

SYLLABUS OF PART – I

SUBJECT : PROSTHODONTICS AND CROWN & BRIDGE

Applied Anatomy

- Anatomy of the stomatognathic system. - Maxilla, Mandible, Maxillary sinus, Face (muscles & nerve supply) , Trigeminal ganglion, Cranial nerves, Salivary glands, Larynx, Pharynx, Trachea and esophagus, Muscles of mastication, Maxillary artery, Temporomandibular Joint, Mandibular Nerve, sympathetic & parasympathetic ganglion,
- Anatomy of T.M.J. its movements, disorders and its management.
- Anatomy physiology and function of the masticator system.

Embryology

- Derivatives of Neural Crest, Pharyngeal arches

Growth & Development Genetics

- Growth and development of face jaws and teeth.
- Growth and development of Maxilla, Mandible ,Face, Hard Palate, Soft Palate, Tongue
- Consequences and management of age changes in the dentition
- Principles of orofacial genetics
- molecular basis of genetic defects

Immunology

- Basic principles of immunity, antigen and antibody reactions
- Immunological disorders,
- Sensitivity, Delayed Hypersensitivity
- Cell mediated immunity

Physiology

- Mastication, swallowing, Speech and deglutition mechanism.
- Salivary glands and saliva,
- Healing of wound & Fracture
- Blood: Composition , volume , functions , blood groups , RBC and haemoglobin , WBC: Structure and Functions , Platelets : Function and applied aspects and Plasma Proteins

- Physiology of pain , sympathetic and para-sympathetic nervous systems , physiology of pulpal pain and non odontogenic pain , pain disorders-typical and atypical

Nutrition & Biochemistry

- Role of Vitamin A, C and B complex in oral mucosal and periodontal health.
- Role of Calcium and Vitamin D in growth and development of teeth and jaws.
- Balanced diet
- Nutrition in geriatric patients

Pathology & Microbiology

- Pathology of the periodontal, Pulp and peri-apical tissues
- Pathology of dental tissues and oral cavity.
- Dental plaque in relation to dental disease.
- Sensory perception and pain
- Oral pre-cancerous lesions.
- Malignant lesions of the oral cavity and head and neck region.
- Developmental anomalies of face, jaws and teeth
- Microbiological & virological effects & its treatment options.
- Biomedical waste disposal system
- Sterilization & Disinfection
- Staphylococci, Streptococci, Fungi- Candida ,Tuberculosis
- Blood Coagulation with applied aspects , Blood Transfusion , shock, lymph and applied aspects , Inflammation , Repair and regeneration , necrosis and Gangrene , Neoplasm , classification of tumors and carcinogenesis.

Virology

- Microbiological & virological effects & its treatment options.
- HIV, Hepatitis, Herpes Virus

Applied Pharmacology

- Medical conditions and medications affecting dental treatment in Geriatric patients
- Antihypertensive
- NSAIDS

- Anti-Histaminics
- Anti-cholinergic
- Adrenergic drugs
- Antibiotics
- Antacids
- Anticoagulants
- Dosage and mode of administration of drugs
- Brief Pharmacology of : drugs acting on Central Nervous System, general anesthetics ,hypnotics, analeptics and tranquilizers, Local anesthetics, antibiotics, analgesics and antipyretics, antiseptics, styptics , Sialogogues and anti-sialogogues, Haematinics , Cortisone , ACTH , Insulin and other ant diabetic
- Chemotherapy and Radiotherapy

Applied Dental Materials:

- Physical, mechanical and biological properties of modern dental materials.
- Gypsum products used in prosthodontics.
- Die and counter die materials.
- Various resins used in prosthodontics including Denture base materials
- Impression materials used in Dentistry.
- Duplicating materials.
- Metals and alloys used in Dentistry.
- Dental Waxes including inlay casting wax
- Investments.
- Casting machines procedures and defects.
- Soldering and Welding
- Cements - restorative and luting
- Composites - various generations and system in order of development.

Composition, uses and manipulation.

- Tissue conditioner and soft reline.
- Porcelain Including Porcelain fused to Metal alloys.

- Porcelain furnace, firing and techniques.
- Mechanics of tooth cutting (burs and points)
- Cutting, polishing and finishing agents.
- Implant materials.
- Bonding agents – enamel and dentin bonding agents and various other adhesives.
- CAD-CAM System & material science & digital scanning systems

Research Methodology and Biostatistics

- Scope and need for statistical application to biological data.
- Definition of selected terms- scale of measurements related to statistics.
- Methods of collecting data.
- Presentation of data statistical diagrams and graphs

Applied Dental Anatomy and Histology

- Biology and anatomy of dental tissues
- Biology and physiology enamel, dentine Cementum, pulp and periodontium
- Anatomy and histology of oral mucous membrane.
- Anatomy of T.M.J. its movements, disorders and its management.
- Anatomy physiology and function of the masticator system.
- Normal occlusion, development of occlusion in deciduous, mixed and permanent
- Dentitions.

Oral Pathology & Oral Microbiology

- Pathology of the periodontal, Pulp and peri-apical tissues
- Pathology of dental tissues and oral cavity.
- Dental plaque in relation to dental disease.
- Sensory perception and pain
- Oral pre-cancerous lesions.

- Malignant lesions of the oral cavity and head and neck region.
- Developmental anomalies of face, jaws and teeth
- Microbiological & virological effects & its treatment options.
- Regressive changes of teeth
- Bacterial ,viral and mycotic infections of oral cavity
- Dental caries
- Physical and chemical injuries of the oral cavity
- Oral manifestations of metabolic and endocrinal disturbances
- Diseases of blood and blood forming organisms in relation to oral cavity
- Diseases of skin, nerves and muscles in relation to oral cavity
- Anatomy of TMJ, its movements , disorders and its management