



TEERTHANKER MAHAVEER UNIVERSITY

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Delhi Road, Moradabad (U.P.)

SYLLABUS FOR TMU RESEARCH APTITUDE TEST IN PROSTHODONTICS AND CROWN & BRIDGE

The syllabus for TMU Research Aptitude Test (TRAT) in Prosthodontics and Crown & Bridge is divided in two parts viz. Part A and Part B as described below:

PART – A

Part A of the TRAT shall be designed to assess the research skills/aptness of the candidate consisting of questions from the following areas:

- 1. Research Methodology:** meaning, characteristics, and ethical issues in research; types of research; research methods.
- 2. Logical Reasoning:** arguments, deductive and inductive research; logical and Venn diagram; inferences; analogies.
- 3. Data Interpretation:** interpretation of data; mapping and analysis of data, tools for data analysis; quantitative and qualitative research.
- 4. General Awareness about Basic Science:** basic science up to the level of SSC.
- 5. Mathematical Reasoning:** number series, letter series, codes; relationships, classification.

PART – B

Part-B of RAT is designed to assess the subject specific knowledge of the candidate covering the syllabus given as below:

Basic sciences: Biology and anatomy of dental tissues, anatomy of the stomatognathic system. growth and development of face jaws and teeth. biology and physiology of tooth and related structures, anatomy of T.M.J. and its movements.

Gerodontics: Consequences and management of age changes in the dentition, Medical conditions and medications affecting dental treatment, geriatric nutrition, Anthropology as applied to craniofacial region, development of occlusion in deciduous, mixed and permanent, Dentitions, mastication and stomatognathic system.

Sterilization methods: Sterilization and disinfection, different methods, importance in clinical set up.

Biostatistics: Importance, 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.

Dentist technician communication- Lab work authorization forms and instructions.

Dental Materials: Physical, mechanical and biological properties of modern dental materials. Gypsum products used in Prosthodontics, Dies and die materials, resins and denture base materials, impression materials, duplicating materials, investment materials, metals and alloys, dental waxes, casting and casting defects, Cements, Composites resins.

Complete Denture Prosthodontics: Anatomy and physiology of edentulous mouth, diagnosis and treatment planning, residual ridge resorption, preprosthetic surgeries, impressions in complete denture prosthodontics, objectives and principals of impression making, philosophies and concepts of impression making, articulators and Face bow record, J.R. and mandibular movements, hinge axis, selection and arrangement of teeth, complete denture occlusion, laboratory procedures involved in complete denture construction, denture insertion and post care , Relining and rebasing, denture repair, immediate dentures, transitional dentures, overdentures, obturators, dental implants.

Partial Denture Prosthodontics: Introduction and terminology used in partial denture prosthodontics, examination, diagnosis and treatment planning in partial denture prosthodontics, classification of partially edentulous arches, components of removable partial dentures and their functions, denture base considerations and teeth, stress breakers, principles of removable partial denture, surviving, mouth preparation for removable partial denture including preparation of abutment teeth, impression materials and procedures for partially edentulous mouth, support for the distal extension denture base, occlusal relationship and arrangement of teeth, laboratory procedures involved in cast partial dentures, denture delivery and instructions to patient, acrylic partial dentures, immediate partial dentures.

Fixed Prosthodontics: Diagnosis and Treatment Planning, periodontal considerations in fixed prosthodontics, occlusion in FPD, bio-mechanical principles of tooth preparation, individual tooth preparation, complete metal crown, partial veneer crown for anterior and posterior teeth, porcelain jacket crown, preparations for intra-coronal restorations, preparations for extensively damaged or endodontically treated teeth, provisional or temporary restorations, fluid control and soft tissue management, impression material and techniques, working casts and dies, interocclusal records techniques and materials, articulation of casts, wax patterns, articulators in fixed partial denture Prosthodontics, precision and semiprecision attachments, connectors in FPD, investing and casting, occlusal equilibration, finishing and cementation, pontics, cementing Medium, full mouth rehabilitation-philosophies, techniques, clinical and lab procedure, porcelain fused to metal restorations, porcelain laminates, resin bonded retainers(Maryland bridges), fixed removable Prosthodontics, solder joints and other connectors.

Maxillofacial Prosthodontics: Dentist and Patient interaction psychological status of the patient social support System, chemotherapy, radiation therapy their effect on oro-dental tissue, prosthodontic reconstruction of acquired mandibular defects, mandibular guidance appliance, speech prosthesis and rehabilitation, clinical and laboratory steps for their fabrication, prosthodontic reconstruction of acquired developmental defect of maxilla, obturators, clinical and laboratory steps for their fabrication, restoration of acquired and developmental facial defects, eye, auricular, nasal, lip, clinical and laboratory steps for their fabrication, cranial and facial implants, reconstructive pre- prosthetic surgery, maxillofacial

prosthesis materials, splints and stents, radiation prosthesis, methods of retention for maxillofacial prosthesis.

Advanced Dental Practice: Dentistry as a profession, health care delivery, genetics, epidemiology, bio-psycho social pathology, psychological aspects and human relation, computer applications for patient care delivery system and dental practice.

New Theories and Concepts: Introduction, importance, characteristics, basic processes in the development of new concepts and theories; philosophy and science in relation to general system theory, innovative techniques, methods and materials, historical perspectives; advanced technology and Prosthodontic implementations, forensic Prosthodontics