

ANNEXURE III

Syllabus for NEB Examination (Dental) (For transfer to BDS Year 4)

GENERAL MEDICINE

- History taking in general,
- General Physical Examination Pallor, Cyanosis, Jaundice, Clubbing and Koilonychia.
- Thyroid, Lymph nodes, Dehydration, Nutrition, Decubitus, Edema.
- Pulse.
- Examination of Blood Pressure and JVP.
- History taking in GIT - Vomiting, Diarrhea, Pain Ab, Constipation.
- Hematemesis, Melena, Dyspepsia, Distension.
- Examination of GIT- Inspection, Palpation.
- Percussion, Auscultation.
- Any deficient program.
- Chest pain, wheezing.
- Inspection, Palpation, Percussion Auscultation front of chest.
- Inspection, Palpation, Percussion, Auscultation back of chest.
- Any deficient program.
- History taking in CVS. .
- General Physical Examintion in CVS - Clubbing, Koilonychia, Osier's nodes, Splinter Hemorrhages, Cyanosis.
- Pulse, JVP, Blood pressure
- Inspection, Palpation of pericardium
- Percussion, Auscultation of pericardium - Mitral, Tricuspid, Aortic.
- Pulrnonary areas.
- Any deficient program.
- History taking in CNS
- Higher Mental Functions of consciousness, Behavior, Speech Memory
- Examination of cranial nerves I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII
- Examination of Motor system
- Examination of sensory system crude touch, pain, temperature. Fine touch, pressure, vibration Joint position
- Cortical sensation
- TWO point localization and discrimination
- Reflexes.
- Examination of Cerebellar system.

Knowledge of Systems and the Diseases

- Genetic factors in disease.
- Immunological factors in disease.
- Climate and environmental factors in disease
- Diseases due to infection.
- Diseases of the cardiovascular system.
- Diseases of the respiratory system.
- Diseases of the alimentary tract and pancreas.
- Diseases of the liver and biliary system.
- Nutritional factors in disease.
- Disturbances in water, electrolyte and acid base balances.
- Diseases of the kidney and genito-urinary system.
- Endocrine and metabolic Diseases.
- Diseases of the blood.
- Oncology.
- Diseases of connective tissues joint and bones.
- Diseases of the skin.
- Psychiatry
- Diseases of the nervous system.
- Principles of geriatric medicine.
- Acute poisoning.

GENERAL SURGERY

- Physiological response to Surgical Trauma and homeostasis
- Wound and its Repair.
- Pathophysiology and Management of Shock including fluid and electrolyte imbalance. c
- Investigation and treatment of Infections and parasitic infestations of surgical importance
- Hemorrhage Blood Transfusion and their implications
- Management of acutely injured & critically ill patients including aspiration pneumonia and embolic phenomena
- Principles in the Management of common Skin and Soft tissue problems: Ulcers, Abscesses, Sinus & Fistulae swellings, embedded foreign bodies and minor injuries.
- Principles of Anaesthesia.
- Nutrition of surgical patients.
- Cardiac Arrest
- Polytrauma with airway difficulty and circulatory instability
- Uncontrolled External Hemorrhage.
- Sudden upper Respiratory Tract Obstruction
- Hypovolumic or Septicemic Shock
- Tension Pneumothorax.

- Cardiac Tamponade.
- Unconscious due to Head Injury
- Gas Gangrene and Tetanus.
- Burns

Knowledge of Systems and the Diseases:

Head, Face and Neck:

- Development abnormalities of face, palate, lip.
- Principles of management of Head Injuries and its complications
- Oral region including tongue.
- Diseases of Salivary glands (Inflammation, Calculus, Tumors)
- Neck lumps including Lymphatics Thyroid, Parathyroid.

Chest Wall & Thorax

- Blunt & Penetrating Injuries and their Complications.
- Lung abscess and Empyema thoracis
- Growth of cysts in the lungs.

Gastro Intestinal Tract:

- Diseases causing Oesophageal Obstruction
- Peptic ulcer and its complications
- Tumors of Stomach.
- Conditions causing Acute Abdomen
- Conditions causing Chronic Abdomen including malignant lesions of small and large bowel

Abdominal Pelvic and Genital Traumas and Hernias

- Principles in management of abdominal trauma
- Epigastric Hernia
- Incisional Hernia

Liver

- Obstructive Jaundice
- Trauma
- Liver Abscess
- Hydrated Cyst
- Malignancy (Hepatoma & Secondaries)

Gall Bladder

- Acute and duoruc Cholecystitis
- Cholelithiasis and its Complications
- Malignancies

Pancreas

- Acute, Relapsing and Chronic pancreatitis
- Panaeatic masses induding (benign, malignant) neoplasia

Skin & Soft Tissues

- Common benign and malignant skin lesions
- Wounds / Ulcers I abscesses /Sinuses / Fistulae
- Soft Tissue Lumps

Orthopedics and Trauma

- Common Congenital Malformatios of Locomotive System.
- Bone Fracture & their Complications.
- Sports injuries and afflictions of Tendons and Bursae.
- Bone and joint Infections.
- Arthritis.
- Bone and Cartilage Tumours

Vascular and Nerve Disorders

- Vascular afflictions.
- Varicosities.
- Deep venous thrombosis.
- Peripheral nerve Injuries.

ORAL PATHOLOGY

- Developmental disturbances of Teeth
- Pre malignant, Benign and Malignant lesions
- Salivary gland tumors and diseases
- Odontogenic & non -Odontogenic tumours
- Tooth wear
- Caries
- Diseases of pulp and periapical tissues
- Spread of Infections
- Wound Healing
- Diseases of bones and joints
- Cysts of Jaws and Oral Cavity
- Immunology

PERIODONTOLOGY

Normal Periodontium

- Periodontium and its structures
- Gingiva
- Periodontal Ligaments
- Alveolar bone
- Cementum

- Periodontal anatomy in relation to periodontal and implant surgical procedures

Classification of Gingival and Periodontal Diseases

- Gingivitis: Dental biofilm induced
- Gingivitis: Non - Dental biofilm induced
- Periodontitis (chronic and aggressive periodontitis according to 1999 classification)
- Periodontitis as a manifestation of systemic diseases
- Necrotizing periodontal diseases
- Other conditions affecting periodontium
- Systemic diseases/condition affecting periodontal supporting tissues
- Periodontal abscesses and Perio-Endo lesions
- Mucogingival deformities and conditions
- Occlusal trauma
- Prosthesis and tooth related factors
- Peri-Implant diseases and conditions

Etiology of Gingival and Periodontal Diseases

- Plaque Microbiology
- Plaque retentive factors
- Calculus
- Improper restorations
- Improper crown margins
- Orthodontic appliances
- Risk factors of periodontal disease

Gingival and Periodontal Diseases

- Pathogenesis
- Host response
- Clinical features
- Histological features
- Radiographic features

Periodontal examination, investigations and documentation

- Extra oral and intraoral examination
- Basic Periodontal Examination
- General dental charting
- Detailed periodontal charting
- Indices and classification of gingival/ periodontal parameters
 - Gingival inflammation
 - Periodontal disease
 - Gingival recession
 - Furcation
 - Mobility
- Sensibility tests
- Referral to physician and/or dental specialists

Diagnosis & Treatment plan of periodontal disease

- Periodontal diagnosis according to 2017 classification
- Radiographic interpretations
- Prognosis of individual teeth
- Phases of treatment plan
- Patient education and motivation regarding proposed treatment plan
- Evidence based sequence of treatment planning

Plaque control

- Plaque indices
- Plaque disclosing agents
- Oral hygiene tools
- Oral hygiene instructions
- Chemical plaque control methods
- Dentifrices
- Dietary counseling

Non-surgical Periodontal therapy

- Goal of non-surgical therapy
- Instruments
- Scaling and prophylaxis
- Scaling and root surface debridement
- Healing response end outcomes expected from periodontal non-surgical therapy

Surgical Principles and Procedures

- Goal of surgical therapy
- Principles of periodontal surgical therapy
- Basic principles of wound healing
- Periodontal surgical procedures for pocket depth reduction
- Gingivectomy
- Principles of Osseointegration
- Basic surgical principles of implant surgery
- Surgical assessment of implant cases
- Basic surgical procedure of implant surgery
- Instruments for perio and implant surgical procedures

Interdisciplinary Periodontics

- Perio-Restorative interrelationship
- Endo-Perio Continuum
- Perio-Ortho interrelationship
- Perio-Medicine
 - Perio- Diabetes
 - Perio – CVD
 - Perio – pregnancy
 - Bleeding/clotting disorders and blood thinners

Periodontal and Implant maintenance

- Importance
- Compliance of Perio and Implant patients
- Choice of instruments for implant maintenance
- Periodontal risk assessment

Clinical skills

- Educate patients concerning the aetiology of periodontal disease and encourage them to assume responsibility for their oral health.
- Perform periodontal charting and instrumentation techniques for plaque, calculus and stains removal using manual and powered instruments.
- Instruct the patients on when and how to use chemical plaque control agents in periodontal disease management.
- Provide symptomatic relief to patients presenting with painful conditions such as necrotizing ulcerative conditions, periodontal abscess, food impactions, dentine hypersensitivity
- Use plaque disclosing agents
- Perform instrument sharpening techniques and identify worn down periodontal instruments

ORAL MEDICINE

The Oral Mucosa

Normal Oral Mucosa

- Structure
- Function
- Age changes

Abnormal oral mucosa

- Oral mucosa in generalized disease
- Periodontium in generalized disease

Principles of oral medicine: assessment and investigation of patients

- Patient assessment
- History taking
- Examination
- Investigations
 - Blood examination
 - Blood chemistry
 - Endocrine function
 - Urinalysis
 - Biopsy
- Microbiological investigations
- Imaging techniques

Infections of gingivae and oral mucosa

Bacterial infections

- Acute Necrotizing Ulcerative Disease
- Non-specific

Fungal infections

Primary Candidiasis

- Acute (Pseudomembranous and Erythematous)
- Chronic (Pseudomembranous, Erythematous and CHC)
- Candida associated lesions
- Denture Induced Stomatitis
- Angular Cheilitis
- Median Rhomboid Glossitis
- Secondary Candidiasis
- Secondary Chronic Mucocutaneous Candidiasis syndrome

Viral infections

- Herpes simplex virus infections
- Varicella zoster virus infections
- Epstein-Barr virus infections
- Human papillomavirus infections
- Human immunodeficiency virus and AIDS

Oral Ulceration

- Traumatic ulceration
 - Aetiology
 - Clinical features
 - Management
- Recurrent aphthous stomatitis (RAS)
 - Clinical features
 - Aetiology
 - Histopathology and immunopathogenesis
 - Systemic conditions and RAS like lesions

Diseases of the lips and tongue and disturbances of taste and halitosis

Diseases of the lips

- Swelling of the lips
- Angular cheilitis (angular stomatitis, chelosis, perleche)
- Lip fissures
- Allergic cheilitis
- Actinic cheilitis (solar keratosis)
- Exfoliative cheilitis
- Perioral dermatitis
- Lip Lickers eczema
- Cheilocandidosis

Diseases of tongue

- Developmental abnormalities and Morphological variations
- Tongue fissures
- Coated tongue
- Hairy tongue
- Atrophy of the lingual epithelium
- Traumatic irritation of the tongue
- Enlargement of the foliate papillae
- Geographic tongue (Erythema Migrans, Benign Migratory Glossitis),
- Median Rhomboid Glossitis
- Disturbances of taste and halitosis

Swellings of the face and neck

Facial swellings

- Differential diagnosis swellings in the neck
- Cervical lymphadenopathy
 - Differential diagnosis
 - Examination of the lymph nodes
 - Inflammatory causes of lymph node enlargement
 - Neoplastic causes of lymph node enlargement

Salivary glands and saliva

- Saliva and salivary glands
- Saliva
- Salivary glands

Assessment of the salivary glands

- Measurement of the salivary flow

Salivary gland diseases

- Sialadenitis
- Sialosis
- Necrotizing sialometaplasia
- HIV-associated salivary gland disease
- Salivary gland tumours

Inflammatory overgrowths, developmental and benign lesions, and pigmentation of the oral mucosa

Inflammatory overgrowths

- Epulides
- Fibroepithelial polyp
- Denture granuloma
- Focal epithelial hyperplasia (Heck's disease)
- Developmental white lesions
- Benign neoplasms
- Squamous cell papilloma
- Miscellaneous benign conditions
- Traumatic keratosis
- Nicotinic Stomatitis (pipe smokers' palate)

- Leukoedema
- Amalgam tattoos
- Melanotic pigmentation Oral melanoma

Precancerous Lesions and Conditions

- Precancerous lesions
 - Leukoplakia
 - Erythroleukoplakia
 - Speckled leukoplakia
 - Candidal leukoplakia (chronic hyperplastic candidosis)
- Malignant transformation of precancerous lesions
- Management of precancerous lesions

- Precancerous conditions
 - Oral Submucous Fibrosis (OSF)
 - Lichen Planus
- Oral carcinoma and carcinogenesis
- Aetiological factors for oral Squamous Cell Carcinoma
- Clinical features and diagnosis of oral carcinoma
- Staging systems for oral carcinoma
- The management of oral carcinoma
- Prevention of oral carcinoma
- Oral carcinoma as a genetic disease

Gastrointestinal disease

- Coeliac disease (gluten sensitive enteropathy)
- Oral manifestation of Celiac disease
- Inflammatory bowel disease (IBD)
- Ulcerative colitis
- Stomatosis and Inflammatory bowel disease
- Gastro Esophageal reflux disorder (GERD)

Blood and nutrition, endocrine disturbances, and renal disease

Disorders of the blood

- Anaemias
- Oral signs and symptoms in anaemia
- Management of patients with anaemias and haematinic deficiencies
- Leukaemia
- Leukopenia
- Platelet abnormalities
- The selection of patients for haematological examination

Disorders of nutrition

- Nutritional deficiencies
- Scurvy
- Endocrine disturbances
 - Normal endocrine changes
 - Adrenocortical diseases
 - Thyroid disease
 - Diabetic mellitus

Renal disease

- Chronic renal failure
- Renal patients undergoing dialysis Renal transplant patients

Immunodeficiency, hypersensitivity, autoimmunity and oral reactions to drug therapy

- Immunodeficiency
- Hypersensitivity
- Angioedema
- Autoimmunity
- Oral reactions to drug therapy
- Spectrum of adverse reactions
 - Oral reactions of antibiotics
 - Oral reactions to steroids
 - Drug therapy and periodontal tissues
 - Fixed drug eruptions

Facial Pain and neurological disturbances

- Facial pain: an overview
- The nerve supply of the face
- The evaluation of facial pain
- Neuropathic pain
 - Trigeminal neuralgia
 - Glossopharyngeal neuralgia
 - Postherpetic neuralgia
 - Neuropathic pain secondary to other conditions
 - Migraine
 - Cluster headaches (periodic migrainous neuralgia/ migrainous neuralgia)
 - Tension type headache
- Giant cell arteritis (temporal arteritis/cranial arteritis)
- Neurological disturbances
- Facial nerve deficits
- Anaesthesia and paraesthesia
- Bell's palsy
- Multiple sclerosis

Temporomandibular disorders

- Investigation of the stomatognathic system
- History
- Examination
- Imaging
- Temporomandibular pain and dysfunction syndrome (TMPDS)
- Management
- Internal derangement
- Disc displacement with reduction
- Disc displacement without reduction
- Rheumatoid arthritis
- Osteoarthritis (osteoarthritis)
- Masseteric Hypertrophy
- Tumours

Chronic and Psychogenic orofacial problems

- Chronic orofacial pain
- Atypical facial pain
- Atypical odontalgia
- Oral dysaesthesia (Burning mouth syndrome)
- Management of chronic orofacial pain

Medical emergencies in dentistry

- The prevention of medical emergencies
- Administration of drugs
- Routes of administration of drugs
- Emergency drugs and equipment

Management of emergencies

- Fainting
- Hypoglycaemia / Hyperglycaemias
- Epileptic seizures
- Asthma
- Chest pain
- Hyperventilation
- Respiratory obstruction/foreign body aspiration
- Anaphylaxis
- Cerebrovascular accidents
- Local anaesthesia toxicity/ overdose
- Adrenal shock/ Addison's crisis
- Respiratory arrest
- Cardiac arrest

Radiology

- Radiation biology, hazards of radiation and radiation protection
- General patient consideration including control of infection
- Intraoral Periapical Radiographs
- Intraoral Bitewing Radiographs
- Intraoral Occlusal Radiographs
- Lateral Cephalometric Radiographs
- Panoramic Radiographs
- Posterior view Skull
- Imaging of Paranasal Sinuses