

**Syllabus for the Preliminary Test for the recruitment of**  
**Associate Professor-Oral and Maxillofacial Surgery, Class-I (Dental)**  
**(Advt.No. -62/2024-25)**

**Mark:200**

**Questions:200**

**Medium: English**

**1. Applied Anatomy:**

Surgical anatomy of the scalp, temple and face, Anatomy of the triangles of neck and deep structures of the neck, Cranial and facial bones and its surrounding soft tissues with its applied aspects in maxillofacial injuries, Muscles of head and neck; chest, lower and upper extremities (in consideration to grafts/flaps), Arterial supply, venous drainage and lymphatics of head and neck, Congenital abnormalities of the head and neck, Surgical anatomy of the cranial nerves, Anatomy of the tongue and its applied aspects, Surgical anatomy of the temporal and infratemporal regions, Anatomy and its applied aspects of salivary glands, pharynx, thyroid and parathyroid gland, larynx, trachea, esophagus, Tooth eruption, morphology, and occlusion, Surgical anatomy of the nose, The structure and function of the brain including surgical anatomy of intra cranial venous sinuses, Autonomous nervous system of head and neck, Functional anatomy of mastication, deglutition, speech, respiration and circulation, Development of face, paranasal sinuses and associated structures and their anomalies, TMJ: surgical anatomy and function.

**2. Physiology:**

Nervous system, Blood, Digestive system, Respiration, Cardiovascular System, Endocrinology, Nutrition

**3. Biochemistry:**

General principles governing the various biological activities of the body, such as osmotic pressure, electrolytes, dissociation, oxidation, reduction etc. General composition of the body, Intermediary metabolism, Carbohydrates, proteins, lipids, and their metabolism, Nucleoproteins, nucleic acid and nucleotides and their metabolism, Enzymes, vitamins and minerals,

Hormones, Body and other fluids, Metabolism of inorganic elements, Detoxification in the body, Antimetabolites.

**4. Pathology:**

Inflammation, Haemostasis, Shock, Chromosomal abnormalities, Hypersensitivity, Neoplasia.

**5. Oral Pathology:**

Developmental disturbances of oral and Para oral structures Regressive changes of teeth, Bacterial, viral and mycotic infections of oral cavity, Dental caries diseases of pulp and periapical tissues, Physical and chemical injuries of the oral cavity, Oral manifestations of metabolic and endocrinal disturbances, Diseases of jawbones and TMJ, Diseases of blood and blood forming organs in relation to oral cavity, Cysts of the oral cavity, Salivary gland diseases, Role of laboratory investigations in oral surgery.

**6. Microbiology:**

Immunity, Knowledge of organisms commonly associated with diseases of oral cavity, Morphology cultural characteristics of strepto, staphylo, pneumo, gono, meningo, clostridium group of organisms, spirochetes, organisms of TB, leprosy, diphtheria, actinomycosis and moniliasis, Hepatitis B and its prophylaxis, culture and sensitivity test, Laboratory determinations, Blood groups, blood matching, RBC and WBC count, Bleeding and clotting time etc, smears and cultures, Urine analysis and cultures.

**7. Applied Pharmacology and Therapeutics:**

Definition of terminologies used, Dosage and mode of administration of drugs, Action and fate of drugs in the body, Drug addiction, tolerance and hypersensitivity reactions, Drugs acting on the CNS, General and local anesthetics, hypnotics, analeptics, and tranquilizers, Chemo therapeutics and antibiotics, Analgesics and antipyretics, Antitubercular and antisiphilitic drugs, Antiseptics, sialogogues and antisialogogues, Haematinics, Antidiabetics, Vitamins A, B-complex, C, D, E, K.

**8. Minor Oral Surgery:**

- **Principles of Surgery:** Developing a Surgical Diagnosis, Basic Necessities For Surgery, Aseptic Technique, Incisions, Flap Design Tissue Handling, Haemostasis, Dead Space Management, Decontamination And Debridement, Suturing, Oedema Control, Patient General Health And Nutrition.

- **Medical Emergencies:** Prevention and management of altered consciousness (syncope, orthostatic hypotension, seizures, diabetes mellitus, adrenal insufficiency), hypersensitivity reactions, chest discomfort, and respiratory difficulty.
- **Examination and Diagnosis:** Clinical history, physical and radiographic, clinical and laboratory diagnosis, oral manifestations of systemic diseases, implications of systemic diseases in surgical patients.
- **Haemorrhage and Shock:** Applied physiology, clinical abnormalities of coagulation, extra vascular hemorrhage, and hemorrhagic lesions, management of secondary hemorrhage, shock.
- **Exodontia:** Principles of extraction, indications and contraindications, types of extraction, complications and their management, principles of elevators and elevators used in oral surgery.
- **Impaction:** Surgical anatomy, classification, indications and contraindications, diagnosis, procedures, complications and their management.
- **Surgical aids to eruption of teeth:** Surgical exposure of unerupted teeth, surgical repositioning of partially erupted teeth.
- **Transplantation of teeth**
- **Surgical Endodontics:** Indications and contraindications, diagnosis, procedures of periradicular surgery
- **Preprosthetic Surgery:** Requirements, types (alveoloplasty, tuberosity reduction, mylohyoid ridge reduction, genial reduction, removal of exostosis, vestibuloplasty)
- **Procedures to Improve Alveolar Soft Tissues:** Hypermobility tissues-operative / sclerosing method, epulis fissuratum, frenectomy and frenotomy
- **Infections of Head and Neck:** Odontogenic and non Odontogenic infections, factors affecting spread of infection, diagnosis and differential diagnosis, management of facial space infections, Ludwig angina, cavernous sinus thrombosis.
- **Chronic infections of the jaws:** Osteomyelitis (types, etiology, pathogenesis, management) osteoradionecrosis
- **Maxillary Sinus:** Maxillary sinusitis – types, pathology, treatment, closure of Oro – antral fistula, Caldwell- luc operation

- **Cysts of the Orofacial Region:** Classification, diagnosis, management of OKC, dentigerous, radicular, non Odontogenic, ranula
- **Neurological disorders of the Maxillofacial Region:** Diagnosis and management of trigeminal neuralgia, MPDS, Bell 's palsy, Frey's syndrome, nerve injuries.
- **Implantology:** Definition, classification, indications and contraindications, advantages and disadvantages, surgical procedure.

➤ **Anesthesia :**

**Local Anesthesia:**

Classification of local anesthetic drugs, mode of action, indications and contra indications, advantages and disadvantages, techniques, complications and their management.

**General Anesthesia:**

Classification, stages of GA, mechanism of action, indications, and contra indications, advantages and disadvantages, post anesthetic complications and emergencies, anesthetic for dental procedures in children, pre medication, conscious sedation, legal aspects for GA

**9. Maxillofacial Trauma:**

Surgical Anatomy of Head and Neck, Etiology of Injury, Basic Principles of Treatment, Primary Care: resuscitation, establishment of airway, management of hemorrhage, management of head injuries and admission to hospital, Diagnosis: clinical, radiological, Soft Tissue Injury of Face and Scalp: classification and management of soft tissue wounds, injuries to structure requiring special treatment, Dento Alveolar Fractures: examination and diagnosis, classification, treatment, prevention, Mandibular Fractures: classification, examination and diagnosis, general principles of treatment, complications and their management, Fracture of Zygomatic Complex: classification, examination and diagnosis, general principles of treatment, complications and their management, Orbital Fractures: blow out fractures, Nasal Fractures, Fractures of Middle Third of the Facial Skeleton: emergency care, fracture of maxilla, and treatment of le fort I, II, III, fractures of Naso orbito ethmoidal region, Ophthalmic Injuries: minor injuries, non-perforating injuries, perforating injuries, retro bulbar hemorrhage, and traumatic optic neuropathy, Traumatic Injuries to Frontal Sinus: diagnosis, classification, treatment, Maxillofacial Injuries in Geriatric and Pediatric Patients, Gun Shot Wounds and War Injuries, Osseointegration in Maxillofacial Reconstruction, Metabolic Response to Trauma: neuro endocrine responses, inflammatory

mediators, clinical implications, Healing of Traumatic Injuries: soft tissues, bone, cartilage, response of peripheral nerve to injury, Nutritional consideration following Trauma, Tracheostomy: indications and contraindications, procedure, complications and their management.

## **10. Maxillofacial Surgery :**

### ➤ **Salivary gland**

Sialography, Salivary fistula and management, Diseases of salivary gland – developmental disturbances, cysts, inflammation and sialolithiasis, Mucocele and Ranula, Tumors of salivary gland and their management, Staging of salivary gland tumors, Parotidectomy

### ➤ **Temporomandibular Joint**

Etiology, history signs, symptoms, examination and diagnosis of temporomandibular joint disorders, Ankylosis and management of the same with different treatment modalities, MPDS and management, Condylectomy – different procedures, Various approaches to TMJ, Recurrent dislocations – Etiology and Management

### ➤ **Oncology**

Biopsy, Management of pre-malignant tumors of head and neck region, Benign and Malignant tumors of Head and Neck region, Staging of oral cancer and tumor markers, Management of oral cancer, Radical Neck dissection, Modes of spread of tumors, Diagnosis and management of tumors of nasal, paranasal, neck, tongue, cheek, maxilla and mandible, Radiation therapy in maxillofacial regions, Lateral neck swellings

### ➤ **Orthognathic surgery**

Diagnosis and treatment planning, Cephalometric analysis, Model surgery, Maxillary and mandibular repositioning procedures, Segmental osteotomies, Management of apertognathia, Genioplasty, Distraction ontogenesis

### ➤ **Cysts and tumors of oro facial region**

Odontogenic and non-Odontogenic tumors and their management, Giant Cell lesions of jawbone, Fibro osseous lesions of jawbone, Cysts of jaw

### ➤ **Laser surgery**

The application of laser technology in surgical treatment of lesions

### ➤ **Cryosurgery**

Principles, applications of cryosurgery in surgical management

### ➤ **Cleft lip and palate surgery**

Detailed knowledge of the development of the face, head and neck, Diagnosis and treatment planning, Current concepts in the management of cleft lip and

palate deformity, Knowledge of Naso endoscopy and other diagnostic techniques in the evaluation of speech and hearing, Concept of multidisciplinary team management

➤ **Aesthetic facial surgery**

Detailed knowledge of the structures of the face and neck including skin and underlying soft tissue, Diagnosis and treatment planning of deformities and conditions affecting facial skin, Underlying facial muscles, bone, Eyelids, external ear, Surgical management of post acne scarring, facelift, blepharoplasty, otoplasty, facial bone recontouring etc.

➤ **Craniofacial surgery**

Basic knowledge of developmental anomalies of the face, head and neck, Basic concepts in the diagnosis and planning of various head and neck anomalies including facial clefts, craniosynostosis, syndromes, etc. Current concept in the management of craniofacial anomalies

**11. Medico Legal Aspects Relevant to the Discipline.**

**12. Research Methodology and Biostatistics.**

**13. Revised Dentists ( Code of Ethics) Regulation, 2014.**

**14. Current Trends and Recent Advancements in the above fields.**