

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान, सेवाआयोग
प्राज्ञिक सेवा, दन्त चिकित्सा समूह, Endodontics उपसमूह, सहायकप्राध्यापक पद,
(९ख) तहको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
Paper II: Technical Subject
Section (A) - 45 Marks
(1 critical analysis Q -15 mark + 3 long Q- 30 marks)

Endodontics

1. Fundamentals of Operative Dentistry

- 1.1 Dental anatomy, histology, physiology and occlusion
 - 1.1.1 Clinical significance of histology during cavity preparation and restoration
 - 1.1.2 Maxilla and mandible
 - 1.1.3 fundamentals of occlusion
 - 1.1.4 Mechanics of mandibular movement
 - 1.1.5 Features of normal periodontium
- 1.2 Principles of tooth preparation, matricing, tooth separation including contacts and contours
- 1.3 Microleakage
 - 1.3.1 Microleakage and nanoleakage - Clinical importance
 - 1.3.2 Role of smear layer
- 1.4 Operative Instruments – hand and rotary instruments
- 1.5 Sterilization and infection control
- 1.6 Diagnosis and treatment planning - case history, clinical and radiographic examination
- 1.7 Management of Pain
- 1.8 Isolation of operating field

2. Carious and non carious lesions of teeth

- 2.1 Dental caries - Etiology, Pathophysiology, Histopathology and Microbiology, Clinical characteristics, recent advances in caries diagnosis, factors for caries risk assessment, modes of prevention of Dental Caries
- 2.2 Non carious lesions of teeth –Erosion, Abrasion, Abfraction, Attrition

3. Dentin hypersensitivity

- 3.1 Neurophysiology of teeth
- 3.2 Theories of dentin hypersensitivity
- 3.3 Management – interdisciplinary approach

4. Direct restorations

- 4.1 Dental amalgam – composition, classification, manipulation, cavity designs, mercury hazards, Complex amalgam restorations, controversies related to amalgam
- 4.2 Enamel and dentin adhesion - challenges in dentin bonding, development of adhesives
- 4.3 Composite Resin - composition, classification, manipulation, cavity designs, Repair of defective composite restorations, Common problems with composite and its management, new advances in composite
- 4.4 Glass ionomer Cement - composition, classification, manipulation, Newer advances in GIC
- 4.5 Direct filling gold - Tooth preparation and restoration, Stress during compaction and Pulp protection
- 4.6 Complex restorations – classification, principles, and complications related to pin retained restorations

5. Indirect restorations

- 5.1 Cast metal restorations – materials, Principles of tooth preparation, impression making and casting, Casting defects, Pin retained cast restoration, Biologic consideration

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5.2 Indirect Resin restorations – materials, Composite inlays and onlays

5.3 Dental ceramic - materials and procedure for Ceramic inlays and onlays, repair

6. Esthetic restoration

6.1 Esthetics – Introduction, factors governing esthetics, Principles of smile design

6.2 Conservative esthetic treatment - Micro abrasion and macro abrasion, vital tooth and non-vital tooth Bleaching

6.3 Veneers – Materials, direct and indirect veneer techniques, Repair

7. Minimal Intervention Dentistry - ART, LSTR, Remineralization therapy, Instruments and materials used for MID

8. Fundamentals of Endodontics - Rationale of Endodontics and role of endodontic therapy in dentistry

9. Histological & anatomical structure of pulp & periradicular tissues

10. Pathologies of pulp and Periradicular tissues

Section (B) - 55 Marks

(1 critical analysis Q -15 marks + 4 long Q -40 marks)

Endodontics

11. Diagnosis in Endodontics - Case History, Various techniques of Pulp Vitality Tests with recent advances, Description of Odontogenic and Non Odontogenic pain

12. Internal Anatomy of root canal system

13. Root Canal Therapy

13.1 Access cavity preparation

13.2 Working length determination

13.3 Cleaning and shaping of root canal system

13.4 Irrigation of root canal system

13.5 Obturation of root canal system

14. Post Endodontic Restoration - effects of Endodontic treatment on the tooth, various Post systems, Describe the instruments used for preparing post space, reasons for post failure and its management

15. Endodontic Surgery

16. Interdisciplinary approach in Restorative Dentistry and Endodontics

16.1 Relationship with Periodontics

16.2 Relationship with Orthodontics

16.3 Relationship with Prosthodontics

16.4 Endodontic microbiology

16.5 Endodontic pharmacology

16.6 Pediatric Endodontics

17. Traumatic Injury

17.1 Classification of Dentoalveolar fracture

17.2 Protocol for examination and management of traumatic injury

17.3 Prevention of traumatic injury

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18. Procedural Accidents including Vertical root fracture - Classification and Management

19. Endodontic Emergencies

19.1 Diagnosis & treatment planning

19.2 Analgesics and antibiotics used in Endodontic Emergencies

20. Endodontic Failure and Retreatment

20.1 Evaluate success of Endodontic treatment

20.2 Causes of the Endodontic Failures and its prevention

20.3 Case selection for Retreatment

21. Recent advances in Conservative and Endodontics

21.1 Lasers in Conservative and Endodontics

21.2 Magnification and illumination

21.3 Dental Implant

21.4 Tissue engineering and regenerative endodontics

Following pattern will be used for formation of paper I & II as far as possible.

Paper I				
Part	Section	Weightage	No. Questions & Weightage	
			Objective Multiple Choice	Subjective
I	A	20		2 Questions X 10 Mark = 20
	B	30		3 Questions X 10 Mark = 30
II	C	25	25 Questions X 1 Mark = 25	
	D	25	25 Questions X 1 Mark = 25	
Paper II				
Section		Weightage	No. Questions & Weightage	
			Long answer	Critical Analysis
A		45	3 Questions X 10 Mark = 30	1 Questions X 15 Mark = 15
B		55	4 Questions X 10 Mark = 40	1 Questions X 15 Mark = 15

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