नेपाली सेना

प्रा.उ.से.डेण्टल डाक्टर (खुला) पदको लिखित परीक्षाको पाठ्यक्रम

समय : २ घण्टा ३० मिनेट

पुर्णाङ्क : १००
उत्तीर्णाङ्क : ४०

यो पाठ्यक्रम नेपाली सेनाको विभिन्न ईकाईहरुमा रिक्त रहेको **प्रा.उ.से.डेण्टल डाक्टर (खुला)** पदका उम्मेदवार छनौट परीक्षाको लागि निर्धारण गरिएको हो । लिखित परीक्षामा सरिक हुने उम्मेदवारहरुको पेशा सम्बन्धि विषयलाई आधारमानी प्रश्नहरु सोधिने छ ।

(क) लिखित परीक्षाको माध्यम नेपाली/अंग्रेजी वा दुवै भाषा हुनेछ ।

(ख) लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र अर्को चरणको परीक्षामा सम्मिलित गराईने छ ।

(ग) प्रश्न पत्र निर्माण गर्दा पाठ्यक्रममा समावेश भएका सबै विषयहरुलाई समेटिनेछ ।

(घ) नेपाली सेनाको आवश्यकता तथा विविध परिस्थितमा नेपाली सेना अनुकुल हुने गरी उल्लेखित विवरणहरुमा हेरफेर हुन सक्नेछ ।

(ङ) पाठ्यक्रमको रुपरेखा देहायमा उल्लेख गरे अनुसार हुनेछ ।

(च) पाठ्यक्रम लागु मिति २०७३/१/६ गते ।

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्न संख्या X अङ्क	समय
पेशा सम्बन्धी	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	४० प्रश्न x १ अङ्क = ४०	२ घण्टा ३० मिनेट
			विषयगत (Subjective)	छोटो उत्तर	६ प्रश्न X ५ अङ्क = ३०	
				लामो उत्तर	३ प्रश्न X १० अङ्क = ३०	

पेशा सम्बन्धी विषयको पाठ्यक्रम

(SYLLABUS FOR DENTAL DOCTOR)

1. General Medicine and General Surgery

- Sign, Symptoms, Diagnosis, Management and its Dental Implication

1.1 General Medicine

1.1.1 Acid Peptic Disease, Cirrhosis of liver, Hepatitis, Worm Infestation, Crohn's Diseases, Anemia, Leukemia, Purpuras, Hemophilia, Bleeding and clotting disorder, Cerebro-vascular accident, Meningitis, Encephalitis, Epilepsy, Diabetes Mellitus, Thyrotoxicosis, Myxoedema, Cushing's syndrome, Addison's disease, Hyperparathyroidism, Tetany, Rheumatoid arthritis, Systemic lupus erythematosus, Osteoartheritis, Nephrotic syndrome, Enteric fever, Valvular and Ischaemic Heart Diseases, Infective endocarditis, Hypertension, Ebola Virus/Swine Flu, Pneumonia, COPD and Bronchial asthama, Tuberculosis, Lipid disorder, UTI

1.1.2 Recent advances in cardiomedicine: leadless pacemaker, transaortic valve implantation

1.2 General Surgery

1.2.1 Enteric fever, Mumps, Sinus, Fistulas, Ulcer, Tumor, Shock, Peptic ulcer, Liver abscess, Pain Abdomen, Bronchial carcinoma, Head injuries, Goiter, Cellulites, Appendicitis, Hemorrhoids, Hernia, Hydrocel, UTI, Drug eruption, HIV/AIDS, Diplopia, Sinusitis, Tonsillitis, Peritonsillar abscess, Ludwig's angina, Indication of tracheostomy, Maxillo-facial Fracture, TMJ Dislocation, Crush injury, Osteomyelitis, Tetanus, Infection control, Fluid and electrolyte therapy, Blood transfusion

2. General and Oral Pathology

2.1 Interpretations of laboratory results
2.2 Normal values of biochemical tests, Hematological tests
2.3 Developmental disorders of teeth
2.4 Dental caries
2.5 Pulpitis
2.6 Apical periodontitis
2.7 Hypercementosis
2.8 Current strategies for prevention of oral manifestation of HIV
2.9 Cysts of the jaw : Non odontogenic and odontogenic cysts
2.10 Odontogenic tumors
2.11 Infective Stomatitis
2.12 Oral Premalignant Lesion
2.13 Oral Cancer
2.14 Common benign mucosal swelling
2.15 Cervical lymphadenopathy
2.16 Pain, anxiety and Neurological disorders of face and oral cavity
2.17 Diseases of temporomandibular joint

2.18 Signs and symptoms of anaemiaamdleukamia related to oral cavity
2.19 Haemorrhagic diseases related to oral cavity
2.20 Development disorders of the oral and maxillofacial region
2.21 Clinical features and pathogenesis of all major salivary glands

3. Oral and Maxillo-Facial Surgery and Anaesthesia

3.1 Oral and Maxillo-Facial Surgery
- 3.1.1 Diagnosis of different oral conditions with its surgical management
- 3.1.2 Management of extraction – simple and complicated teeth
- 3.1.3 Management of oro-facial infections by proper incision, drainage and antibiotic therapy
- 3.1.4 Carry out biopsies of oral issues
- 3.1.5 Diagnosis and management of the odontogenic cysts & different typesof oral tissue bioopsies
- 3.1.6 Apicectomy
- 3.1.7 Closure of oro-antral fistula
- 3.1.8 Diagnosis and treatment of TMJ dislocation
- 3.1.9 Principles of pain control in maxillofacial surgery
- 3.1.10 Principles of radiotherapy, chemotherapy and other adjuvant therapy in the management of malignant tumors
- 3.1.11 Basic principles in the management of facial trauma cases in relation with : Nutritional consideration; Systemic evaluation of the traumatized patient; Airway management; Shock, fluid resuscitation and management; Control of bleeding due to facial trauma; Antibiotic and analgesic; Plan and Management of fixation of jaw fracture with close reduction using arch bar and IMF; Proper splinting of dento-alveolar injury; Diagnosis and classification of different types of maxillary & mandibular fractures; Diagnosis of benign lesions and malignant lesions of oral cavity; Post operative complications of jaw fractures; Management of soft tissue wound of orb facial structure
- 3.1.12 Amelobalastoma
- 3.1.13 Oro-facial defects : Cleft lip and palate
- 3.1.14 Osteomyelitis of jaw bones

3.2 Anaesthesia
- 3.2.1 Principles of administering safe general anaesthesia and local anesthesia
- 3.2.2 Pre -anesthetic drugs
- 3.2.3 Block and local anesthesia of oral cavity
- 3.2.4 Infiltration anesthesia of oral cavity
- 3.2.5 Post operative complication of general anesthesia
- 3.2.6 Management of complication of intra oral local anesthesia

3.3 Principles of oral and maxillofacial surgery
- 3.3.1 General patient management
- 3.3.2 Emergencies in oral surgery
- 3.3.3 Pharmacology and oral surgery
- 3.3.4 Operating room, instruments and surgical team
- 3.3.5 Surgical principles and technique
- 3.3.6 Preparation of mouth for dentures
- 3.3.7 Facial deformity

4. Oral Medicine and Dental Radiology

4.1 Oral Medicine

- 4.1.1 Introduction and scope of oral medicine
- 4.1.2 Case history discussion and patient examination
- 4.1.3 Diagnostic investigations
- 4.1.4 White lesions of oral cavity
- 4.1.5 Red lesions of oral cavity
- 4.1.6 Pigmented lesions of oral cavity
- 4.1.7 Diseases of the tongue
- 4.1.8 Infections of oral cavity
- 4.1.9 Systems review – Systemic disease and their oral manifestations and dental management of : Cardiovascular disease, Respiratory disease, Gastro intestinal disease, Urinary disease, Blood dyscrasias – with special reference to anaemicpatients, leukaemia patients and patients on anticoagulanttherapy, Endocrine disorders
- 4.1.10 Oral premalignant lesions and oral cancer and other malignant lesion
- 4.1.11 Ulcerative and vesiculobullous lesions
- 4.1.12 Salivary gland disorders
- 4.1.13 Oro-facial pain - different diagnosis and management
- 4.1.14 TMJ disorders
- 4.1.15 Immunodeficiency diseases with special reference to AIDS

4.2 Dental Radiology

- 4.2.1 X-Ray equipments, developing and processing
- 4.2.2 Radiation hazards and protection
- 4.2.3 Use of Periapical radiography, Bitewing radiography, Occlusalradiography, Oblique lateral radiography, O.P.G. view of mandible, Cephalomaetric radiography, Tomography, O.M view of maxilla, P.A. view of mandible, CBCT
- 4.2.4 Radiological interpretation of different radiological images of different bony and soft tissue, lesions of oro-facial structure including all types of oro-facial trauma

5. Orthodontics

- 5.1 Definition, scope and objectives of orthodontia
- 5.2 Indication for orthodontics treatment
- 5.3 Limitation of orthodontic treatment
- 5.4 Growth and development: Jaws, Teeth, Face, Skull
- 5.5 Occlusion
- 5.6 Normal development of oral functions: Mastication, Swallowing, Speech, Occlusal function
- 5.7 Normal occlusion: development, characteristics and variation
- 5.8 Genetics-applied to orthodontics
- 5.9 Malocclusion: classification, etiology
- 5.10 Orthodontic records
- 5.11 History and examination

5.12 Study models
5.13 Radiography
5.14 Preventive and interceptive orthodontics
5.15 Extractions in orthodontics
5.16 Orthodontic appliances: Removable, Functional, and Fixed
5.17 Tissue response to orthodontic tooth movement
5.18 Stability and retention
5.19 Oral surgery for orthodontic patients
5.20 Materials related to orthodontics

6. Dental Materials

6.1 Aim and scope
6.2 Structure and behavior of matters, biological consideration
6.3 Physical and mechanical properties of dental materials
6.4 Gypsum products
6.5 Impression materials: Impression compound, ZnO-Eugenol, Agar-agar, Alginate and Rubber base impression materials
6.6 Synthetic resins: properties, denture base material, repair and reline material
6.7 Resins as restorative materials: Unfilled and filled resins, Light cure, Dentin bonding agent and Acid etch
6.8 Metal alloys: Dental amalgam alloys and Dental casting gold alloys, Stainless steel, Chrome cobalt alloy, Nickle titanium alloy, Titanium alloy
6.9 Waxes: different types of dental waxes used in dentistry
6.10 Welding and Soldering
6.11 Dental cement: Zinc Oxide Eugenol, Zinc phosphate, Polycarboxylate, Glass Ionomers, Cavity liners, Cavity varnishes and Calcium hydroxide
6.12 Dental porcelain: Porcelain fused to metal, porcelain furnace and fusing
6.13 Abrasive and polishing agents.

7. Conservative and Endodontics

7.1 Conservative
- 7.1.1 Scope of conservative Dentistry and Endodontics
- 7.1.2 Patient examination, diagnosis and treatment planning in Conservative and Endodontics including various diagnostic aids
- 7.1.3 Instruments and Equipment used in Conservative and Endodontics : Hand instruments, Rotary instruments
- 7.1.4 Sterilization in Conservative dentistry and Endodontics
- 7.1.5 Clinical significance of dental anatomy, histology, physiology and occlusion
- 7.1.6 Dental caries
- 7.1.7 Fundamentals in tooth preparation: Nomenclature of teeth, Caries terminology, Tooth preparation terminology, Principles of tooth preparation
- 7.1.8 Principles of isolation and moisture control
- 7.1.9 Dentinal hypersensitivity
- 7.1.10 Cavity preparation for various types of restorative material : Amalgam, Composite, Glass Ionomer Cement, Cast restoration

7.2 Endodontics

7.2.1 Pulp development, structure and function
7.2.2 Periapical pathology
7.2.3 Tooth morphology and access opening
7.2.4 Working length determination
7.2.5 Cleaning and shaping the root canal system
7.2.6 Obturation of the root canal system
7.2.7 Traumatic injuries : Diagnosis and management
7.2.8 Root resorption
7.2.9 Surgical endodontics
7.2.10 Pulp capping and pulpotomy
7.2.11 Bleaching of teeth
7.2.12 Restoration of endodontically treated teeth
7.2.13 Endo – Perio lesions
7.2.14 Endodontic failures and retreatment
7.2.15 Endodontic emergencies
7.2.16 Drugs used in Conservative and Endodontics
7.2.17 Irrigants and medicaments

8. Prosthodontics and Crown and Bridge

8.1 Prosthodontics

8.1.1 Examination, diagnosis, treatment planning and prognosis
8.1.2 Retention and stability
8.1.3 Impression making
8.1.4 Preparation of casts, trays and temporary denture bases
8.1.5 Methods of jaw registration
8.1.6 Identification of artificial teeth : Selection, arrangement and aesthetics
8.1.7 Complete denture : Principles of occlusion and articulation in compete dentures; Trial in complete dentures; Steps of processing and finishing denture; Correction of occlusal discrepancies; Steps in insertion and adjustments of complete dentures; Sequelae of ill fitting dentures; Rebasing and relining of dentures
8.1.8 Immediate dentures
8.1.9 Implant dentures
8.1.10 Obturators
8.1.11 Partial Dentures: Scope of removable partial dentures; Classification of removable partial dentures; Components removable partial dentures; Mouth preparation for removable partial dentures; Impression making; Designs of removable partial dentures and associated problems; Principles on fabrication of cast metal framework; Jaw relation records, Selection and arrangement of teeth; Trial of partial dentures; Steps of processing, finishing, delivery and maintenance of partial dentures; Uses of immediate partial dentures.

8.2 Crown and Bridge

8.2.1 Indication and Contra-indication

8.2.2 Examination, diagnosis and treatment planning
8.2.3 Principles of selection and choice of abutment teeth
8.2.4 Principles of tooth reduction
8.2.5 Preparation of abutment teeth
8.2.6 Temporary protections of prepared tooth
8.2.7 Gingival retractions and impression procedures
8.2.8 Construction of dies and working methods, direct and indirect techniques

9. Periodontology

9.1 Definition, scope, aim and objectives of periodontology
9.2 Normal periodontium: Gingiva, Periodontal ligament, Cementum, Alveolar bone
9.3 Aging and periodontium
9.4 Defense mechanisms of gingiva
9.5 Classification of diseases of Periodontium
9.6 Epidemiology of periodontal diseases
9.7 Etiology of periodontal diseases: Dental plaque/periodontal microbiology; Material alba, food debris and stains; Dental calculus; Food impaction; Host response; Dental occlusion/ Trauma from occlusion/bruxism and other parafunctional habits; influence of systemic diseases on periodontium- diabetes, sexhormones, nutrition, AIDS, haemorrhagic diseases
9.8 Etiology, pathogenesis, clinical signs and symptoms and management of: Plaque associated gingivitis, Systematically aggravated gingivitis, Acute gingivalinfection, acute herpetic gingivostomatitis, pericoronitis, Desquamativegingivitis, Allergic gingivitis,
9.9 Gingival enlargement, Gingival abscess
9.10 Periodontal pocket
9.11 Periodontal abscess
9.12 Clinical diagnosis and Diagnostic aids
9.13 Prognosis
9.14 Treatment plan and rationale for periodontal treatment
9.15 Periodontal treatment of medically compromised patients
9.16 General principles of periodontal therapy
9.17 Definition- Periodontal regeneration, repair, new attachment, reattachment
9.18 Plaque control : mechanical and chemical
9.19 Periodontal instrumentarium, principles of periodontal instrumentation
9.20 Anti-microbial and other chemotherapeutic agents in periodontal therapy
9.21 Coronoplasty in periodontal therapy
9.22 General principles of periodontal surgery, root planning
9.23 Gingival curettage
9.24 Gingivectomy
9.25 Flap surgery
9.26 Resective osseous surgery: osseous defects and osseous surgery including bone grafts
9.27 Reconstructive osseous surgery: Root conditioning /guided tissue regeneration
9.28 Furcation involvement and management

9.29 Endo-perio therapy
9.30 Mucogingival surgery
9.31 Periodontal splints, Periodontal pack
9.32 Dentinal hypersensitivity
9.33 Dental implant
9.34 Prosthetic and restorative procedures in management of periodontal disease
9.35 Maintenance phase of periodontal therapy or supportive periodontal treatment
9.36 Recent advances in periodontal surgery

10. Paedodontics and Community Dentistry

10.1 Paedodontics
- 10.1.1 Definition, scope and importance of paedodontics
- 10.1.2 Morphology of dentitions and its application
- 10.1.3 Applied morphology and histology of deciduous and permanent teeth
- 10.1.4 Importance of 1st permanent molar
- 10.1.5 Anomalies of developing dentition: tooth eruption, tooth exfoliation, tooth number, tooth structure, tooth color
- 10.1.6 Orofacial growth and its modification
- 10.1.7 Management of common dental and oral diseases in children
- 10.1.8 Diagnosis and management of orodental trauma in child patient
- 10.1.9 Oral manifestation of systemic disease in children
- 10.1.10 Paedodontic treatment plan
- 10.1.11 Psychological development and behavioural attitude in paediatric group
- 10.1.12 Common oral surgical procedures undertaken in children
- 10.1.13 Conscious sedation and anaesthesia used in children for dental procedures
- 10.1.14 Pulp therapy in primary and young permanent tooth
- 10.1.15 Space maintainer and regainer : Indication, Classification and techniques of fabrication
- 10.1.16 Management of pain, anxiety and stress in child patient
- 10.1.17 Orthodontic treatment in primary dentition

10.2 Community Dentistry
- 10.2.1 Concept of health and attitude towards illness
- 10.2.2 Community survey and family case study
- 10.2.3 Doctor, patient relationship
- 10.2.4 Epidemiology of oral diseases in Nepal
- 10.2.5 Fluorides: fluoride mechanisms, flurosis, systemic fluorides, topical fluorides, defloridation
- 10.2.6 Food which prevent dental decay
- 10.2.7 Concept of health education
- 10.2.8 Methods and media of oral health education
- 10.2.9 Nutrition and health
- 10.2.10 Growth and development
- 10.2.11 Breast feeding
- 10.2.12 Motivation to community people and school teachers
- 10.2.13 National Oral Health Policy

यस पेशा सम्बन्धी विषयको पाठ्यक्रमका एकाईहरुबाट सोधिने प्रश्नहरुको संख्या निम्नानुसार हुनेछ ।

एकाइ नं. (Unit No.)	अङ्कभार (Weightage)	बहुवैकल्पिक प्रश्न (MCQs) को संख्या	छोटो उत्तर प्रश्नको संख्या	लामो उत्तर प्रश्नको संख्या
१	३५	१५	६ प्रश्न X ५ अङ्क	३ प्रश्न X १० अङ्क
२				
३				
४	२५	१०		
५				
६				
७	४०	१५		
८				
९				
१०				
जम्मा	**१००**	४० प्रश्न x १ अङ्क = ४० अङ्क	६ प्रश्न X ५ अङ्क = ३० अङ्क	३ प्रश्न X १० अङ्क = ३० अङ्क

Multiple Choice Sample Questions

1) Ability of material to sustain a large permanent deformation under a tensile load without rupture represents
   a) Resilience
   b) Malleability
   c) Toughness
   d) **Ductility**

2) Centric relation and centric occlusion should be same in:
   a) Removable partial denture
   b) Fixed partial denture
   c) Complete denture
   d) Treatment partial denture

3) RPI stands for:
   a) Occlusal rest, proximal plate, I bar
   b) Cingulum rest, proximal plate, I bar
   c) Rest, proximal plate, indirect retainer
   d) Rest, proximal guide plane, I bar

4) Which of the following is most commonly used implant?
   a) Subperiosteal implant
   b) Transosteal implant
   c) Endosteal implant
   d) Permucosal implant

5) Who is known as 'father of modern Implantology'?
   a) Gustav Dahl
   b) Per-Ingvar Brånemark
   c) Carl Misch
   d) Carl O. Boucher

Sample (Long and Short Questions)

1) Classify impression materials. Write the composition and setting reaction of alginate hydrocolloid. (2+3=5)
2) Define dental amalgam. List the factors affecting the strength of amalgam. (1+4=5)

3) 24-year-old female TV newsreader had a fall 24 hours back. During the mishap, she lost her maxillary right central incisor. What are the treatment options available for her? Which would be the best option and why? (3+2+5=10)
4) A patient came to dental department with a chief complaint of fever, pain in lower right back tooth region and difficulty in opening mouth since 2 days. On examination, there was limited mouth opening and inflammation of the operculum in relation to partially erupted 48. Identify the condition. Add a note on investigation and probable finding of the radiographic investigation. Write down about supportive and definitive treatment of the condition. (2+4+4=10)