

8. Paedodontics and Preventive Dentistry

Deals with prevention and treatment of oral and Dental ailments that may occur during childhood.

9. Oral Medicine and Radiology

Oral Medicine is that specialty of dentistry concerned with the basic diagnostic procedures and techniques useful in recognizing the diseases of the oral tissues of local and constitutional origin and their medical management.

Radiology is a science dealing with x-rays and their uses in diagnosis and treatment of diseases in relation to orofacial diseases.

2. Course contents Prosthodontics

Aim:

To train dental graduates so as to ensure higher competence in both general and special area of Prosthodontics and prepare a candidate for teaching, research and clinical abilities including prevention and after care in prosthodontics including crown and bridge and implantology.

General Objectives of the Course:

- Training programme in Prosthodontic dentistry including Crown & Bridge & Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to research with understanding of social, cultural, education and environmental background of the society
- To have acquired adequate knowledge and understanding of applied basic and systematic medical science knowledge in general and particular to head and neck.
- The postgraduates will be able to provide Prosthodontic therapy for patients with competence and working knowledge with understanding of applied medical behavioral and clinical science that are beyond the treatment skills of the general BDS graduate and MDS graduate of other specialities to demonstrate evaluative and judgment skills in making appropriate decisions regarding prevention, treatment aftercare and referral to deliver comprehensive care to patients.

Knowledge

The candidate should possess knowledge applied basic and systematic medical sciences.

- On human anatomy, embryology, histology, applied in general and particular to head and neck, Physiology & Biochemistry, Pathology and microbiology, virology, Health and diseases of various systems of the body (systemic) principles in surgery and medicine, Pharmacology, Nutrition, behavioral Science, Age changes, genetics, Immunology, Congenital defects and syndrome and Anthropology, Bioengineering, Bio-medical and Biological Principle and application Dental material science
- Ability to diagnose and planned treatment for patients requiring a Prosthodontic therapy

- Ability to diagnose
- Tooth and dentures
- Prosthodontic esthetic
- Age changes
- Ability to
- Should in Prosthodontics
- General
- Identify the patient
- Identify appropriate
- Advice
- Competence
- Should in prosthodontics
- Teaching
- Should with the
- Should infect
- Should and p
- Should tissue

Skills

- The
- inve
- the
- Unc
- Pro
- The
- sp
- Th
- a p
- de
- pr
- S
- tr
- s
- lo
- P

CONSERVATIVE DENTISTRY

Objectives

The following objectives are laid out to achieve the goals of the course. These are to be achieved by the time the candidate completes the course. These objectives may be considered under the following subtitles.

Knowledge

At the end of 36 months of training, the candidates should be able to:

- Describe aetiology, pathophysiology, periapical diagnosis and management of common restorative situations, endodontic situations that will include contemporary management of dental caries, management of trauma and pulpal pathoses including periodontal situations.
- Demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontics.
- Identify social, economic, environmental and emotional determinants in a given case or community & take them into account for planning & execution at individual & community level.
- Ability to master differential diagnosis and recognize conditions that may require multi disciplinary approach or a clinical situation outside the realm of the specialty, which he or she should be able to recognize and refer to appropriate specialist.
- Update himself by self-study and by attended basic and advanced courses, conferences, seminars, and workshops in the specialty of Conservative Dentistry- Endodontics-Dental Materials and Restorative Dentistry.
- Ability to teach, guide, colleagues and other students. Use information technology tools and carry out research both basic and clinical with the aim of his publishing his work and presenting the same at scientific platform

Skills

- Take proper chair side history, exam the patient and perform medical and dental diagnostic procedures and order as well as perform relevant tests and interpret to them to come to a reasonable diagnosis about the dental condition in general and Conservative Dentistry - Endodontics in particular. And undertake complete patient monitoring including preoperative as well as post operative care of the patient.
- Perform all levels of restorative work and surgical and non-surgical Endodontics including endodontic endosseous implants, as well as endodontic-periodontal surgical procedures as part of multidisciplinary approach to clinical condition.
- Provide basic life saving support in emergency situations.
- Manage acute pulpal and pulpo periodontal situations.
- Have a thorough knowledge of infection control measures in the dental clinical environment and laboratories.

Human Values, Ethical Practice and Communication Abilities

- Adopt ethical principles in all aspects of restorative and contemporary Endodontics" including non-surgical and surgical Endodontics. © Professional honesty and integrity should be the top priority.
- Dental care has to be provided regardless of social status, caste, creed or religion of the patient.
- Develop communication skills- in particular to explain various options available management

- and to ob
- Apply hig
- shall not
- aspects o
- when req
- right to in

Course Content Paper 1:

Applied Anatom

- Develop
- cranial an
- neck, mu
- consider
- autonom
- masticati
- general
- contact, c
- Internal a
- Applied b
- vessels, l

Development of

- Enamel-c
- Age chan
- Dentin - c
- age and f
- Pulp - d
- clinical c
- Cementu
- Periodon
- Salivary g

Applied Physiol

- Masticati
- Blood co
- transfusio
- hypoxia,
- activity an
- and lactat
- Physiolog
- Clinical s
- Physiolog
- physiolog
- atypical,
- reduction

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

**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-
 - a. 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.
 - Single visit endodontics, current concepts and controversies.

Teaching / Learning Activities The following is the minimum required to be completed before the candidate can be consider eligible to appear for final MDS exam.

First Year

Pre Clinical Work - Operative and Endodontics

Preclinical work on typhodont teeth

1. Class 2 amalgam cavities
 - a. Conservative preparation
 - b. Conventional preparation
 2. Inlay cavity preparation on premolars
And molars - MO, DO, MOD
 - a. Wax pattern
 - b. Casing
 3. Onlay preparation oh molars a. Casting
 4. Full Crown
 - a. Anterior
 - b. Posterior
 (2 each to be processed)
 5. 7/8 crown (1 to be processed)
 6. 3/4 crown premolars (1 to be processed)
- Pre Clinical work on natural teeth

1. Inlay on molars and premolars MO, DO, and MOD	08
a. Casting	02
b. Wax pattern	02
2. Amalgam cavity preparation	
a. Conventional	02
b. Conservative	02
3. Pin retained amalgam on molar teeth	02
4. Post and core build up	
Anterior teeth	10
Posterior teeth	05
5. Casting	
Anterior	04
Posterior	02
6. Onlay on molars (1 to be processed)	03
7. Full crown premolars and molars	04
8. Full crown anterior (2 and 3 to be processed)	06
9. Veneers anterior teeth (indirect method)	02
10. Composite inlay (class 2)	03
11. Full tooth wax carving - all permanent teeth	

Endodontics

1. Sectioning of all maxillary and mandibular teeth.
 2. Sectioning of teeth - in relation to deciduous molar, 2nd primary upper and lower molar 1 each
 3. Access cavity opening and root canal therapy in relation to maxillary and mandibular permanent teeth
 4. Access cavity preparation and BMP Anterior
 - a. Conventional prep
 - b. Step back
 - c. Crown down
- Obturation 03
5. BMP Premolar 06 (2 upper and 2 lower) obturation 1 each
 6. BMP Molar 06 (3 upper - 2 first molars and 1 second molar, 3 lower - 2 first molars and 1 second molar) obturation 1 each
 7. Post and core preparation and fabrication in relation to anterior and posterior teeth
 - a. Anterior 10 (casting 4)
 - b. Posterior 05 (casting 2)
 8. Removable dies 04

Note: Technique work to be completed in the first four months

Clinical work

A Composite restorations	30
B GIC Restorations	30
C Complex amalgam restorations	05
D Composite inlay + veneers (direct and indirect)	05
E Ceramic jacket crowns	05
F Post and core for anterior teeth	05
G Bleaching	
vital	05
Non vital	05

Second Year

Case discussion-5

- 1 Ceramic jacket crowns
- 2 Post and core for anterior teeth
- 3 Post and core for posterior teeth
- 4 Composite restoration
- 5 Full crown for posterior teeth
- 6 Cast gold inlay
- 7 Other special types of work such as splints, Reattachment of fractured teeth etc.
- 8 Anterior RCT
- 9 Posterior RCT
- 10 Endo surgery performed independently
- 11 Management of endo - Perio problems

- Under graduate teaching program as a
- Seminars - 5 by each student
- Journal club - 5 by each student
- Dissertation work
- Prepare scientific paper and present it
- Library assignment to be submitted 1
- Internal assessment - theory and clinical

Third Year

Dissertation work to be submitted 6 months

Clinical work

- Cast gold inlay- Onlay, cuspal restorations
- Post and core
- Molar endodontics
- Endo surgery

All other types of surgeries including
splinting, replantation, endodontic implants

ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS

Objectives

The training programme in Orthodontics is to structure and achieve the following four objectives
Knowledge of

1. The dynamic interaction of biologic processes and mechanical forces acting on the stomatognathic system during orthodontic treatment
2. The etiology, pathophysiology, diagnosis and treatment planning of various common Orthodontic problems
3. Various treatment modalities in Orthodontics preventive interceptive and corrective.
4. Basic sciences relevant to the practice of Orthodontics
5. Interaction of social, cultural, economic, genetic and environmental factors and their relevance to management of oro - facial deformities
6. Factors affecting the long-range stability of orthodontic correction and their management
7. Personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases.

Skills

1. To obtain proper clinical history, methodical examination of the patient, perform essential diagnostic procedures, and interpret them and arrive at a reasonable diagnosis about the Dentofacial deformities.
2. To be competent to fabricate and manage the most appropriate appliance - intra or extra oral, removable or fixed, mechanical or functional, and active or passive - for the treatment of any orthodontic problem to be treated singly or as a part of multidisciplinary treatment of orofacial deformities.

Attitudes:

1. Develop an attitude to adopt ethical principles in all aspects of Orthodontic practice.
2. Professional honesty and integrity are to be fostered
3. Treatment care is to be delivered irrespective of the social Status, cast, creed or colleagues
4. Willingness to share the knowledge and clinical experience with professional colleagues
5. Willingness to adopt, after a critical assessment, new methods and techniques of orthodontic management developed from time to time based on scientific research, which are in the best interest of the patient
6. Respect patients rights and privileges, including patients right to information and right to seek a second opinion
7. Develop attitude to seek opinion from allied medical and dental specialists as and when required

Communication skills

1. Develop adequate communication skills particularly with the patients giving them various

optio
cons
2. Deve
spec
rende

Course Cont

The prog
specialit
education
practice h
towards a

Spread of the

Six month
coverage
and subm
depending

I. Appli

- Prenat
Stages
- Postnat
Bones
face gr
- Bone g
Origin
mecha
- Assess
Growth
differen
and rec
- Muscle
Develop
muscle
- Develop
Dental
periods
- Assess

The carpal b
Physiology

XIX. Recent advances like:

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

Skills:

II. Pre - Clinical Exercises

A general outline of the type of exercises is given here. Every institution can decide the details of exercises under each category.

1. General Wire bending exercises to develop the manual dexterity.
2. Clasps, Bows and springs used in the removable appliances.
3. Soldering and welding exercises.
4. Fabrication of removable habit breaking, mechanical and functional appliances, also all types of space maintainers and space regainers.
5. Bonwill Hawley Ideal arch preparation.
6. Construction of orthodontic models trimmed and polished preferably as per specifications of Tweed or A.B.O.
7. Cephalometric tracing and various Analyses, also superimposition methods -
8. Fixed appliance typhodont exercises.
 - a) Training shall be imparted in one basic technique i.e. Standard Edgewise / Begg technique or its derivative / Straight wire etc., with adequate exposure to other techniques.
 - b) Typhodont exercise
 - i. Band making
 - ii. Bracket positioning and placement
 - iii. Different stages in treatment appropriate to technique taught
9. Clinical photography
10. Computerized imaging
11. Preparation of surgical splints, and splints for TMJ problems.
12. Handling of equipments like vacuum forming appliances and hydro solder etc

First Year

- I. Basic Pre-Clinical Exercise Work for the MDS Students:

First 6 Months

1. Non-appliance exercises

All the following exercises should be done with 0.7 or 0.8mm wire

Sl. No.	Exercise	No.
1	Straightening of 6" & 8" long wire	1 each
2	Square	1
3	Rectangle	1
4	Triangle of 2" side	1
5	Circle of 2" side	1
6	Bending of 5U's	1
7	Bending of 5V's	1

2. Clasps

Sl. No.	Exercise	No.
1	$\frac{3}{4}$ Clasps	2
2	Full clasps	2
3	Triangular Clasps	2
4	Adam's clasp - upper molar	2
5	Adam's Clasp - lower molar	2
6	Adam's Clasp - Pre-molar	2
7	Adam's Clasp - Incisor	2
8	Modification of Adam's - With Helix	2
9	Modification of Adam's - With distal extension	2
10	Modification of Adam's - With soldered tube	2
11	Duyzing Clasps on Molars	2
12	Southend Clasp	1

3. LABIAL BOWS

Sl. No.	Exercise	No.
1	Short labial bow (upper & lower)	1
2	Long labial bow (upper & lower)	1
3	Robert's retractor	1
4	High labial bow-with apron spring's	1
5	Mill's labial bow	1
6	Reverse loop labial bow	1
7	Retention labial bow soldered to Adam's clasp	1
8	Retention labial bow extending distal to second molar	
9	Fitted labial bow	
10	Split high labial bow	1

4. SPRINGS

Sl. No.	Exercise	No.
1	Finger spring-mesial movement	2
2	Finger spring-distal movement	2
3	Double cantilever spring	2
4	Flapper spring	2
5	Coffin spring	2
6	T spring	2

5. CANINE RETRACTORS

Sl. No.	Exercise	No.
1	u loop canine retractor	2PAIRS
2	Helical canine retractor	2PAIRS
3	Palatal canine retractor	2PAIRS
4	Self-supporting canine retractor	2PAIRS
5	Self-supporting canine retractor	2PAIRS

6. Appliances

Sl. No.	Exercise
1	Hawley's retention appliance with anterior bite plane
2	Upper Hawley's appliance with posterior bite plane
3	Upper expansion appliance with coffin spring
4	Upper expansion appliance with coffin spring
5	Upper expansion appliance with expansion screw
6	Habit breaking appliance with tongue crib
7	Oral screen and double oral screen
8	Lip bumper
9	Splint for Bruxism
10	Catalans appliance
11	Activator
12	Bionator
13	Frankel-FR 2 appliance
14	Twin block
15	Lingual arch
16	TPA
17	Quad helix
18	Bihelix
19	Utility arches
20	Pendulum appliance

7. Soldering exercises

Sl. No.	Exercise	No.
1	Star	1
2	Comb	1
3	Christmas tree	1
4	Soldering buccaltube on molar bands	1

8. Welding exercises

Sl. No.	Exercise
1	Pinching and welding of molar, premolar, canine and incisor bands
2	Welding of buccal tubes and brackets on molar bands and incisor bands

9. Impression of upper and lower arches in alginate

10. Study model preparation

11. Model analysis

Sl. No.	Exercise
1	Impression of upper and lower dental arches
2	Preparation of Study Model -1 And all the permanent dentition analyses to be done.
3	Preparation of Study Model - 2And all the permanent dentition analyses to be done.
4	Preparation of Study Model - 3And all the mixed dentition analyses to be done.

12. Cephalometrics

Sl. No.	Exercise
1	Lateral cephalogram to be traced in five different colors and super imposed to see the accuracy of tracing
2	Steiner's analysis
3	Down's analysis
4	Tweed analysis
5	Rickett's analysis
6	Burrstone analysis
7	Rakosi's analysis
8	Mc Namara analysis
9	Bjork analysis
10	Coben's analysis
11	Harvold's analysis
12	Soft tissue analysis - Holdaway and Burstone

13. Basics of Clinical Photography including Digital Photography

14. Light wire bending exercises for the Begg technique

Sl. No.	Exercise
1	Wire bending technique on 0.016' wire circle "Z" Omega
2	Bonwill-Hawley diagram
3	Making a standard arch wire
4	Inter maxillary hooks- Boot leg and Inter Maxillary type
5	Upper and Lower arch wire
6	Bending a double back arch wire
7	Bayonet bends (vertical and horizontal offsets)
8	Stage-III arch wire
9	Torquing auxiliary (upper)
10	Reverse Torquing (lower)
11	Up righting spring

15. Typhodont exercises

- Teeth setting in Class-II division I malocclusion with maxillary anterior proclination and mandibular anterior crowding
- Band pinching, welding brackets and buccal tubes to the bands
- Stage-I
- Stage-II
- Pre Stage-I
- Stage-III

CLINICAL WORK:

Once the basic pre-clinical work is completed the students can take up clinical cases and W clinical training is for the two and half years.

Each postgraduate student should start with a minimum of 50 cases of his/her own. Additionally he / she should handle a minimum of 20 transferred cases.

The type of cases can be as follows:

- Removable active appliances-5cases
- Class-I malocclusion with Crowding
- Class-I malocclusion with bi-maxillary protrusion
- Class-II division-1
- Class-II division-2
- Class-III (Orthopedic, Surgical, Orthodontic cases)
- Inter disciplinary cases
- Removable functional appliance cases like activator, Bionator, functional regulator, twin block and new developments
- Fixed functional appliances - Herbst appliance, jasper jumper etc - 5 cases
- Dento-facial orthopedic appliances like head gears, rapid maxillary expansion niti expander etc., - 5 cases

- Appliance
- Fixed me
- Retention

Other work to b

- Seminar
- seminar
- Journal
- five sem
3. Protoco
- admissi
4. Under g
- student
5. Field su
6. Inter-de
7. Case di
8. Field vi
9. Basic s
10. Internat

Second Year:

- The clinical cases to be
- Semin
 - presen
 2. Journ
 - shoul
 3. Librar
 4. Under
 5. Inter-
 6. Case
 7. Field
 8. Intern
 9. Disse
 - starte

Third Year:

- The clinical cases to
- Sem
 - a mi
 2. Jour
 - sem
 3. Und
 4. Inte
 5. The

Biochemistry, Applied Pathology, Microbiology, Oral Pathology, Physical and Social Anthropology, Applied Pharmacology and Research Methodology and statistics.

PAPER II: Public Health

PAPER-III: Dental Public Health

PAPER-IV: Essay

Topics of current interest in community oral health?

* The topics assigned to the different papers are generally evaluated under those sections. However a strict division of the subject may not be possible and some overlapping of topics is inevitable. Students should be prepared to answer overlapping topics.

B. Practical/ Clinical Examination : 200 Marks

1. Clinical examination of at least 2 patients representing the community- includss history, main complaints, examination and recording of the findings, using indices for the assessment of oral health and presentation of the observation including diagnosis, comprehensive treatment planning. (50 Marks -1 % Hrs)
2. Performing
 - a. One of the treatment procedures as per treatment plan. (Restorative, surgical, rehabilitation)
 - b. Preventive oral health care procedure. (50 Marks -1 % Hrs)
 - c. One of the procedures specified in the curriculum
3. Critical evaluation of a given research article published in an international journal (50 Marks-1 Hour)
4. Problem solving - a hypothetical oral health situation existing in a community is given with sufficient data. The student as a specialist in community dentistry is expected to suggest practical solutions to the existing oral health situation of the given community. (50 Marks -1 Hour)

C. Viva Voce 100 Marks

i. Viva-Voce examination: 80 marks

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression, interpretation of data and communication skills. It includes all components of course contents. It includes presentation and discussion on dissertation also.

ii. Pedagogy Exercise: 20 marks

A topic be given to each candidate in the beginning of clinical examination. He/she is asked to make a presentation on the topic for 8-10 minute

PAEDODONTICS & PREVENTIVE DENTISTRY

Objectives

At the end of 3 years of training the candidate should be able to

1. Create not only a good oral health in the child but also a good citizen tomorrow.
2. Instill a positive attitude and behavior in children
3. Understand the principles of prevention & preventive dentistry right from birth to adolescence
4. Guide and counsel the parents in regards to various treatment modalities including different facets of preventive dentistry
5. Prevent and intercept developing malocclusion

Skills

1. Obtain proper clinical history, methodological examination of the child patient, perform essential diagnostic procedures and interpret them, and arrive at a reasonable diagnosis and treat appropriately
2. Be competent to treat dental diseases which are occurring in child patient.
3. Manage to repair and restore the lost / tooth structure to maintain harmony between both hard and soft tissues of the oral cavity.
4. Manage the disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.

Attitudes

1. Develop an attitude to adopt ethical principles in all aspects of Pedodontic practice.
2. Professional honesty and integrity are to be fostered
3. Treatment care is to be delivered irrespective of the social status, cast, creed, and religion of the patients.
4. Willingness to share the knowledge and clinical experience with professional colleagues.
5. Willingness to adopt, after a critical assessment, new methods and techniques of Pedodontic management developed from time to time, based on scientific research, which are in the best interest of the child patient.
6. Respect child patient's rights and privileges, including child patients right to information and right to seek a second opinion.
7. Develop an attitude to seek opinion from allied medical and dental specialities, as and when required

Course contents

1. Applied Anatomy & genetics
2. Applied Physiology
3. Applied Pathology
4. Nutrition and Dietetics
5. Growth & Development: Prenatal and postnatal development of cranium, face, jaws, teeth and

- Genetic disorders
21. Oral manifestations of Systemic Conditions in Children & their Management
 22. Management of Minor Oral Surgical Procedures in Children
 23. Dental Radiology as related to Pediatric Dentistry
 24. Cariology
 - Historical background
 - 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
 - Dietary modifications & Diet counseling.
 - Subjective & objective methods of Caries detection with emphasis on Caries Activity tests, Caries prediction, Caries susceptibility & their clinical Applications
 25. Pediatric Oral Medicine & Clinical Pathology: Recognition & Management of developmental dental anomalies, teething disorders, stomatological conditions, mucosal lesions, viral infections etc.
 26. Congenital Abnormalities in Children: Definition, Classification, Clinical features of Management.
 27. Dental Emergencies in Children and their Management.
 28. Dental Materials used in Pediatric Dentistry.
 29. Preventive Dentistry:
 - Definition
 - Principles & Scope
 - Types of prevention
 - Different preventive measures used in Pediatric Dentistry including fissure sealants and caries vaccine.
 30. Dental Health Education & School Dental Health Programmes
 31. Dental health concepts, Effects of civilization and environment, Dental Health delivery system, Public Health measures related to children along with principles of Pediatric Preventive Dentistry
 32. Fluorides:
 - Historical background
 - Systemic & Topical fluorides
 - Mechanism of action

- Toxicity & Management.
 - Defluoridation techniques.
33. Medicological aspects in Paediatric Dentistry with emphasis on informed concept.
 34. Counseling in Paediatric Dentistry
 35. Case History Recording, Outline of principles of examination, diagnosis & treatment planning.
 36. Epidemiology: Concepts, Methods of recording & evaluation of various oral diseases. Various national & global trends of epidemiology of oral diseases.
 37. Comprehensive Infant Oral Health Care.
 38. Principles of Bio-Statistics & Research Methodology & Understanding of Computers and Photography
 39. Comprehensive cleft care management with emphasis on counseling, feeding, nasoalveolar bone remodeling, speech rehabilitation.
 40. Setting up of Pedodontics & Preventive Dentistry Clinic.
 41. Emerging concept in Paediatric Dentistry of scope of laser/minimum invasive procedures :

1ST YEAR

Preclinical Work

(Duration - first 6 Months of First Year MDS)

(One On Each Exercise)

1. Carving of all deciduous teeth
2. Basic wire bending exercises
3. Fabrication of
 - a. Maxillary bite plate / Hawley's
 - b. Maxillary expansion screw appliance
 - c. Canine retractor appliance
 - d. All habit breaking appliances
 - i. Removable type
 - ii. Fixed type
 - iii. Partially fixed and removable
 - e. Two Myofunctional appliance
 - f. Making of inclined plane appliance
 - g. Feeding appliances
4. Basic soldering exercise I - making of a lamppost of stainless steel wire pieces of different gauges soldered on either side of heavy gauge main post.
5. Fabrication of space maintainers
 - a. Removable type-
 - Unilateral Non - functional space maintainer
 - Bilateral Non-Functional space maintainer

- Unilateral functional space maintainer
- Bilateral functional space maintainer

b. Space Regainers -

- Hawley's appliances with Helical space regainer
- Removable appliance with Slingshot space regainer
- Removable appliance with Dumbbell space regainer

c. Fixed Space maintainers

- Band & long loop space maintainer
- Band & short loop space maintainer
- Mayne's space maintainer
- Transpalatal arch space maintainer
- Nance Palatal holding arch
- Nance Palatal holding arch with canine stoppers
- Gerbcr space regainer
- Distal shoe appliance

a. Active space maintainers

- b. For guiding the eruption of first permanent molar -rags
- c. Arch holding device
- d. Functional space maintainer

6. Basics for spot welding exercise

7. Collection of extracted deciduous and permanent teeth

- a. Sectioning of the teeth at various levels and planes
- b. Drawing of section and shapes of pulp
- c. Phantom Head Exercises : Performing ideal cavity preparation for various restorative materials for both Deciduous and permanent teeth
- d. Performing pulpotomy, root canal treatment and Apexification procedure

i) Tooth preparation and fabrication of various temporary and permanent restorations on fractured anterior teeth.

ii) Preparation of teeth for various types of crowns

iii) Laminates/veneers

iv) Bonding & banding exercise

8. Performing of behavioral rating and IQ tests for children.

9. Computation of: -

- Caries index and performing various carrier activity test.
- Oral Hygiene Index
- Periodontal Index

Fluorosis Index

10. Surgical Exercises : a. Fabrication of splints b. Type of Wiring c. Suturing, various pvit system, prcing & porm. tuli

a. Taking of periapical, occlusal, bitewing radiographs of children

b. Developing and processing of films, thus obtained

c. Tracing of soft tissue dental and skeletal landmarks as observed on Cephalometric radiographs and drawing of various planes and angles, further interpretation of Cephalometric radiographs is analysis.

d. Mixed dentition cast analysis

11. Library assignment

12. Synopsis

Clinical work Requirements from 7 to 36 months

The following is the minimum requirement to be completed before the candidate can be considered eligible to appear in the final M.D.S Examinations: -

No.	Clinical Work	Total	7 to 12 months	13 to 24 months	25 to 36 months
1	Behavior Management of different age groups children with complete records.	17	2	10	5
2	Detailed Case evaluation with complete records, treatment planning and presentation of cases with chair side and discussion	17	2	10	5
3	Step-by-step chair side preve -ntive dentistry scheduled for high risk children with gingival and periodontal diseases & Dental Caries	11	1	5	5
4	Practical application of Preve -ntive dentistry concepts in a class of 35-50 chiidren& Dental Health Education & Motivation.	7	1	4	2
5	Pediatric Operative Dentistry with application of recent concepts.(a). Management of Dental Caries (I) Class I	50	30	10	10