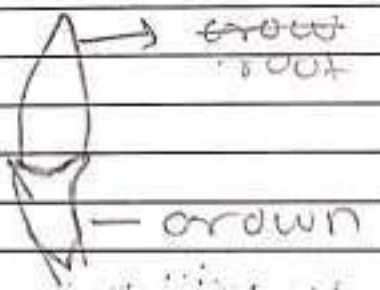
② permanant maxillary central incisor
Lingual side.

- trapezoidal
- crown converges ligual.
- Lingual surface is irregular.
- Cingulum in cervical thisel.
- Shallow lingual
- fossa in middle & incisal thisel.
- usually 2 development grooves in lingual fossa.

lingual side

(3) permanent maxillary central incisor mesial side.

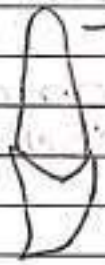
- incisal ridge is in line with vertical root axis
- wedge or triangular shaped.
- Labial outline convex
- Lingual outline is concavoconvex
- cervical line - curves incisally
- mesial contact - area at incisal 3rd near incisal ridge.



mesial side

(4) permenent maxillary central incisor Distal side.

- wedge or triangular shaped.
- curvature of cervical line 1mm shorter (2-5mm)
- Distal contact area are the junction of incisal and middle third.



Distal side.

(5) permanent maxillary central incisor incisal side.

- Triangular shaped.
- Appears bulky from incisal view.

- wider mesiodistally then labiolingually
- labially broad and convex
- lingually cingulum is present.
- incisal edge - perpendicular to labiolingual bisecting line.

Incisal side

(7)

Q.17 — ?

d7 Define the following : cusp, cingulum, fossa, ridge, groove, pit,

① cusp - elevation on a tooth that can be found on the incisal or occlusal surface.

② cingulum - large round elvation on cervical third of lingual surface of anterior tooth.

③ fossa - a shallow depression in the tooth present on the lingual surface.

④ Ridge - linear and convex elevation of surface of crown.
types - marginal ~~trigate~~, triguetrum.

⑤ Groove - shallow lines depressions on the surface of tooth.
types - supplemental and developmental

(6) pit - Deep groove that make up the chewing surface of teeth.

(7) Difference between permanent and deciduos dentition.

deciduous dentition	permanent dentition
- deciduous dentition teeth are lighter in color.	- permanent teeth are darker in color.
- They appear bluish-white (milky white) and also called as milk teeth.	- They appear yellowish white or greyish white color.
- crowns are wider mesiodistally in comparisond to their crown heigh.	- The crowns teeth appear longer as their cervicoincisal height is greater than mesiodistal width.

- This gives a cup-shaped appearance to anterior teeth and "squat" shaped appearance to deciduous molars.

- This gives a square shaped appearance to anterior, and trapezoidal to permanent teeth.

Seen and Satisfied

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Department of Dental Anatomy and Histology

Internal Assessment Examination- I / II / III

Roll No.	Question Booklet Version	Question Booklet Sr. No.
000074		

Answer Sheet No.
(write this no. on your question booklet)

Name of Examination: Betterment Exam.

Subject	Paper

Roll No. (In Words): Seventy Four

Question Booklet Version (In Words):

This is to certify that the entries of Roll No. Question Booklet Version Question Booklet Sr. No. and subject have been verified.

Candidate's Signature | Invigilator's Signature

Date : 22/08/2024

	1	2	3	4	5	6	7	8	9	10
A							X		X	
B						X				
C	X	X	X		X					X
D				X				X		

	11	12	13	14	15	16	17	18	19	20
A								X		
B		X		X	X	X	X			X
C	X								X	
D			X							

USE BLUE BALL POINT PEN ONLY

INSTRUCTIONS

1. Cross X The Blocks Using Blue Ball Point Only
2. Cross Only One Block For Each Question As Shown Below

Wrong	Wrong	Wrong	Right
A ✓	A ■	A X	A X
B	B	B	B
C	C	C X	C
D	D	D	D

3. Cross only Block Provided Do Not Make Any sure Marks On The Answer Sheet.
4. Rough Work Must Not Be Done On This Answer Sheet Use Free Space in Question Booklet Provided

12/20

MARKED

SECURED

Name of Exercise	Marks Obtained
Section - A	
Section - B	
Section - C	

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Department of Dental Anatomy and Histology.

Name of Student :- Sakshi Shivajirao Sakhare.

Roll No. of Student :- 0 0 0 7 4

Name of the Examination :- Betterment Exam
Internal Assessment Examination

SECTION - B

19.5/25

Date : 22/08/2024

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Sign. of Invigilator

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2 Long Answer Questions

→ Periodontium ligament is a fibrous connective tissue that connects cementum to alveolar bone.

* Functions of Periodontal Ligament

① Sensory : PDL performs sensory functions

② formative : PDL performs formative functions

③ Secretive : PDL lubricates essential component in the tissue.

* Principle fiber groups of periodontium.

→ Principle fiber groups of periodontium are separated from & cementum.

* There are ~~four~~ five types of principle fibers, they are, 1) Apical fibers

2) Oblique fibers

3) Horizontal fibers

4) Transeptal fibers.

5) Apical Crest fibers.

1) Apical fibers.

* Origin of apical fibers.

→ from the apical part.

* Attachment of apical fibers.

→ To the axial part of the root.

* Insertion of the apical fibers.

→ from Apical portion to the alveolar Bone.

2) Oblique fibers.

* Origin of Oblique fibers.

→ Originate obliquely

* Attachment of Oblique fibers.

→ To the Horizontal part of the root.

* Insertion of the oblique fibers.

→ from obliquely to the alveolar bone.

3) Horizontal fibers.

* Origin of Horizontal fibers.

→ Originate Horizontaly

* Attachment of Horizontal fibers.

→ Horizontally attached on apical crest.

* Insertion of Horizontal fibers

→ Horizontally to the alveolar bone.

4) Apical Crest fibers.

* Origin of Apical crest fibers

→ Originates apically of the apical part

* Attachment of Apical crest fibers.

→ Apically attached to the part

* Insertion of Apical crest fibers

→ Inserted on apical to the alveolar bone.

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Page No. | Date: / /

5) Transeptal fibers.

* Origin of Transeptal fibers.

→ Originated Transeptally

* Attachment of Transeptal fibers

→ Attached transeptally to transeptal portion.

* Insertion of Transeptal fibers.

→ Transeptal portion to the alveolar bone.

* functions of Principle fiber groups of periodontium.

1) Apical fibers.

→ These fibers resist axial forces on tooth.

2) Oblique fibers

→ These fibers resist oblique forces on tooth.

3) Horizontal fibers.

→ These fibers resist Horizontal forces on tooth.

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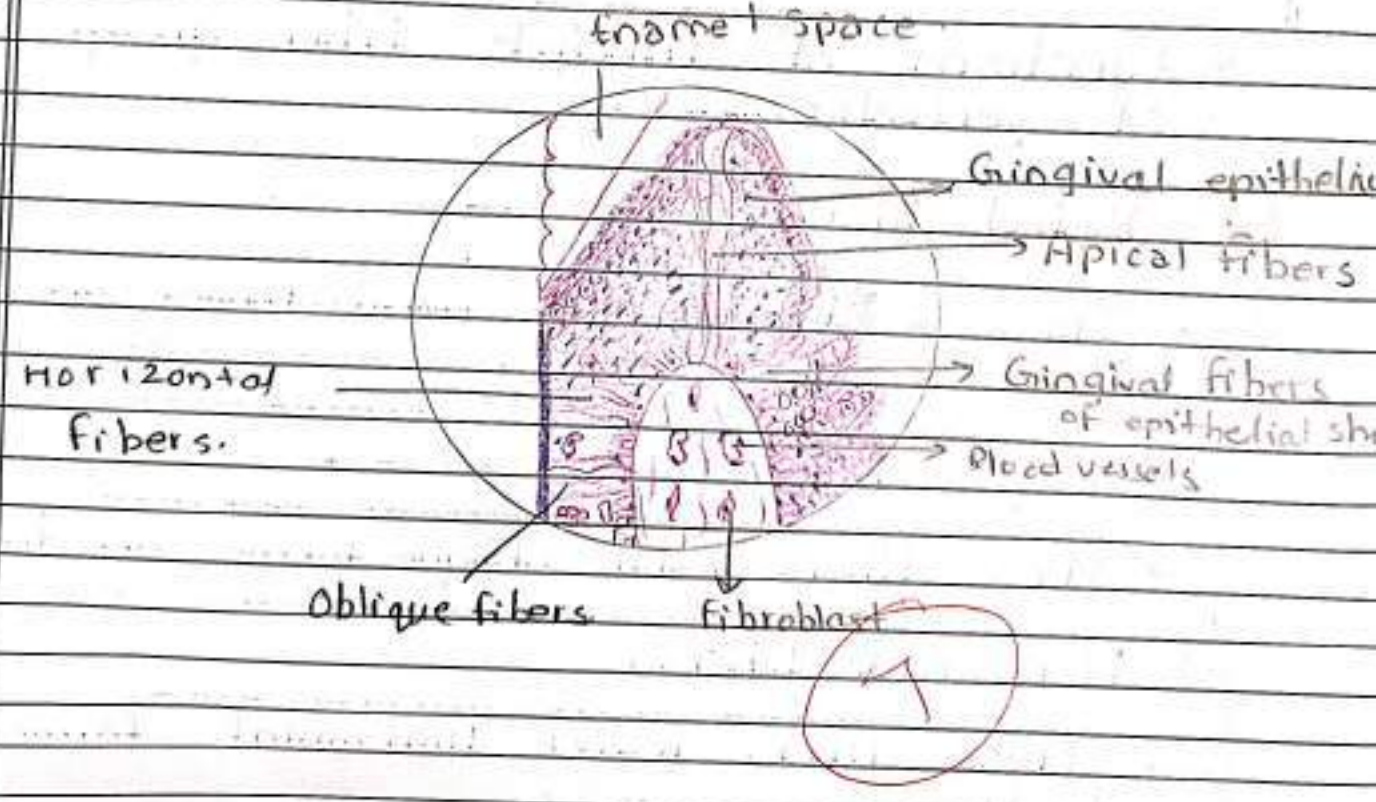
Page No. | Date:

4) Apical crest fibers.

→ These fibers resist forces exerted axially or apically on tooth.

5) Transeptal fibers.

→ These fibers resist forces exerted on tooth transeptally.



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Page No. | Date

1 Short Answer Question.

b.

Composition of Saliva.

→ Saliva mainly performs the function of protection in the oral cavity.

→ It also performs other accessory function such as mastication, speech, deglutition, tissue repair,

→ Saliva consists of three major salivary glands extra orally and minor glands inside oral cavity

→ Saliva contains 99% of water and 1% of inorganic and organic content.

Saliva.

99% Water

1% Inorganic organic content.

Inorganic content | Organic content

Proteins, enzymes, K, Na, Ca, HCO_3, HPO_4.

Lipids, Uria, Uric acids, Amino acids, Immunoglobins.

* functions of Saliva.
* Protection
→ Saliva mainly performs the function of protection from microorganisms.

→ Prevents deccication of oral mucosa.

→ Secretes enzymes favourable for oral cavity.
* Antimicrobial function.
→ Performs antimicrobial functions.

* Mastication.

→ Saliva helps in mastication by releasing salivary amylase.

→ Saliva also secretes lipoproteins.

* Deglutition and speech.

→ Saliva helps in lubrication of oral cavity thereby eases deglutition of food and speech.

* Tissue Repair.

→ Saliva helps in wound healing.

* Keeps the oral cavity moist

→ Saliva keeps the oral cavity moist and eases the breakdown of food.

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Page No. | Date: / /

'd fixatives.

→ fixation is a process in which tissues are kept in a as possible as living situation.

→ This process is managed under certain conditions such as 1) they are kep away from fixatives.

2) They are kept in cold temperatures.

3) kept in optimum PH.

fixatives.

1) Chemical fixatives.

① Farmaldehyde.

② Acrolein glutaraldehyde & Electron Microscopy

③ Rossman's fluid :

1) Glycoproteins.

2) ~~for~~ Proteoglycons.

3) Lypoproteins.

④ Cranoy's fluid : Nucleic Acids.

2) ~~Fresh~~ Freeze Fresh Sections

3) Dehydrated : Liquid Nitrogen

→ The most common fixative used is 10% formalin.

→ the formaldehyde is the commonly used fixative because of its reactivity with mucoproteins.

1 Short Answer Question.

e Hypo-Calcified Structures of Enamel.

→ Hypo-calcified structures of enamel are those structures which have high mineral content.
→ These structures are.

1) Enamel Spindles.

→ Enamel spindles are the odontoblastic processes present at the chamber of pulp and extend to DEJ and get entrapped in enamel.

2) Enamel lamellae.

→ Are thin structures originating from DEJ to Enamel

→ These are of Three Types.
→ A, B & C, Type C are of most common.

3) Enamel Tufts

→ Enamel Tufts resemble the tufts of grass.

→ Enamel Tufts are present on DEJ and originate to enamel.

4) Neonatal Line.

→ It is a hypomineralized structure and divided into two parts postnatal and prenatal line.

→ Originate from DEJ extend into enamel.

5) Incremental lines of Retzius.

→ Brown lines originating from DEJ and extending to enamel having high mineral content are termed as incremental lines of retzius.

6) Dentino Enamel Junction

→ It has high mineral content therfore is called a hypomineralized structure.

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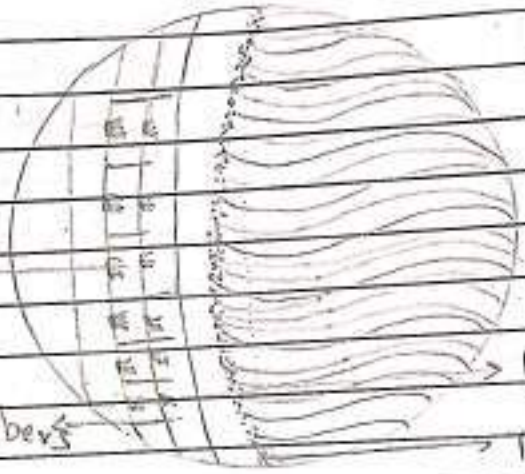
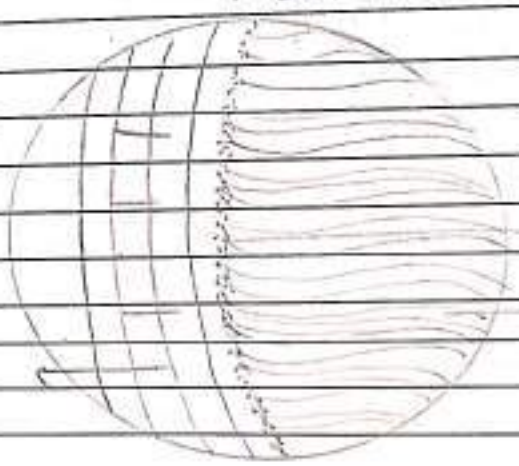
Page No. | Date: / /

Accellular Cementum.	Cellular Cementum.
→ It is primary cementum	→ It is permanent cementum.
→ forms before the eruption of the tooth	→ forms after the eruption of the tooth.

Cellular Cementum



Acellular Cementum.



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Acellular	Cellular
→ Cementocytes are absent	→ Cementocytes are present.
→ Sharpeys fibers are absent	→ Sharpeys fibers are present.
→ Absent in single rooted tooth ~~too~~	→ Present in both single & multirooted tooth.
→ tomes granular layer present	→ tomes granular layer is not present.

3

Section B
Roll No 74.

Page No. | Date: / /

1) Short Answer Question

c) The stages of tooth development are.

a) Bud Stage

b) Cap stage

c) Eary Bell Stage

D) Advanced Bell stage

f) Root Development Stage.

* The Bell stage is classified into two types

① Farly Bell stage and
② Advanced Bell stage.

→ The advanced bell stage consists of the ameloblasts which are the enamel forming cells.

→ The stratum intermedium layer has already been disappeared

→ It consist of enamel space & also dentinoid

→ It consist of odontoblast which are the dentin forming cells.

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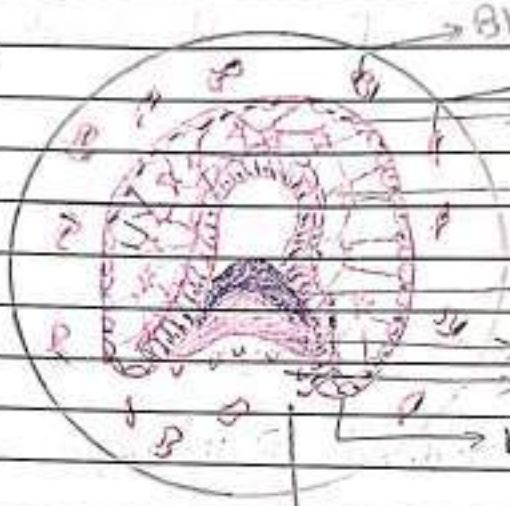

Diagram of Early Bell stage.

2

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Department of Dental Anatomy and Histology

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Roll No. of Student :- 0 0 0 7 4

Name of the Examination :- Betterment Exam
Internal Assessment Examination

SECTION - C

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Time :

13/25

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1) Short Answer

c

→ Muscles of mastication are muscles surrounding the joint that togetherly work and occurs the movement of the joint.

→ Mainly the muscles of mastication are.

1) Masseter

→ It is the main principle muscle of mastication.

→ Nerve supply → Masseter nerve.

→ Attachment → two headed attachment one at the later part of mandible and one at the border of mandible

functions :- Protrusion and Jaw movement in Chewing food.

2) Temporalis.

→ Temporalis is the largest muscle and constitute the whole temporalis fossa.

→ function :- Protrusion and retruction of the elevated jaw.

3) lateral Pterygoid.

→ It is a small muscle.

→ Attached to the clavicle.

→ function Protrusion and Jaw movement towawards lateral side.

4) Medial Pterygoid.

→ Its function is protrusion and elevation of the mandible and the Jaw movement.

MIDSR

Page No. | Date: / /

2

→ Embrasures are the cavities present between the teeth of the same arch. around the spares present between the teeth.

→ These embrasures are of v shape

→ Side of the embrasure depends on the aspect we are looking at the teeth.

→ from the lingual aspect, Incisal and cirvical aspect of tooth is seen.

→ from the incisal aspect, lingual and palatal aspect of tooth is seen

→ If we draw a Imaginary line between these embrasures these are equal.

1½

* Physiological properties of embrasures.

→ Present for cleansing perpose in naturally mechanism of tooth.

→ Precent for cavities during mastication.

* Other components of embrasures.

→ Lingual Aspect

1) Incisal aspect increases in size from anterior to posterior.
2) Cervical aspect decreases in size from anterior to posterior.

e. Deciduous Dentition.	Permanent Dentition.
→ It is the primary dentition.	→ It is the permanent dentition.
→ In deciduous dentition, molars dont erupt	→ In permanent dentition, molars erupt.
→ Premolars, erupt at the place of deciduous molars	→ Molars erupt directly.
→ Central Incisors are light yellowish in colour and ~~tran~~ white in colour and are ~~transluscent~~ opaque.	→ Central incisors are light yellowish in colour and are opaque.

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Page No. | Date: / /

b

Arch traits are the difference between mandibular and maxillary canine.

→ Maxillary canine's crown is larger mesiodistally

→ Mandibular canine's crown is smaller mesiodistally than maxillary canine.

→ Maxillary canine has longer root.

→ Mandibular canine has shorter root than maxillary.

→ Cervical fossa of maxillary canine is more prominent than that of mandibular canine.

→ labiolingually maxillary canine is bigger than mandibular canine.

→ Maxillary as well as mandibular canine has two fossa.

→ fossa of mandibular canine are more prominent than that of maxillary.

d 1) Cusp : Elevation on the surface (occlusal surface of tooth) is called as cusp.

2) Cingulum : Elevation or protuberance on cirvical line on the surface of the tooth is known as cingulum.

3) fossa :- Deep pit inside the surface of tooth is known as fossa.

4) ridge :- line joing two fossas is known as ridge.

5) groove :- Deep fossa, inside the surface of tooth is know as groove.

6) Pit :- Deep, occlusal surface is called as pit (mesial and marginal side).

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Page No. | Date: / /

2) Long Answer Questions.

*Class Traits of Incisors

→ Incisors don't have fossa where as canines don't ~~b~~ have two fossa's and premolars and molars have multiple fossas.

→ Incisors don't have cusps, whereas
→ canines have cusp (one) and, premolars and molars have more than one cusps.

* Morphology of central Incisor.

1) labial Aspect.

→ from this aspect, crown appears square or rectangular shaped.

→ Mesiodistal dimensions are wider than labiolingual dimensions.

→ from this aspect root appears tapering towards distal side.

(4)

2) lingual Aspect

→ Crown appears wedge shaped.

→ Roots appears titted towards mesial.

3) Distal Aspect

→ Crown appears a little bit pin shaped.

→ roots tappers

4) Mesial Aspect

→ Crown appears pin shaped

→ root tappers