

Syllabus for the post of

**Tutor in Pedodontics (Paediatric) and Preventive Dentistry Class-II (Dental)
(Advt. No. 10/2021-22)**

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, Cardiovascular 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. Paediatric & preventive dentistry

(1) Introduction to Pedodontics & Preventive Dentistry.

- Definition, Scope, Objectives and Importance.

(2) Growth & Development:

Importance of study of growth and development in Pedodontics. Prenatal and Postnatal factors in growth & development. Theories of growth & development. Development of maxilla and mandible and related age changes.

(3) Development of Occlusion from Birth Through Adolescence.

- Study of variations and abnormalities.

(4) Dental Anatomy and Histology:

Development of teeth and associated structures. Eruption and shedding of teeth. Teething disorders and their management. Chronology of eruption of teeth. Differences between deciduous and permanent teeth. Development of dentition from birth to adolescence. Importance of first permanent molar.

(5) Dental Radiology Related to Pedodontics.

(6) Oral Surgical Procedures in Children:

Indications and contraindications of extractions of primary and permanent teeth in children. Knowledge of Local and General Anesthesia. Minor surgical procedures in children.

(7) Dental Caries:

Historical background. Definition, aetiology & pathogenesis. Caries pattern in primary, young permanent and permanent teeth in children. Rampant caries, early childhood caries and extensive caries: Definition, aetiology, Pathogenesis, Clinical features, Complications & Management. Role of diet and nutrition in Dental Caries. Dietary modifications & Diet counseling. Caries activity, tests, caries prediction, caries susceptibility & their clinical application.

(8) Gingival & Periodontal Diseases in Children:

Normal gingiva & periodontium in children. Definition, aetiology & Pathogenesis. Prevention & Management of gingival & Periodontal diseases.

(9) Child Psychology:

Definition. Theories of child psychology. Psychological development of children with age. Principles of psychological growth & development while managing child patient. Dental fear and its management. Factors affecting child's reaction to dental treatment.

(10) Behaviour Management:

Definitions. Types of behaviour encountered in the dental clinic. Non-pharmacological & pharmacological methods of Behaviour Management.

(11) Pediatric Operative Dentistry:

Principles of Pediatric Operative Dentistry. Modifications required for cavity preparation in primary and young permanent teeth. Various Isolation Techniques. Restorations of decayed primary, young permanent and permanent teeth in children using various restorative materials like Glass Ionomer, Composites & Silver Amalgam. Stainless steel, Polycarbonate & Resin Crowns.

(12) Pediatric Endodontics:

Principles & Diagnosis. Classification of Pulpal Pathology in primary, young permanent & permanent teeth.

Management of Pulpally involved primary, young permanent & permanent teeth: Pulp capping – direct & indirect, Pulpotomy, Pulpectomy, Apexogenesis, Apexification.

Obturation Techniques & material used for primary, young permanent & Permanent teeth in children.

(13) Traumatic Injuries in Children:

Classifications & Importance. Sequelae & reaction of teeth to trauma. Management of Traumatized teeth.

(14) Preventive & Interceptive Orthodontics:

Definitions. Problems encountered during primary and mixed dentition phases & their management. Serial extractions. Space management.

(15) Oral Habits in Children:

Definition, Aetiology & Classification. Clinical features of digit sucking, tongue thrusting, mouth breathing & various other secondary habits. Management of oral habits in children.

(16) Dental Care of Children With Special Needs

Definition, Aetiology, Classification, Behavioural and Clinical features & Management of children with: Physically handicapping conditions. Mentally compromising conditions. Medically compromising conditions. Genetic disorders.

(17) Congenital Abnormalities in Children:

Definition, Classification, Clinical features & Management.

(18) Dental Emergencies in Children & Their Management.

(19) Dental Materials Used in Pediatric Dentistry.

(20) Preventive Dentistry:

Definition. Principles & Scope. Types of prevention. Different preventive measures used in Pediatric Dentistry including pit and fissure sealants and caries vaccine.

(21) Dental Health Education & School Dental Health Programmes.

(22) Fluorides:

Historical background. Systemic & Topical fluorides. Mechanism of action. Toxicity & Management. Defluoridation techniques.

(23) Case History Recording:

Outline of principles of examination, diagnosis & treatment planning.

(24) Setting up of Pedodontic Clinic.

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 Pedodontics & Preventive Dentistry.