

Syllabus for the post of

**Tutor in Prosthodontics and Crown and Bridge Class-II (Dental)
(Advt. No. 09/2021-22)**

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. Prosthodontics and Crown & Bridge:

Complete Dentures

A. Applied Anatomy and Physiology

1. Introduction
2. Biomechanics of the edentulous state.
3. Residual ridge resorption.

B. Communicating with the patient

1. Understanding the patients.
 - Mental attitude.
2. Instructing the patient.

C. Diagnosis and treatment planning for patients-

1. with some teeth remaining.
2. with no teeth remaining.
 - a) Systemic status.
 - b) Local factor.
 - c) The geriatric patient.
 - d) Diagnostic procedures.

D. Articulators

E. Improving the patient's denture foundation and ridge relation -an overview.

- a) Pre-operative examination.
- b) Initial hard tissue & soft tissue procedure.
- c) Secondary hard & soft tissue procedure.
- d) Implant procedure.
- e) Congenital deformities.
- f) Postoperative procedure.

F. Principles of Retention, Support and Stability

G. Impressions.

- a) Muscles of facial expression.
- b) Biologic considerations for maxillary and mandibular impression including anatomy landmark and their interpretation.
- c) Impression objectives.
- d) Impression materials.

- e) Impression techniques.
- f) Maxillary and mandibular impression procedures.
 - i. Preliminary impressions.
 - ii. Final impressions.
- H. Record bases and occlusion rims.
 - a) Materials & techniques.
 - b) Useful guidelines and ideal parameters.
 - c) Recording and transferring bases and occlusal rims.
- I. Biological consideration in jaw relation & jaw movements – craniomandibular relations.
 - a) Mandibular movements.
 - b) Maxillo -mandibular relation including vertical and horizontal jaw relations.
 - c) Concept of occlusion.
- J. Relating the patient to the articulator.
 - a) Face bow types & uses.
 - b) Face bow transfer procedure.
- K. Recording maxillo mandibular relation.
 - a) Vertical relations.
 - b) Centric relation records.
 - c) Eccentric relation records.
 - d) Lateral relation records.
- L. Tooth selection and arrangement.
 - a) Anterior teeth.
 - b) Posterior teeth.
 - c) Esthetic and functional harmony.
- M. Relating inclination of teeth to concept of occlusion.
 - a) Neurocentric concept.
 - b) Balanced occlusal concept.
- N. Trial dentures.
- O. Denture insertion.
 - a) Insertion procedures.
 - b) Clinical errors.
 - c) Correcting occlusal disharmony.
 - d) Selective grinding procedures.
- P. Treating problems with associated denture use (tabulation/flow-chart form).
- Q. Treating abused tissues
- R. Relining and rebasing of dentures

- S. Immediate complete dentures construction procedure.
- T. The single complete denture.
- U. Over dentures denture.
- V. Dental implants in complete denture.

Removable Flexible Dentures

- A. Introduction
 - Terminologies and scope
- B. Classification.
- C. Examination, Diagnosis & Treatment planning & evaluation of diagnostic data.
- D. Components of a removable partial denture.
 - Major connectors,
 - minor connectors,
 - Rest and rest seats.
- E. Components of a Removable Partial Denture.
 - Direct retainers,
 - Indirect retainers,
 - Tooth replacement.
- F. Principles of Removable Partial Denture Design.
- G. Survey and design.
 - Surveyors.
 - Surveying.
 - Designing.
- H. Mouth preparation and master cast.
- I. Impression materials and procedures for removable partial dentures.
- J. Preliminary jaw relation and esthetic try-in for some anterior replacement teeth.
- K. Laboratory procedures for framework construction-in brief.
- L. Fitting the framework.
- M. Try-in of the partial denture.
- N. Completion of the partial denture.
- O. Inserting the Removable Partial Denture.
- P. Postinsertion observations.
- Q. Temporary Acrylic Partial Dentures.
- R. Immediate Removable Partial Denture.
- S. Removable Partial Dentures opposing Complete denture.

Fixed Partial Dentures

1. Introduction
2. Fundamentals of occlusion.
3. Articulators.
4. Treatment planning for single tooth restorations.
5. Treatment planning for the replacement of missing teeth including selection and choice of abutment teeth.
6. Fixed partial denture configurations.
7. Principles of tooth preparations.
8. Preparations for full veneer crowns.
9. Preparations for partial veneer crowns.
10. Provisional Restorations
11. Fluid Control and Soft Tissue Management
12. Impressions
13. Working Casts and Dies
14. Wax Patterns
15. Pontics and Edentulous Ridges
16. Esthetic Considerations
17. Finishing and Cementation
18. Solder Joints and Other Connectors
19. All - Ceramic Restorations
20. Metal - Ceramic Restorations
21. Preparations of intracoronal restorations.
22. Preparations for extensively damaged teeth.
23. Preparations for periodontally weakened teeth
24. The Functionally Generated Path Technique
25. Investing and Casting
26. Resin - Bonded Fixed Partial Denture

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 osseo-integration. 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 Prosthodontics and Crown & Bridge.