



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in

MDS

CONSERVATIVE DENTISTRY AND ENDODONTICS

- Health information systems – collection, compilation, presentation of data.
- Elementary statistical methods – presentation of statistical data, statistical averages – measures of central tendency, measures of dispersion.
- Normal distribution.
- Tests of significance – parametric and non – parametric tests (Fisher's t-test, Sign test, Median test, Mann Whitney test, Kruskal Wallis, One-way analysis, Friedman two-way analysis, Regression analysis).
- Correlation and regression.
- Use of Computers.

RESEARCH METHODOLOGY

- Essential features of a protocol for research in humans
- Experimental and non-experimental study designs
- Ethical considerations of research

APPLIED DENTAL MATERIALS

- Physical and mechanical properties of dental materials, biocompatibility.
- Impression materials, detailed study of various restorative materials, restorative resin and
- Recent advances in composite resins, bonding recent developments tarnish and corrosion,
- Dental amalgam, direct filling gold, casting alloys, inlay wax, die materials, investments,
- Casting procedures, defects, dental cements for restoration and pulp protection (luting, liners, bases) cavity varnishes.
- Dental ceramics – recent advances, finishing and polishing materials.
- Dental bur – design and mechanics of cutting – other modalities of tooth preparation.
- Methods of testing biocompatibility of materials used.

CLINICAL PHOTOGRAPHY , MEDICO LEGAL JURISPRUDENCE

PART II - PAPER I: CONSERVATIVE DENTISTRY

1. Examination, diagnosis and treatment plan
2. Occlusion as related to conservative dentistry, contact, contour, its significance.
3. Separation of teeth, matrices, used in conservative dentistry.
4. Dental caries – epidemiology, recent concept of etiological factors, pathophysiology.

5. Histopathology, diagnosis, caries activity tests, prevention of dental caries and management – recent methods.

6. Hand and rotary cutting instruments, development of rotary equipment, speed ranges, hazards.
7. Dental bur and other modalities of tooth reparation – recent developments (air abrasion, Lasers etc)
8. Infection control procedures in conservative dentistry, isolation equipments etc.
9. Direct concepts in tooth preparation for amalgam, composite, GIC and restorative techniques, failures and management.
10. Direct and indirect composite restorations.
11. Indirect tooth coloured restorations – ceramic, inlays and onlays, veneers, crowns, recent
12. Advances in fabrication and materials.
13. Tissue Management
14. Impression procedures used for indirect restorations.
15. Cast metal restorations, indications, contraindications, tooth preparation for class 2 inlay, onlay full crown restoration
16. Restorative techniques, direct and indirect methods of fabrication including materials used for fabrication like inlay wax, investment materials and
17. Direct gold restorations.
18. Recent advances in restorative materials and procedures.
19. Management of non-carious lesion.
20. Advance knowledge of minimal intervention dentistry.
21. Recent advances in restoration of endodontically treated teeth and grossly mutilated teeth
22. Hypersensitivity, theories, causes and management
23. Lasers in Conservative Dentistry

24. CAD-CAM & CAD-CIM in restorative dentistry

25. Dental imaging and its applications in restorative dentistry (clinical photography)

26. Principles of esthetics

- a. Color
- b. Facial analysis
- c. Smile design
- d. Principles of esthetic integration
- e. Treatment planning in esthetic dentistry

PART II- PAPER – III: 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
7. Orofacial dental pain emergencies: endodontic diagnosis and management
8. Case selection and treatment planning
9. Infection control procedures used in Endodontics (aseptic techniques such as rubber dam, sterilization of instruments etc)
10. Access cavity preparation – objectives and principles
11. Endodontic instruments and instrumentation – recent developments, detailed description of hand, rotary, sonic, ultra sonic etc.,
12. Working length determination / cleaning and shaping of root canal system and recent development in techniques of canal preparation.
13. Root canal irrigants and intra canal medicaments used including non – surgical Endodontics by calcium hydroxide.
14. Endodontic microbiology.
15. Obturating materials, various obturation techniques and recent advances in obturation of root canal.
16. Traumatic injuries and management – endodontic treatment for young permanent teeth.
 - a. Pediatric Endodontics – treatment of immature apex.
17. Endodontic surgeries, recent developments in techniques and devices, endoosscous
 - a. Endodontic implants – biology of bone and wound healing.
18. Endoperio interrelationship, endo + Perio lesion and management
19. Drugs and chemicals used in Endodontics
20. Endo emergencies and management.
21. Restoration of endodontically treated teeth, recent advances.
22. Geriatric Endodontics

D: Distribution of marks:**Theory:****Part-I University Examinations:****PAPER I : APPLIED BASIC SCIENCES - Total of 100 Marks/3hrs**

There shall be 10 questions of 10 marks each

Part-II University Examinations:- Total of 300 Marks (100 Marks /3hrs for each Paper)

- (i) Paper-I: **Conservative Dentistry** – There shall be 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks/3hrs)
- (ii) Paper-II: **Endodontics** -There shall be 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks/3hrs)
- (iii) Paper III: **Essay -Descriptive & Analyzing Type Questions** -There shall be 2 out of 3 essay questions (50 x 2 = 100 Marks/3hrs)

CLINICAL AND PRACTICAL: Part-II University Examinations (Total marks 300)

- (i) Practical and Clinical Examination: 200 Marks
- (ii) Viva-voce and Pedagogy: 100 Marks

CLINICAL: 200 MARKS

The duration of clinical and viva voce examination will be 2 days for a batch of 4 students. If the number of student exceeds 4, the programme can be extended to 3rd day

DAY 1**CLINICAL EXERCISE 1 50 MARKS**

- Cast core preparation 10 mark
- Tooth preparation 10 mark
- Direct wax pattern 10 mark
- Casting 10 mark
- Cementations 10 mark
- Retraction & elastomeric impression 10 mark

CLINICAL EXERCISE 2 50 MARK**Inlay exercise**

D: Distribution of marks:**Theory:****Part-I University Examinations:****PAPER I : APPLIED BASIC SCIENCES - Total of 100 Marks/3hrs**

There shall be 10 questions of 10 marks each

Part-II University Examinations:- Total of 300 Marks (100 Marks /3hrs for each Paper)

(i) Paper-I: **Conservative Dentistry** – There shall be 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks/3hrs)

(ii) Paper-II: **Endodontics** -There shall be 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks/3hrs)

(iii) Paper III: **Essay -Descriptive & Analyzing Type Questions** -There shall be 2 out of 3 essay questions (50 x 2 = 100 Marks/3hrs)

CLINICAL AND PRACTICAL: Part-II University Examinations (Total marks 300)

(i) Practical and Clinical Examination: 200 Marks

(ii) Viva-voce and Pedagogy: 100 Marks

CLINICAL: 200 MARKS

The duration of clinical and viva voce examination will be 2 days for a batch of 4 students. If the number of student exceeds 4, the programme can be extended to 3rd day

DAY 1**CLINICAL EXERCISE 1****50 MARKS**

- Cast core preparation
 - Tooth preparation
 - Direct wax pattern
 - Casting
 - Cementations
 - Retraction & elastomeric impression
- 10 mark
10 mark
10 mark
10 mark
10 mark

CLINICAL EXERCISE 2**50 MARK**

Inlay exercise