

Syllabus for the post of

Tutor in Oral and Maxillofacial Surgery Class-II (Dental) (Advt. No. 08/2021-22)

Marks – 200

Questions – 200

Medium - English

1. Human Anatomy, Embryology, Histology & Medical Genetics

Introduction to : Anatomical terms, Skin, superficial fascia & deep fascia, Cardiovascular system, portal system collateral circulation and arteries, Lymphatic system, regional lymph nodes, Osteology - Including ossification & growth of bones, Myology – Including types of muscle tissue & innervation, Syndesmology – Including classification of Joints, Nervous system.

Head & Neck

Thorax: Demonstration on a dissected specimen of : Thoracic wall, Heart chambers, Coronary arteries, Pericardium, Lungs – surfaces; pleural cavity, Diaphragm

Abdomen: Demonstration on a dissected specimen of: Peritoneal cavity, Organs in the abdominal & pelvic cavity.

Clinical Procedures, Embryology, Histology, Medical Genetics

2. Human Physiology:

General Physiology, Blood, Muscle and Nerve, Digestive system, Excretory system, Body temperature and Functions of skin, Endocrinology, Reproduction, Cardio vascular system, Respiratory system, Central nervous system, Special senses.

3. Biochemistry and Nutrition:

Chemistry of Bioorganic molecules, Macronutrients and digestion, Micronutrients, Energy Metabolism, Special aspects of Metabolism, Biochemical genetics and Protein synthesis, Enzyme and Metabolic regulation, Structural Components and Blood proteins, Medical Biochemistry.

4. Dental Anatomy, Embryology and Oral histology:

Tooth Morphology, Oral embryology, Oral Histology, Oral Physiology

5. General Pathology

Introduction to Pathology, Etiology and Pathogenesis of Disease, Degenerations, Cell death & Necrosis, Inflammation, Healing, Tuberculosis, Syphilis, Typhoid, Thrombosis, Embolism, Ischaemia and Infraction, Derangements of body fluids, Disorders of circulation, Nutritional Disorders, Immunological mechanisms in disease, AIDS and Hepatitis, Hypertension, Diabetes Mellitus, Adaptive disorders of growth, General Aspects of neoplasia

6. Microbiology:

History, Introduction, Scope, Aims and Objectives, Morphology, Physiology of bacteria, Detail account of Sterilization and Disinfection, Brief account of Culture media and Culture techniques, Basic knowledge of selection, collection, transport, processing of clinical, Specimen and identification of bacteria, Bacterial Genetics and Drug Resistance in bacteria, Immunology, Systematic bacteriology, Virology, Mycology, Parasitology.

7. General and Dental Pharmacology and Therapeutics:

General Pharmacology, Anti-septic's, astringents, obtundents, mummifying agents, bleaching agents, styptics, disclosing agents, dentifrices, mouth washes, caries and fluorides, Pharmacotherapy of common oral conditions in dentistry.

8. Oral Pathology and Oral Microbiology:

Introduction, Developmental disturbances of teeth, jaws and soft tissues of oral & perioral region, Dental Caries, Pulp & Periapical Pathology & Osteomyelitis, Periodontal Diseases, Microbial infections of oral soft tissues, Common non-inflammatory diseases, involving the jaws, Diseases of TM Joint, Cysts of the Oral & Perioral region, Tumors of the Oral Cavity, Traumatic, Reactive & Regressive lesions of Oral Cavity, Non neoplastic Salivary Gland Diseases, Systemic Diseases involving Oral cavity, Mucocutaneous Lesions, Diseases of the Nerves, Pigmentation of - Oral & Perioral region & Discoloration of teeth, Diseases of Maxillary Sinus, Oral Precancer-Cancer, Biopsy.

9. General Medicine:

Aims of medicine Definitions of signs, symptoms, diagnosis, differential diagnosis treatment & prognosis. Infections, G.I.T, CVS, RS, Hematology, Renal system, Nutrition, CNS, Endocrines, Critical care.

10. General Surgery:

History of surgery, General principles of surgery, Wounds, Inflammation, Infections, Transmissible viral infections, Shock and hemorrhage, Tumors, ulcers, cysts, sinus and fistulae, Diseases of lymphatic system, Diseases of the oral cavity, Diseases of larynx, nasopharynx, Nervous system, Fractures, Principles of operative surgery, Anomalies of development of face, Diseases of thyroid and parathyroid, Swellings of the jaw, biopsy.

11. Oral & Maxillofacial Surgery

(1) Introduction, Definition, Scope, Aims and Objective

(2) Diagnosis in Oral Surgery:

- History taking
- Clinical examination
- Investigations.

(3) Principles of infection control and cross-infection control with particular reference to HIV/AIDS and Hepatitis.

(4) Principles of Oral Surgery -

a) Asepsis: Definition, measures to prevent introduction of infection during surgery.

- Preparation of the patient
- Measures to be taken by operator
- Sterilisation of instruments - various methods of sterilisation etc.
- Surgery Set up

b) Painless Surgery:

1. Pre-anaesthetic considerations. Pre-medication: purpose, drugs used
2. Anaesthetic considerations - Local, Local with IV sedations
3. Use of general anaesthetic

c) Access:

Intra-oral: Mucoperiosteal flaps, principles, commonly used intra oral incisions.

Bone Removal: Methods of bone removal.

Use of Burs: Advantages & precautions

Bone cutting instruments: Principles of using chisel & osteotome.

Extra-oral: Skin incisions - principles, various extra-oral incision to expose facial skeleton.

- Submandibular
- Pre auricular
- Incision to expose maxilla & orbit
- Bicoronal incision

d) Control of haemorrhage during surgery

Normal Haemostasis, Local measures available to control bleeding, Hypotensive anaesthesia etc.

e) Drainage & Debridement

Purpose of drainage in surgical wounds, Types of drains used, Debridement: purpose, soft tissue & bone debridement.

f) Closure of wounds

Suturing: Principles, suture material, classification, body response to various materials etc.

g) Post operative care

Post operative instructions, Physiology of cold and heat, Control of pain – analgesics, Control of infection – antibiotics, Control of swelling - anti-inflammatory drugs, Long term post operative follow up - significance.

(5) Exodontia: General considerations

Ideal Extraction. Indications for extraction of teeth. Extractions in medically compromised patients.

Methods of extraction:

- Forceps or intra-alveolar or closed method, Principles, types of movement, force etc.
- Trans-alveolar, surgical or open method, Indication, surgical procedure.

Dental elevators: uses, classification, principles in the use of elevators, commonly used elevators

Complications of Exodontia- Complications during exodontias, Common to both maxilla and mandible, Post-operative complications -Prevention and management of complications.

(6) Impacted teeth

Incidence, definition, aetiology.

(a) Impacted mandibular third molar: Classification, reasons for removal, Assessment - both clinical & radiological, Surgical procedures for removal, Complications during and after removal, Prevention and management.

(b) Maxillary third molar: Indications for removal, classification, Surgical procedure for removal.

(c) Impacted maxillary canine: Reasons for canine impaction, Localization, indications for removal, Methods of management, labial and palatal approach, Surgical exposure, transplantation, removal etc.

(7) Pre-prosthetic Surgery:

Definition, classification of procedures

(a) Corrective procedures, Alveoloplasty, Reduction of maxillary tuberosities, Frenectomies and removal of tori.

(b) Ridge extension or Sulcus extension procedures, Indications and various surgical procedures

(c) Ridge augmentation and reconstruction, Indications, use of bone grafts, Hydroxyapatite, Implants - concept of osseointegration, Knowledge of various types of implants and surgical procedure to place implants.

(8) Diseases of the maxillary sinus

Surgical anatomy of the sinus. Sinusitis both acute and chronic. Surgical approach of sinus - Caldwell-Luc procedure. Removal of root from the sinus. Oro-antral fistula - aetiology, clinical features and various surgical methods for closure.

(9) Disorders of T.M. Joint

Applied surgical anatomy of the joint. Dislocation - Types, aetiology, clinical features and management. Ankylosis - Definition, aetiology, clinical features and management. Myofascial pain dysfunction syndrome, aetiology, clinical features, management- Non surgical and surgical. Internal derangement of the joint. Arthritis of T.M. Joint.

(10) Infections of the Oral cavity

Introduction, factors responsible for infection, course of odontogenic infections, spread of odontogenic infections through various facial spaces. Dento-alveolar abscess - aetiology, clinical features and management. Osteomyelitis of the jaws - definition, aetiology, pre-disposing factors, classification, clinical features and management. Ludwigs angina - definition, aetiology, clinical features, management and complications.

(11) Benign cystic lesions of the jaws -

Definition, classification, pathogenesis. Diagnosis - Clinical features, radiological, aspiration biopsy, use of contrast media and histopathology. Management - Types of surgical procedures, Rationale of the techniques, indications, procedures, complications etc.

(12) Tumours of the Oral cavity -

General considerations. Non odontogenic benign tumours occurring in oral cavity - fibroma, papilloma, lipoma, ossifying fibroma, myxoma etc. Ameloblastoma - Clinical features, radiological appearance and methods of management. Carcinoma of the oral cavity, Biopsy – types. TNM classification. Outline of management of squamous. Cell carcinoma: surgery, radiation and chemotherapy , Role of dental surgeons in the prevention and early detection of oral cancer.

(13) Fractures of the jaws -

General considerations, types of fractures, aetiology, clinical features and general principles of management. mandibular fractures - Applied anatomy, classification. Diagnosis - Clinical and radiological. Management - Reduction closed and open. Fixation and immobilisation methods. Outline of rigid and semi-rigid internal fixation. Fractures of the condyle - aetiology, classification, clinical features, principles of management. Fractures of the middle third of the face. Definition of the mid face, applied surgical anatomy, classification, clinical features and outline of management. Alveolar fractures - methods of management. Fractures of the Zygomatic complex. Classification, clinical features, indications for treatment, various methods of reduction and fixation. Complications of fractures - delayed union, non-union and malunion.

(14) Salivary gland diseases -

Diagnosis of salivary gland diseases'. Sialography, contrast media, procedure. Infections of the salivary glands. Sialolithiasis - Sub mandibular duct and gland and parotid duct. Clinical features, management. Salivary fistulae. Common tumours of salivary glands like Pleomorphic adenoma including minor salivary glands.

(15) Jaw deformities -

Basic forms - Prognathism, Retrognathism and open bite. Reasons for correction. Outline of surgical methods carried out on mandible and maxilla.

(16) Neurological disorders -

Trigeminal neuralgia - definition, aetiology, clinical features and methods of management including surgical. Facial paralysis - Aetiology, clinical features. Nerve injuries - Classification, neurohaphy etc.

(17) Cleft Lip and Palate -

Aetiology of the clefts, incidence, classification, role of dental surgeon in the management of cleft patients. Outline of the closure procedures.

(18) Medical Emergencies in dental practice –

Primary care of medical emergencies in dental practice particularly -
(a) Cardio vascular (b) Respiratory (c) Endocrine (d) Anaphylactic reaction
(e) Epilepsy

(19) Emergency drugs & Intra muscular I.V. Injections -

Applied anatomy, Ideal location for giving these injections, techniques etc.

(20) Oral Implantology

12. Forensic Odontology

Introduction to forensic dentistry, Overview of forensic medicine and toxicology, Dental identification, Maintaining dental records, Age estimation, Sex differentiation, Ethnic variations ('racial' differences) in tooth morphology, Bite mark procedures, Dental DNA methods.

13. Oral Implantology

History of implants, their design & surface characteristics and osseointegration. Scope of oral & maxillofacial implantology & terminologies. A brief introduction to various implant systems in practice. Bone biology, Morphology, Classification of bone and its relevance to implant treatment and bone augmentation materials. Soft tissue considerations in implant dentistry. Diagnosis & treatment planning in implant dentistry. Pre surgical preparation of patient. Implant installation & armamentarium for the Branemark system as a role model. First stage surgery- Mandible-Maxilla. Healing period & second stage surgery. Management of surgical complications & failures. General considerations in prosthodontic reconstruction & Bio mechanics. Prosthodontic components of the Branemark system as a role model. Impression procedures & Preparation of master cast. Jaw relation records and construction of suprastructure with special emphasis on occlusion for osseointegrated prosthesis. Management of prosthodontic complications & failures. Recall & maintenance phase.

14. Medico Legal Aspects Relevant to the Discipline.

15. The Revised Dentists (Code of Ethics) Regulations, 2014.

16. Current Trends and recent advancements in the Field of Oral and Maxillofacial Surgery.