

**Pokhara University Teaching Hospital
Curriculum for Dental Officer Level Examination**

For Written Examination
Full Marks:65

There shall be 4 hrs written examination based on the following syllabus

Group A: Written Examination

1. General Medicine and General Surgery (5)

Sign, Symptoms, Diagnosis, Management and its Dental Implication

- a) **General Medicine** : Hepatitis, Anemia, Leukemia, Purpuras, Hemophilia, Bleeding and clotting disorder and its management, Hyperparathyroidism, Tetany, Rheumatoid arthritis, Systemic lupus erythematosus, Osteoarthritis, Nephrotic syndrome, and Ischaemic Heart Diseases.
- b) **General Surgery:** HIV/AIDS, Diplopia, Sinusitis, Tonsillitis, Peritonsillar abscess, Ludwig's angina, Indication of tracheostomy, Maxillo-facial Fracture, TMJ Dislocation, Crush injury, Osteomyelitis and Tetanus.

2. General and Oral Pathology (5)

Interpretations of laboratory results, Normal values of biochemical tests, Haematological tests, Developmental disorders of teeth, Dental caries, Pulpitis, Apical periodontitis, Hypercementosis, Gingivitis & Periodontitis, Cysts of the jaw : Non odontogenic and odontogenic cysts, Odontogenic tumors, Infective Stomatitis, Oral Premalignant Lesion, Oral Cancer, Common benign mucosal swelling, Cervical lymphadenopathy, Pain., anxiety and Neurological disorders of face and oral cavity, Diseases of temporomandibular joint, Signs and symptoms of anaemia and leukamia related to oral cavity, Haemorrhagic diseases related to oral cavity, Development disorders of the oral and maxillofacial region, Clinical features and pathogenesis of all major salivary glands.

3. Oral and Maxillofacial Surgery and Anaesthesia (10)

- a) **Oral and Maxillofacial Surgery:** Diagnosis of different oral conditions with its surgical management, Extraction –simple and complicated teeth, Management of orofacial infections by proper incision, drainage and antibiotic therapy, Biopsies of oral issues, Diagnosis and management of the odontogenic cysts & different types of oral tissue biopsies, Apicoectomy, Closure of oro-antral fistula, Diagnosis and treatment of TMJ dislocation, The principles of pain control in maxillofacial surgery, Principles of radiotherapy, chemotherapy and other adjuvant therapy in the management of malignant tumors, Basic principles in the management of facial trauma Cases, Plan and Management of fixation of jaw fracture within 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, Ameloblastoma, Oro-facial defects : Cleft lip and palate, Osteomyelitis of jaw bones.
- b) **Anaesthesia:** Principles of administering safe General anaesthesia, Local anesthesia, Pre – anesthetic drugs, Block and local anesthesia of oral cavity, Infiltration anesthesia of oral cavity,

Post-operative complication of general anesthesia, and Management of complication of intra-oral local anesthesia.

4. Oral Medicine and Dental Radiology (5)

- a) **Oral Medicine:** Introduction and scope of oral medicine, Case history discussion and patient examination, Diagnostic investigations, White, red and pigmented lesions of oral cavity Diseases of the tongue, Infections of oral cavity, Systems review – Systemic disease and their oral manifestations and dental management, Oral premalignant lesions and oral cancer and other malignant lesion, Ulcerative and vesiculobullous lesions, Salivary gland disorders, Orofacial pain- different diagnosis and management, TMJ disorders, Immunodeficiency diseases with special reference to AIDS.
- b) **Dental Radiology:** X-Ray equipment's, developing and processing, Radiation hazards and protection, Use of Periapical radiography, Bitewing radiography, Occlusal radiography, Oblique lateral radiography, O.P.G. view of mandible, Cephalometric radiography, Tomography, O.M view of maxilla, P.A view of mandible, 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)

Definition, scope and objectives of orthodontia, Indication for orthodontics treatment, Limitation of orthodontic treatment, Growth and development: Jaws, Teeth, Face, Skull, Occlusion, Normal development of oral functions: Mastication, Swallowing, Speech, Occlusal function, Normal occlusion: It's development, Characteristics and variation, Genetics-applied to orthodontics, Malocclusion: Classification, Etiology, Orthodontic records, History and examination Study models, Radiography, Preventive and interceptive orthodontics, Extractions in orthodontics, Orthodontic appliances: Removable, Functional, and Fixed, Tissue response to orthodontic tooth movement, Stability and retention, Oral surgery for orthodontic and Patients and materials related to orthodontics.

6. Dental Materials (5)

Structure and behaviour of matters, Biological consideration, Physical and mechanical properties of dental material, Gypsum products, Impression materials: ZnO-Eugenol, Agar-agar, Alginate, Rubber base impression materials, Synthetic resins, Resins as restorative materials, Metal alloys, Waxes: different types of dental waxes used in dentistry, Welding and Soldering, Dental cement: Dental porcelain: Porcelain fused to metal, porcelain furnace and fusing, Abrasive and polishing agents.

7. Conservative and Endodontics (5)

- a) **Conservative:** Scope of conservative Dentistry and Endodontics, Patient examination, diagnosis and treatment planning in Conservative and Endodontics including various diagnostic aids, Instruments and Equipment used in Conservative and Endodontics, Sterilization in Conservative dentistry and Endodontics, Clinical significance of dental anatomy, histology, physiology and occlusion, Dental caries, Fundamentals in tooth preparation (Nomenclature of teeth, Caries terminology, Tooth preparation terminology, Principles of tooth preparation), Principles of isolation and moisture control, Pain control in Conservative and Endodontics, Cavity preparation for various types of restorative material (Amalgam, Composite, Glass Ionomer Cement, Cast restoration

- b) **Endodontics:** Pulp development, structure and function, Periapical pathology, Tooth morphology and access opening, Working length determination, Cleaning and shaping the root canal system, Obturation of the root canal system, Traumatic injuries: Diagnosis and management, Root resorption, Surgical endodontics, Pulp capping and pulpotomy, Bleaching of teeth, Restoration of endodontically treated teeth, Endo-Perio lesions, Endodontic failures and retreatment.

8. Prosthodontics and Crown and Bridge (10)

- a) **Prosthodontics:** Examination, diagnosis, treatment planning and prognosis, Retention and stability, Impression making Preparation of casts, trays and temporary denture bases, Methods of jaw registration, Identification of artificial teeth : Selection, arrangement and aesthetics, Complete denture, Principles of occlusion and articulation in complete dentures, Trial in complete denture, Steps of processing and finishing denture, Correction of occlusal discrepancies, Steps in delivery and adjustments of complete dentures, Sequelae of ill-fitting dentures, Rebasement and relining of dentures, Immediate dentures, Implant dentures, Obturators, Partial Dentures, Scope of removable partial dentures, Classification of removable partial dentures, Components removable partial denture, 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.
- b) **Crown and Bridge:** Indication and Contra-indication, Examination, diagnosis and treatment planning, Principles of selection and choice of abutment teeth, Principles of tooth reduction, Preparation of abutment teeth, Temporary protections of prepared tooth, Gingival retractions and Construction of dies and working methods, direct and indirect techniques.

9. Periodontology (5)

Definition, scope, aim and objectives of periodontology, Normal periodontium: Gingiva, Periodontal ligament, Cementum, Alveolar bone, Aging and periodontium, Defense mechanisms of gingiva, Classification of diseases of Periodontium, Epidemiology of periodontal diseases, 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 (TFO)/bruxism and other parafunctional, Influence of systemic diseases on periodontium- diabetes, sex hormones, nutrition, AIDS, haemorrhagic diseases, Etiology, pathogenesis, clinical signs and symptoms and management of: Plaque associated gingivitis, Systematically aggravated gingivitis, Acute gingival infection- ANUG, acute herpetic gingivostomatitis, pericoronitis, Desquamative gingivitis, Allergic gingivitis, Gingival enlargement, Gingival abscess, Periodontal pocket, Periodontitis: Adult periodontitis, Rapidly progressive periodontitis, Early onset periodontitis, Juvenile periodontitis associated with systemic diseases, Periodontal abscess, Clinical diagnosis and Diagnostic aids, Prognosis, Treatment plan and rationale for periodontal treatment, Periodontal treatment of medically compromised patients, General principles of periodontal therapy, Definition- Periodontal regeneration, repair, new attachment, Reattachment, Plaque control : mechanical and chemical, periodontal instrumentation, Principles of periodontal instrumentation, Anti-microbial and other chemotherapeutic agents in periodontal therapy, Coronoplasty in periodontal therapy, General principles of periodontal surgery, root planning, Gingival

curettage, Gingivectomy, Flap surgery, Resective osseous surgery : Osseous defects and osseous surgery including bone grafts, Reconstructive osseous surgery: Root conditioning /guided tissue regeneration (GTR), Furcation involvement and management, Endo-perio therapy, Mucogingival surgery, Periodontal splints, Periodontal pack, Dentinal hypersensitivity, Prosthetic and restorative procedures in management of periodontal disease, Maintenance phase of periodontal therapy or supportive periodontal treatment and Concept on Dental implant.

10. Paedodontics (5)

Definition, Scope and importance of Paedodontics, Morphology of dentitions and its application, Applied morphology and histology of deciduous and permanent teeth, Importance of 1st permanent molar, Anomalies of developing dentition: tooth eruption, tooth exfoliation, tooth number, tooth structure, tooth color, Orofacial growth and its modification, Management of common dental and oral diseases in children, Diagnosis and management of orodental trauma in child patient, Oral manifestation of systemic disease in children, Paedodontic treatment plan, Psychological development and behavioural attitude in paediatric group, Common oral surgical procedures undertaken in children, Sedation and anaesthesia used in children for dental procedures, Pulp therapy in primary and young permanent tooth, Space maintainer : Indication, Classification and techniques of fabrication, Management of pain, anxiety and stress in child patient and Orthodontic treatment in primary dentition.

11. Community Dentistry (5)

Concept of health and attitude towards illness, Community survey and family case study, Doctor, patient relationship, Epidemiology of oral diseases in Nepal, Fluorides, fluoride mechanisms, fluorosis, systemic fluoride, topical fluorides, Food which prevent dental decay, Concept of health education, Motivation and incentives, Methods and media of oral health education, Nutrition and health, Growth and development, Breast feeding, Motivation to community people and school teachers and National Oral Healthy.

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For Practical Examination
Full Marks: 35

Practical examination based on the following syllabus

Group B: Practical Examination

1. Assessment of vital signs, Physical examination and systemic examination
2. Instrumentation and materials (Step by step procedures, indications, manipulation)
3. History taking
4. Anxiety and pain control methods used during dental treatment
5. Pre and post treatment instructions
6. Case scenario (Approach to different cases)
