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**Syllabus for PhD entrance Examination: PROSTHETIC DENTISTRY**

1. Study of human masticatory apparatus and its functions in health, in deranged occlusal states and in conditions incidental to partial or complete loss of teeth and/or facial structures.
2. Study of the principles, procedures and techniques of constructing and maintaining various types of dentures and allied prosthesis including the material used. (Removable Prosthodontics And Implants, Fixed Prosthodontics)
3. Study of biological and mechanical consideration related to various types of dentures and allied prosthesis.
4. Removable Prosthodontics and Implants a. Prosthodontic treatment for completely edentulous patients – Complete denture, immediate complete denture, single complete denture, tooth supported complete denture, Implant supported Prosthesis for completely edentulous b. Prosthodontic treatment for partially edentulous patients: - partial dentures, intra coronal and extra coronal precision attachments retained partial dentures, maxillofacial prosthesis.
5. Prosthodontic treatment for edentulous patients: -Complete Dentures and Implant supported Prosthesis for Edentulous in both the arches
6. Complete Denture Prosthesis - Definitions, terminology, G.P.T., Boucher's clinical dental terminology
7. Scope of Prosthodontics - the Cranio Mandibular system and its functions, the reasons for loss of teeth and methods of restorations, Infection control, cross infection barrier - clinical and laboratory and hospital and lab waste management
8. Prosthodontic treatment for partially edentulous patients - Removable partial Prosthodontics - a. Scope, definition and terminology, Classification of partially edentulous arches - requirements of an acceptable methods of classification, Kennedy's classification, Applegate's rules for applying the Kennedy classification b. Components of RPD - major connector - mandibular and maxillary, minor connectors, design, functions, form and location of major and minor connectors, tissue stops, finishing lines, reaction of tissue to metallic coverage
9. Maxillofacial Rehabilitation: Scope, terminology, definitions, cross infection control and hospital waste management, work authorization.
10. Occlusion Evaluation, Diagnosis and Treatment of Occlusal Problems Scope, definition, terminology, optimum oral health, anatomic harmony, functional harmony, occlusal stability, causes of deterioration of dental and oral health, Anatomical, physiological, neuro - muscular, psychological, considerations of teeth, muscles of mastication,

Temporo-mandibular joint, intra oral and extra oral and facial musculatures, the functions of Cranio mandibular system.

11. Fixed Prosthodontics Scope, definitions and terminology, classification and principles, design, mechanical and biological considerations of components - Retainers, connectors, pontics, work authorization.
12. TMJ – Temporo-mandibular joint dysfunction - Scope, definitions, and terminology Temporo-mandibular joint and its function, Orofacial pain, and pain from the temporo-mandibular joint region, temporo-mandibular joint dysfunction, temporo-mandibular joint sounds, temporo-mandibular joint disorders Anatomy related, trauma, disc displacement, Osteoarthrosis /Osteoarthritis, Hypermobility and dislocation, infectious arthritis, inflammatory diseases, Eagle's syndrome (Styloid -stylohyoid syndrome), Synovial chondromatosis, Osteo-chondrosis disease, Osteonecrosis, Nerve entrapment process, Growth changes, Tumors, Radiographic imaging.
13. Aesthetics: Scope, definitions - Morpho psychology and esthetics, structural esthetic rules - facial components, dental components, gingival components physical components. Esthetics and its relationship to function - Crown morphology, physiology of occlusion, mastication, occlusal loading and clinical aspect in bio esthetic aspects, Physical and physiologic characteristic and muscular activities of facial muscle, perioral anatomy and muscle retaining exercises.

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**Syllabus for PhD entrance Examination: PERIODONTICS**

1. Applied anatomy, physiology, biochemistry of the periodontium.
2. Characteristics of periodontal disease, etiology, pathogenesis and microbiology
  - Etiopathogenesis
  - a. Classification of periodontal diseases and conditions
  - b. Epidemiology of gingival and periodontal diseases
  - c. Defense mechanisms of gingiva
  - d. Periodontal microbiology
  - e. Basic concepts of inflammation and immunity
  - f. Microbial interactions with the host in periodontal diseases
  - g. Pathogenesis of plaque associated periodontal diseases
  - h. Dental calculus
  - i. Role of iatrogenic and other local factors
  - j. Genetic factors associated with periodontal diseases
  - k. Influence of systemic diseases and disorders of the periodontium
  - l. Role of environmental factors in the etiology of periodontal disease
  - m. Stress and periodontal diseases
  - n. Occlusion and periodontal diseases
  - o. Smoking and tobacco in the etiology of periodontal diseases
  - p. AIDS and periodontium
  - q. Periodontal medicine
  - r. Dentinal hypersensitivity
3. Clinical and Therapeutic Periodontology Clinical periodontology includes gingival diseases, periodontal diseases, instrumentation, diagnosis, prognosis and treatment of periodontal diseases
  - a. Surgical aspects of periodontics.
  - b. Traumatic periodontal disturbances.
  - c. Interrelationship of periodontics with other Dental and medical clinical disciplines.
  - d. Public health aspects of periodontal diseases-preventive Periodontics.
  - e. Current advances in periodontics.

**ORAL IMPLANTOLOGY**

1. Introduction and historical review
2. Biological, clinical and surgical aspects of dental implants
3. Diagnosis and treatment planning
4. Implant surgery
5. Prosthetic aspects of dental implants
6. Diagnosis and treatment of Peri implant complications
7. Special emphasis on plaque control measures implant patients
8. Maintenance phase

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**Syllabus for PhD entrance Examination: CONSERVATIVE DENTISTRY**

**Conservative Dentistry**

1. Examination, diagnosis and treatment plan
2. Occlusion as related to conservative dentistry, contact, contour, its significance. Separation of teeth, matrices, used in conservative dentistry.
3. Dental caries- epidemiology, recent concept of etiological factors, pathophysiology, Histopathology, diagnosis, caries activity tests, prevention of dental caries and management - recent methods.
4. Hand and rotary cutting instruments, development of rotary equipment, speed ranges hazards.
5. Dental burs and other modalities of tooth reparation- recent developments (air abrasions, lasers etc)
6. Infection control procedures in conservative dentistry, isolation equipments etc.
7. Direct concepts in tooth preparation for amalgam, composite, GIC and restorative techniques, failures and management.
8. Direct and indirect composite restorations.
9. Indirect tooth colored restorations- ceramic, inlays and onlays, veneers, crowns, recent advances in fabrication and materials.
10. Impression procedures used for direct restorations.
11. Cast metal restorations, indications, contraindications, tooth preparation, Onlay full crown restorations. Restorative techniques, direct and indirect methods of fabrication including materials used for fabrication like inlay wax, investment materials and Direct gold restorations.
13. Recent advances in restorative materials and procedures.
14. Management of non-cariou lesion.
15. Advance knowledge of minimal intervention dentistry.
16. Recent advances in restoration of endodontically treated teeth and grossly mutilated teeth
17. Hypersensitivity, theories, causes and management.
18. Lasers in Conservative Dentistry
19. CAD-CAM & CAD-CIM in restorative dentistry
20. Dental imaging and its applications in restorative dentistry (clinical photography)
21. Principles of esthetics
  - Facial analysis
  - Smile design
  - Principles of esthetic integration
  - Treatment planning in esthetic dentistry

**Endodontics**

1. Rationale of endodontics.
2. Knowledge of internal anatomy of permanent teeth, anatomy of root apex and its implications in endodontic treatment.
3. Dentin and pulp complex.
4. Pulp and periapical pathology
5. Pathobiology of periapex.

6. Diagnostic procedure - recent advances and various aids used for diagnosis. Orofacial dental pain emergencies: endodontic diagnosis and management
7. Case selection and treatment planning
8. Infection control procedures used in endodontics (aseptic techniques such as rubber dam, sterilization of instruments etc.)
9. Access cavity preparation - objectives and principles
10. Endodontic instruments and instrumentation - recent developments, detailed description of hand, rotary, sonic, ultra sonic etc..
11. Working length determination / cleaning and shaping of root canal system and recent development in techniques of canal preparation.
12. Root canal irrigants and intra canal medicaments used including non – surgical endodontics by calcium hydroxide.
13. Endodontic microbiology.
14. Obturating materials, various obturation techniques and recent advances in obturation of root canal.
15. Traumatic injuries and management - endodontic treatment for young permanent teeth. Pediatric endodontics - treatment of immature apex.
16. Endodontic surgeries, recent developments in technique and devices, endosseous endodontic implants - biology of bone and wound healing.
17. Endoperio interrelationship, endo + Perio lesion and management
18. Drugs and chemicals used in endodontics
19. Endo emergencies and management.
20. Restoration of endodontically treated teeth, recent advances.
21. Geriatric endodontics
22. Endo emergencies and management.
23. Biologic response of pulp to various restorative materials and operative procedures.
24. Lasers in endodontics.
25. Multidisciplinary approach to endodontic situations.
26. Endodontic radiology- digital technology in endodontic practice.
27. Local anesthesia in endodontics.
28. Procedural errors in endodontics and their management.
29. Endodontic failures and retreatment.
30. Resorptions and its management.
31. Microscopes in endodontics.
32. Single visit endodontics, current concepts and controversies.

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**Syllabus for PhD entrance Examination: ORAL AND MAXILLOFACIAL SURGERY**

1. Principles of evidence based surgery- understanding journal based literature study; the value of textbook, reference book articles, value of review articles; original articles and their critical assessment, understanding the value of retrospective, prospective, randomized control and blinded studies, understanding the principles and the meaning of various Bio-statistical tests applied in these studies.
2. Principles of surgery- developing a surgical diagnosis, basic necessities for surgery, aseptic techniques, incisions, flap designs, tissue handling, homeostasis, dead space management, decontamination and debridement, suturing, edema control, patient general health and nutrition.
3. Medical emergencies - Prevention and management of altered consciousness, sensitivity reaction, chest discomfort, respiratory difficulty.
4. Pre operative workup - Concept of fitness for surgery; basic medical work up; work up in special situation like diabetes renal failure, cardiac and respiratory illness; risk stratification
5. Post operative care- concept of recovery room care, Airway management, Assessment of Wakefulness, management of cardio vascular instability in this period, Criteria for shifting to the ward, pain management
6. Wound management- Wound healing, factors influencing healing, basic surgical techniques, Properties of suture materials, appropriate use of sutures.
7. Surgical Infections - Asepsis and antisepsis, Microbiological principles, Rational use of antibiotics, special infections like Synergistic Gangrene and Diabetic foot infection, Hepatitis and HIV infection and cross infection.
8. Airway obstruction/management - Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation,
9. Cricothyroidectomy, Tracheostomy.
10. Anesthesia - stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants.
11. Facial pain; Facial palsy and nerve injuries.
12. Pain control - acute and chronic pain, cancer and non-cancer pain, patient controlled analgesia
13. Clinical oral surgery - all aspects of dento alveolar surgery
14. Pre-prosthetic surgery - A wide range of surgical reconstructive procedures inv their hard and soft tissues of the edentulous jaws.
15. Temporomandibular joint disorders - TMJ disorders and their sequelae, assessment and management.
16. Reconstructive oral and maxillofacial surgery - hard tissue and soft tissue reconstruction.
17. Cyst and tumors of head and neck region and their management - including principles of tumor surgery, giant cell lesion of jaw bones, fibro osseous lesion of jaw lesions.
18. Neurological disorders of maxillofacial region-diagnosis and management of Trigeminal
19. Neuralgia, MPDS, Bells palsy, Frey's Syndrome, Nerve injuries

20. Maxillofacial trauma - basic principles of treatment, primary care, diagnosis and management of hard and soft tissue injuries, Comprehensive, management including polytrauma patients
21. Assessment of trauma-multiple injuries patients/closed abdominal and chest injuries/penetrating injuries, pelvic fractures, urological injuries, vascular injuries.
22. Orthognathic surgery - The trainee must be familiar with the assessment and correcting of jaw deformities
23. Laser surgery - The application of laser technology in the surgical treatment of lesions amenable to such therapy
24. Cryosurgeries - Principles, the application of cryosurgery in the surgical management of lesions amenable to such surgeries.
25. 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 nasal endoscopy and other diagnostic techniques In the evaluation of speech and hearing, concept of multi disciplinary team management.
26. Craniofacial surgery - basic knowledge of developmental anomalies of face, head and neck, basics concept in the diagnosis and planning of various head and neck anomalies including facial cleft, craniosynostosis, syndromes, etc., Current concepts in the management of craniofacial anomalies



**Syllabus for PhD entrance Examination: ORTHODONTICS**

1. Normal occlusion and variation
2. Etiology and Classification of malocclusion: A comprehensive review of the local and systemic factors in the causation of malocclusion, Various classifications of malocclusion
3. Dentofacial Anomalies: Anatomical, physiological and pathological characteristics of major groups of developmental defects of the orofacial structures.
4. Diagnostic procedures and treatment planning in orthodontics
  - a. Problem cases - analysis of cases and its management
  - b. Adult cases, handicapped and mentally retarded cases and their special problems
  - c. Critique of treated cases. Cephalometrics
  - d. Instrumentation, Image processing, Tracing and analysis of errors and applications
  - e. Radiation hygiene, Advanced Cephalometrics techniques
  - f. Video imaging principles and application.
5. Myofunctional Orthodontics:  
Basic principles, Contemporary appliances - their design and manipulation, Case selection and evaluation of the treatment results
6. Dentofacial Orthopedics  
Principles, Biomechanics, Appliance design and manipulation
7. Cleft lip and palate rehabilitation:  
Diagnosis and treatment planning, Mechanotherapy, Special growth problems of cleft cases, Speech physiology, pathology and elements of therapy as applied to orthodontics
8. Biology of tooth movement:  
Principles of tooth movement-review, Applied histophysiology of bone, periodontal ligament, Molecular and ultracellular consideration in tooth movement
9. Orthodontic / Orthognathic surgery:  
Pre and post-surgical Orthodontics
10. Basic principles of Mechanotherapy Includes Removable appliances and fixed appliances  
Design, Construction, Fabrication, Management,
11. Applied preventive aspects in Orthodontics  
Caries and periodontal disease prevention, Oral hygiene measures, Clinical procedures



## 12. Interceptive Orthodontics

- Principles, Growth guidance, Diagnosis and treatment planning
- Therapy emphasis on:
  - a. Dento-facial problems
  - b. Tooth material discrepancies
  - c. Minor surgery for Orthodontics

## 13. Retention and relapse

Mechanotherapy - special reference to stability of results with various procedures

Post retention analysis

## 14. Recent advances like:

- Use of implants
- Lasers
- Application of FE.M.
- Distraction Osteogenesis

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**Syllabus for PhD entrance Examination: ORAL PATHOLOGY & MICROBIOLOGY**

**1. Systemic microbiology/applied microbiology**

Morphology, classification, pathogenicity, mode of transmission, methods of pre collection and transport of specimen, for laboratory diagnosis, staining methods, culture media, interpretation of laboratory reports and antibiotic sensitivity tests.

- © Staphylococci
- © Streptococci
- © Corynebacterium diphtheria
- © Mycobacteria
- © Clostridia, bacteroides and fusobacteria
- © Actinomycetales
- © Spirochetes

**2. Virology:**

**General properties:** structure, broad classification of viruses, pathogenesis, pathology of viral infections.

**Herpes virus:** list of viruses included, lesions produced, pathogenesis, latency principles and laboratory diagnosis.

**Hepatitis virus:** list of viruses, pathogenesis, and mode of infection, list of diagnostic tests, and their interpretations, methods of prevention and control.

**Human Immunodeficiency virus:** structure with relevance to laboratory diagnosis, type of infection, laboratory tests and their interpretation, universal precautions, specific precautions and recent trends in diagnosis and prophylaxis.

**3. Mycology:**

© General properties of fungi, classification bases on disease, superficial, subcutaneous, deep opportunistic infections.

© General principles of fungal infections, diagnosis rapid diagnosis method of collection of sample and examination for fungi.

**4. Oral Biology (oral and dental histology)**

© Structure and function of oral, dental and paraoral tissues including their ultrastructure, molecular and biochemical aspects.

© Study of morphology of permanent and deciduous teeth

**5. Basic molecular biology and techniques:**

Experimental aspects - DNA extraction, PCR, western blotting.

**6. Basic histo techniques and microscopy:**

© Routine hematological tests and clinical significance of the same.

© Biopsy procedures for oral lesions.

© Processing of tissues for Paraffin lesions.

© Microtome and principles of microtomy.

© Routine stains, principles and theories of staining techniques

© Microscope, principles and theories of microscopy.

© Light microscopy and various other types including electron microscopy.

© Methods of tissue preparation for ground sections, decalcified sections.

**7. Oral pathology**

© Developmental defects of oral and maxillofacial region and abnormalities of teeth Dental caries (Introduction, Epidemiology, microbiology, cariogenic bacterial including properties, acid

production in plaque, development of lesion, response of dentine - pulp unit, histopathology, root caries, sequelae and immunology).

© Pulpal and Periapical diseases

© Infections of oral and Para oral regions (bacterial, viral and fungal infection)

© Non - neoplastic disorders of salivary glands

© Bone pathology

© Hematological disorders

© Physical and chemical injuries, allergic and Immunological diseases.

© Cysts of odontogenic origin

© Dermatologic diseases.

© Periodontal diseases

© Oral manifestations of systemic diseases

© Facial pain and neuromuscular disorders including TMJ disorders

© Regressive alterations of teeth

### **8. Specialized histotechniques and special stains:**

Special staining techniques for different tissues. Immunohistochemistry

Preparation of frozen sections

### **9. Oral oncology**

Detailed study including Pathogenesis, molecular and biochemical changes of tumor like lesions and Premalignant lesions affecting the hard and soft tissues of oral and paraoral tissues

Tumour markers

### **10. Oral Microbiology and immunology**

© Normal Oral microbial flora

© Defense mechanism of the oral cavity

© Microbiology and immunology of Dental caries and Periodontal diseases

© Dental caries (Introduction, epidemiology, microbiology, cariogenic bacteria including properties, acid production in plaque, development of lesion, response of dentin-pulp unit, histopathology, root caries, sequelae and immunology)

© Tumor immunology

© Infections of Pulp and Periapical and periodontal tissues

© Oral sepsis and Bacteraemia

© Microbial genetics

© Infections of oral and Para oral regions (bacterial, viral and fungal infections)

### **11. Forensic Odontology:**

Legal procedures like inquest, medico-legal evidences post mortem examination of violence around mouth and neck, identification of deceased individual-dental importance. Bite marks, rugae patterns and lip prints.

**Syllabus for PhD entrance Examination: PAEDODONTICS**

1. Preventive paedodontics-epidemiology, general and specific preventive measures.
2. Growth & Development: Prenatal and postnatal development of cranium, face, jaws, teeth and supporting structures. Chronology of dental development and development of occlusion. Dimensional changes in dental arches. Cephalometric evaluation of growth.
3. Child Psychology: Development & Classification of behavior, personality, intelligence in children, theories of child psychology, stages of psychological child development, fear anxiety, apprehension and its management
4. Behavior Management: Non- pharmacological & Pharmacological methods.
5. Child Abuse & Dental Neglect
6. Conscious Sedation, Deep Sedation & General Anesthesia in Pediatric Dentistry
7. Preventive Pedodontics: Concepts, chair side preventive measures for dental diseases, high-risk caries including rampant & extensive caries - Recognition, Features & Preventive Management, Pit and Fissures Sealants, Oral Hygiene measures, Correlation of brushing with dental caries and periodontal diseases. Diet & Nutrition as related to dental caries.
8. Dental Plaque: Definition, Initiation, Pathogenesis, Biochemistry, and Morphology & Metabolism.
9. Microbiology & Immunology as related to Oral Diseases in Children. Basic concepts, immune system in human body, Auto Immune diseases, Histopathology, Pathogenesis, Immunology of dental caries, Periodontal diseases. Tumors, Oral Mucosal lesions etc.
10. Gingival and Periodontal diseases in Children:
  - Normal Gingiva & Periodontium in children.
  - Gingival & Periodontal diseases - Etiology, Pathogenesis, Prevention & Management
11. Pediatric Operative Dentistry
  - Principle Of Operative Dentistry along with modifications of materials/past, current & latest including tooth colored materials.
  - Modifications required for cavity preparation in primary and young permanent teeth.
  - Various Isolation Techniques
12. Pediatric Endodontics:
  - a. **Primary Dentition:** - Diagnosis of pulpal diseases and their management – Pulp capping,

Pulpotomy, Pulpectomy (Materials & Methods).

b. Young permanent teeth and permanent teeth, Pulp capping, Pulpotomy, Apexogenesis, Apexification, Concepts, Techniques and Materials used for different procedures.

13. Prosthetic consideration in-Paediatric Dentistry.

14. Traumatic Injuries in Children:

- Classifications & Importance, Sequelae & reaction of teeth to trauma, Management of Traumatized teeth with latest concepts, Management of jaw fracture in children.

15. Interceptive Orthodontics:

a. Concepts of occlusion and esthetics: Structure and function of all anatomic components of occlusion, mechanics of articulations, recording of masticatory function, diagnosis of Occlusal dysfunction, relationship of TMJ anatomy and pathology and related neuromuscular physiology.

b. Recognition and management of normal and abnormal developmental occlusions in primary, mixed and permanent dentitions in children (Occlusal Guidance).

c. Biology of tooth movement: A comprehensive review of the principles of teeth movement

d. Myofunctional appliances: Basic principles, contemporary appliances: Design & Fabrication

e. Removable appliances: Basic principles, contemporary' appliances: Design & Fabrication

f. Space Management: Etiology, Diagnosis of space problems, analysis, Biomechanics, Planned extraction in interception orthodontics.

16. Oral Habits in Children:

- Definition, Etiology & Classification

- Clinical features of digit sucking, tongue thrusting, mouth breathing & various other secondary habits.

- Management of oral habits in children

17. Cariology

- Definition, Etiology & Pathogenesis

- Caries pattern in primary, young permanent and permanent teeth in children.

- Rampant caries, early childhood caries and extensive caries. Definition, etiology, Pathogenesis, Clinical features, Complications & Management.

- Role of diet and nutrition in Dental Caries

18. Pediatric Oral Medicine & Clinical Pathology: Recognition & Management of developmental dental anomalies, teething disorders, stomatological conditions, mucosal lesions, viral infections etc.

19. Congenital Abnormalities in Children: Definition, Classification, Clinical features of Management.

20. Dental Materials used in Pediatric Dentistry

**Syllabus for PhD entrance Examination: ORAL MEDICINE & RADIOLOGY**

1. Methods of clinical diagnosis of oral and systemic diseases as applicable to oral tissue including modern diagnostic techniques
2. Laboratory investigations including special investigations of oral and bro – facial diseases
3. Teeth in local and systemic diseases, congenital, and hereditary disorders
4. Oral manifestations of systemic diseases
5. Oro - facial pain
6. Psychosomatic aspects of oral diseases
7. Management of medically compromised patients including medical emergencies in the dental chair
8. Congenital and Hereditary disorders involving tissues of oro facial region
9. Systemic diseases due to oral foci of infection
10. Hematological, Dermatological, Metabolic, Nutritional, & Endocrinal conditions with oral manifestations
11. Neuromuscular diseases affecting oro -facial region
12. Salivary gland disorders
13. Tongue in oral and systemic diseases
14. TMJ dysfunction and diseases
15. Concept of immunity as related to oro - facial lesions, including AIDS
16. Cysts, Neoplasms, Odontomes, and fibro - osseous lesions
17. Oral changes in Osteo - dystrophies and chondro - dystrophies
18. Pre malignant and malignant lesions of oro facial region
19. Allergy and other miscellaneous conditions
20. Therapeutics in oral medicine -clinical pharmacology
21. Forensic odontology

22. Computers in oral diagnosis and imaging
23. Evidence based oral care in treatment planning

**Radiology**

1. History of radiology, structure of x - ray tube, production of x - ray, property of x rays
2. Biological effects of radiation
3. Filtration of collimation, grids and units of radiation
4. Films and recording media
5. Processing of image in radiology
6. Design of x -ray department, dark room and use of automatic processing units
7. Localization by radiographic techniques
8. Faults of dental radiographs and concept of ideal radiograph
9. Quality assurance and audit in dental radiology
10. Extra - oral-imaging techniques
11. OPG and other radiologic techniques
12. Advanced imaging technique like CT Scan, MRI, Ultras one & thermo graphic
13. Radio nucleotide techniques
14. Contrast radiography in salivary gland, TMJ, and other radiolucent pathologies
15. Radiation protection and ICRP guidelines
16. Art of radiographic report, writing and descriptors preferred in reports
17. Radiograph differential diagnosis of radiolucent, radio opaque and mixed lesions
18. Digital radiology and its various types of advantages



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**Syllabus for PhD entrance Examination: COMMUNITY DENTISTRY**

1. Biostatistics

Topics including general principles, concepts and analysis to provide the student appropriate knowledge for the study of Public Health and Community Health studies.

2. Epidemiology

Principles, methods and purpose of epidemiology, general methods of investigations, relationship of epidemiologic triad in diseases, processes like caries periodontal diseases, malocclusion, Dental health problems of special population groups.

3. Environmental Health (Elementary study only)

The topics include component of environment and their effect on health, control of health hazards, water and food supplies, disposal of wastes, pollution, radiations hazards and occupational hazards.

4. Public Health Education

Importance, public health education. Methods and selection of media for propagation of health programme at various levels.

5. Public Health Nutrition

Importance of nutrition of health, common disorders, related to nutrition deficiencies in individuals and in community level. Socio-economic influence on nutrition. Nutrition and inheritance.

6. Behavioural Sciences

Selected topics in sociology, psychology, anthropology relevant to areas in public health practice-topics include social science theories, concepts, methods of research and practical application in Public Health Programmes.

7. Public Health Practice & Administration Family Planning

Concept and scope of public health, historical background of preventive and public health organisation and administration at various levels. National and International public health programmes, health, manpower, establishment of priorities for solving health needs of community. Methods, consideration, need and practice of family planning programmes in India, Knowledge, attitudes and administration at various levels.

8. Preventive Dentistry

Concepts of prevention levels and application of various preventive measures at individual and mass level evaluation of preventive programmes in dentistry-Dental auxiliaries.

10. Dental Public Health & Dental Epidemiology

Includes all phases of Dental public health and Epidemiology of Dental and oral diseases, design of clinical trials, field surveys and laboratory work. Biostatistics as applied to public health problems, collecting, tabulations, elementary analysis of data including vital statistics, treatment rates, distribution of varieties, sampling variation.