



SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY

Ordinance Governing
IV BDS Course
2021-22

Amended up to November, 2022

SHRI DHARMASTHALA MANJUNATHESHWARA UNIVERSITY

(A State Private University established under the Shri Dharmasthala Manjunatheshwara University
Act No 19 of 2018 of Government of Karnataka and Notification No. ED 261 URC 2018 dated 19th December 2018)

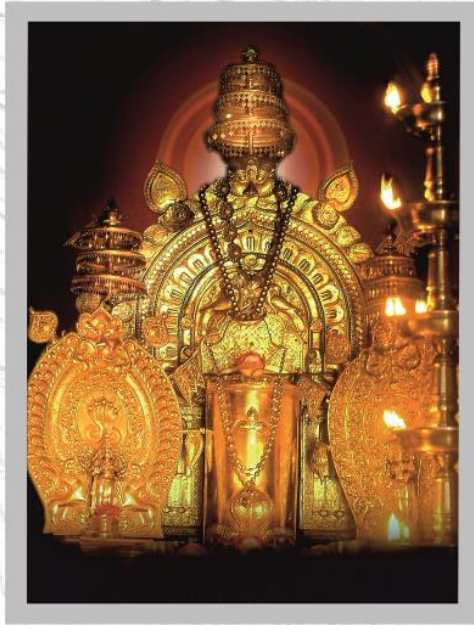
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|| Om Shri Manjunathaya Namaha ||



Shree Kshethra Dharmasthala

Edition Year : 2021-22

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THE LOGO

Poojya Dr D. Veerendra Heggade, Hon'ble Chancellor of the University, while searching for an appropriate Logo for the University, saw a photograph picked from Temple Architecture showing Wings of a Bird, sculpted in Indian style and wanted it to be incorporated in the logo for the University, as the Wings symbolize 'Spreading of Knowledge beyond Boundaries'. Further it was felt that the Central theme of the logo should be 'Rudra' (The Linga) with wings on each side. In this way, the logo of the University was conceptualized.

Hence:

1. The central part represents **Rudra** who Demolishes Darkness.
2. The Three **horizontal lines on The Linga** stand for Samyak Darshan (Right Belief), Samyak Gyan (Right Knowledge) and Samyak Charitra (Right Conduct).
3. The **Wings** symbolize spreading of Knowledge across the boundaries.
4. Base line "**Truth Liberates**" highlights the Purpose of Education: to liberate oneself unconditionally. It shows that it is not discipline, nor knowledge nor the efforts to freedom that liberate but Truth is what liberates you from all your conditioning and ignorance.

The overall significance of Shri Dharmasthala Manjunatheshwara University's Logo is:

Darkness of ignorance is destroyed by the flow of knowledge to bring Liberty to everyone, by realizing the truth. And, it should spread globally without the boundaries as hindrance.



SHRI
DHARMASTHALA
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UNIVERSITY

VISION

Shri Dharmasthala Manjunatheshwara University will set the highest standards of teaching and learning by awakening the intelligence of the students and nurturing the creativity hidden in them by creating an environment where the ancient wisdom blends with modern science, to transform them into whole human beings to face the challenges.

MISSION

- ▶ To ensure that the journey of education is inspiring, pleasant and enjoyable.
- ▶ Attract the best of teachers and students.
- ▶ Achieve high principles of trust, love and spirituality in the students.
- ▶ Create a collaborative, diverse and exclusive community.
- ▶ Transform the student of today to be a leader of tomorrow and a better human being.
- ▶ Produce passionate teachers.
- ▶ Evolve innovative teaching techniques.
- ▶ Create a peaceful environment.
- ▶ Prepare the student to face the social challenges.
- ▶ Create a University of which the Nation is proud of.
- ▶ Be an effective partner in Nation Building.
- ▶ Create an Eco-friendly University.
- ▶ Create a University based on the principles of beauty, love and justice.

||Om Shanti! Om Shanti! Om Shanti||



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SDMU/ACAD/BDS/F-4/Notf-225/687/2021

Date: 31.12.2021


NOTIFICATION

Ordinance governing Curricula of BDS Year IV - 2021

- Ref:
1. Revised BDS Course Regulations 2007 by Dental Council of India notified on 25-07-2007 and its periodical amendments
 2. Minutes of the 5th Meeting of Academic Council
(Ref. No. SDMU/AC/M5/F-28/626/2021 Dated: 10-12-2021)
 3. Minutes of the 5th Meeting of Board of Studies - Dental UG held on 07.07.2021

In exercise of the powers conferred under Statutes 1.4 (Powers and functions - Para ix & x) & 1.8 (Powers and functions - Para i) of Shri Dharmasthala Manjunatheshwara University, the Academic Council has accorded its approval for the notification on the ordinance governing the Curricula of BDS Year IV - 2021.

The ordinance shall be effective from the date of notification.


Lt. Col. U. S. Dinesh (Retd.)
REGISTRAR
REGISTRAR
Shri Dharmasthala Manjunatheshwara
University, Dharwad

To: The Principal, SDM College of Dental Sciences & Hospital.

Copy for information to:

1. Hon'ble Chancellor, Shri Dharmasthala Manjunatheshwara University, Dharwad
2. Vice Chancellor - Shri Dharmasthala Manjunatheshwara University.
3. Pro Vice-Chancellor (Academics) - Shri Dharmasthala Manjunatheshwara University.
4. Controller of Examinations, Shri Dharmasthala Manjunatheshwara University.
5. Chairperson, Board of Studies - Dental UG
6. University Office for Records File
7. Office of the Registrar



**CURRICULUM OF STUDY FOR
IV YEAR BDS**

CONTENTS

Sl. No.	Department Name
1	Oral Medicine & Radiology
2	Conservative Dentistry & Endodontics
3	Oral & Maxillofacial Surgery
4	Prosthodontics & Crown and Bridge
5	Orthodontics & Dentofacial Orthopaedics
6	Pediatrics & Preventive Dentistry
7	Periodontology
8	Public Health Dentistry

ORAL MEDICINE & RADIOLOGY

1. Aims and Objectives:

Aims:

- The undergraduate higher training programme commences in the fourth year with Lecture and clinical exercises and continues for 12 months before entering internship.
- During their one month clinical posting in each academic year, students have the opportunity of taking the history, examining the patient, and arriving at a diagnosis of common as well as special oral diseases with the aid of radiographs and other investigations, thereby planning suitable treatment for the patient.

Objectives:

(a) Knowledge and understanding:

The student should acquire the following during the period of training.

1. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyze scientifically various established facts and data.
2. The relationship and effect on general-state of oral health and also the bearing on physical and social well-being of the patient is necessary.
3. Adequate knowledge of clinical disciplines and methods, which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive, diagnostic and therapeutic aspects of dentistry.
4. Adequate clinical experience required for general dental practice.
5. Adequate knowledge of biological function and behavior of persons in health and sickness as well as the influence of the natural and social environment on the state of oral health so far as it affects dentistry.

(b) Skills:

A graduate should be able to demonstrate the following skills necessary for practice of dentistry:

1. Able to identify common oral lesions of the oral cavity and refer to the concerned specialty for their management
2. Should have an adequate knowledge about common laboratory investigations and interpretation of their results.

3. Should have adequate knowledge about medical complications that can arise while treating systemically compromised patients and take prior precautions/ consent from the concerned medical specialist.
4. Have adequate knowledge about radiation health hazards, radiations safety and protection. Competent to take intra-oral radiographs and interpret the radiographic findings
5. Be aware of the importance of intra oral as well as extra oral radiographs
6. Should be familiar with jurisprudence, ethics and understand the significance of dental records with respect to law
7. To train the students about the importance, role, use and techniques of radiographs/digital radiograph and other imaging methods in diagnosis.

(c) Attitudes:

A graduate should develop during the training period the following attitudes.

1. Willing to apply current knowledge of dentistry in the best interest of the patients and the community.
2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
4. Willingness to participate in the continuing education programs to update knowledge and professional skills from time to time.

2. Teaching hours:

Lecture Hours – 47 hours

Practical Hours – 90 hours

Total – 137 hours

Teaching methodology : **Audio & Video Aids**

Sl No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
1	Ulcerative & Vesciculo bullous lesions	Classification, Herpes simplex, herpes zoster, bullous lichen planus, pemphigous, cicatrical pemphigoid, erythema multiforme	Primary and secondary lesions	3 hours Didactic lectures and case discussion
2	Premalignant conditions and lesions	Oral submucous fibrosis, Lichen planus, Discoid lupus erythematosus, Leuloplakia, Erythroplakia, Chemical burn, leukoedema, fordyce's spots, stomatitis nicotina palatinus, white spongy nevus, stomatitis venenata and medicamentosa, denture sore mouth	Effect of smoking and smokeless type of tobacco on oral mucosa Chemical reactions of lime and tobacco toxins	2 hours
3	Fibro-osseous lesions	Classifications, clinical features, radiological features, and treatment		2 hours
4	Salivary Gland disorders	Developmental disturbances like aplasia, aberrations. Functional disturbances like xerostomia, ptylism Inflammatory conditions like non-specific sialadenitis, mumps, sarcoidosis, Heerdforyt's syndrome, necrotizing sialometaplasia. Cysts and tumors like mucocele, ranula, pleomorphic adenoma, mucoepidermoid carcinoma, Sjogrens syndrome, Mikuliez's disease, sialosis, salivary gland tumours	Anatomy of salivary glands, Saliva, Sialometry, sialography, examination of salivary glands,	3 hours Didactic lectures and problem based learning

5	Diseases of Maxillary sinus	Classification of maxillary sinus disorders, Developmental disorders, cysts, inflammatory disorders, benign and malignant tumours, Maxillary sinusitis, paranasal sinusitis, Oroantral communication. Examination and investigations of Maxillary sinus disorders	Anatomy of maxillary sinus, Functions of maxillary sinus	1 hour Didactic lectures and radiographic demo
6	Oral manifestations and dental management of CVS patients	Oral clinical features secondary to CVS diseases and their medications. Medical emergency management of cardiac arrest, specific infections, syncope	Normal physiology of Cardiac system Drugs used in CVS diseases Anti-platelets, Anti-coagulants	1 hours Didactic lectures and case discussion
7	Oral manifestations and dental management of Renal disorder patients	Oral clinical features secondary to renal diseases and their medications. Medical emergency management of Chronic renal disease & renal failure patients, renal transplant patients.	Normal physiology of renal system Nephrotoxic drugs, drugs to be prescribed for renal patients after dental procedures	1 hours
8	Oral manifestations and dental management of respiratory disorders patients	Oral clinical features secondary to respiratory diseases and their medications. - Acute viral infections, allergic rhinoconjunctivitis, otitis media, sinusitis, pharyngitis, and tonsillitis, acute bronchitis Medical emergency management of Asthmatic patients, Tuberculosis	Normal physiology of respiratory system drugs to be avoided in asthmatic patients, aseptic measures to be followed in TB patients	1 hours

9	Oral manifestations and dental management of GI disorders patients	Oral clinical features secondary to GI diseases and their medications. Peptic ulcers, inflammatory bowel disorders, Jaundice, alcoholic & drug induced hepatitis, liver cirrhosis Plummer Vinson's syndrome, Peutz-Jegher's syndrome,	Normal physiology of GI system	1 hour
10	Oral cancer	Etiology and classification, screening, clinical features, and staging of cancer, diagnosis, laboratory investigations & diagnosis, Immune concepts in oi		3 hours
11	HIV/AIDS	Retrovirus, Etiology, pathogenesis, clinical features, investigations, oral complications, dental management of HIV/AIDS patients. Post exposure prophylaxis and guidelines to prevent transmission to dentists	Prevalence & epidemiology, mode of transmission, History of Nomenclature of virus, characteristic of HIV virus,	2 hours
12	Auto immune diseases of Oral cavity			3 hours
13	Diseases of tongue and tongue in systemic disorders	Aglossia, ankyloglossia, bifid tongue, fissured tongue, scrotal tongue, macroglossia, microglossia, geographic tongue, median rhomboid glossitis, depapillation of tongue, hairy tongue, atrophic tongue, reactive lymphoid hyperplasia, glossopyrosis, ulcers, white & red lesions		2 hours
14	Forensic odontology in Oral medicine	Medico legal aspects of orofacial injuries, identification of bite marks, determination of age and sex, identification of cadavers by dental appliances, restorations and tissue remnants		2 hours

15	Bacterial infections of Oral & para oral structures	Streptococcal, tuberculous, syphilis, Vincent's leprosy, osteomyelitis, actinomycosis, diphtheria & tetanus	Anatomy of facial spaces, spread of infection, Diagnosis of odontogenic infections	2 hours
16	Viral infections of Oral & para oral structures	Herpes simplex, herpes zoster, Ramsay Hunt syndrome, measles, herpangina, mumps, infectious mononucleosis, HIV, hepatitis B, C	Viruses causing oral infections	2 hours
17	Fungal infections of Oral & para oral structures	Candidiasis, Mucormycosis, Histoplasmosis		1 hour

3. Teaching schedule for Theory

Sl. No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
1	Radiographic features of tumors	Fibroma, haemangioma, neurofibroma, mucoepidermoid carcinoma, intraosseous carcinoma, adenoid cystic carcinoma, squamous cell carcinoma, carcinomas of jaw bones	Normal anatomic features of radiographs, Imaging features of tumors – location, periphery & shape, internal structures, effect of tumor on surrounding structures	2 hours

2	Radiation biology	Radiation chemistry: Direct & indirect effect Deterministic & stochastic effect Acute radiation syndrome, radiation effect on embryo and fetus, carcinogenesis, Heritable effects	Biological properties of radiation, Radio sensitivity of various organs, normal radiation dose	2 hours
3	Temporo mandibular joint imaging	Developmental disorders, anomalies, exostosis and tori, infantile cortical hyperostosis, osteogenesis imperfecta, marfan's syndrome, osteoporosis, Paget's disease, mono or polyostotic fibrous dysplasia, cherubism	Normal anatomy of TMJ, normal mandibular movements	2 hour Didactic lectures and Problem based learning
4	Orthopantomograph	Principles of OPG, panoramic machine, Patient positioning & head alignment, image receptors, interpretation of panoramic images, Indications, contraindications, advantages & disadvantages of OPG	Advantage in comparison with other radiographs	1 hour

5	Sialography	Image interpretation of salivary gland disorders, Radiographic features of salivary glands, technique, contrast agents used for sialography, Indications and contraindications. Etc	Anatomy of major salivary gland, technique, contrast agents used, equipment used	1 hour
6	Advanced radiographic techniques	Computed tomography, Cone beam computed tomography, Magnetic resonance imaging, Ultrasonography, Scintigraphy, Positron emission tomography	Technique behind each radiographic technique. Indication and contraindications Advantages & disadvantages of each techniques. Image interpretation.	2 hours
7	Radiographic features of cysts and tumors	Classification, Odontogenic and non-odontogenic cysts of oral cavity, inflammatory cyst, non- epithelial cysts. syndromes associated with cysts	Theories of cysts enlargement,	2 hours
8	Radiotherapy	Rationale for radiotherapy, effect of radiation on oral and perioral tissues. Oral complications and their management.	Dental management of post radiotherapy patients	1 hour

9	Forensic odontology - Role of radiographs in Forensic odontology	Radiographic changes of skull and maxillary and mandibular arches. Age estimation by number of teeth, condition of developing teeth. Forensic dental identification report. Application of radiology in mass disasters Application of radiology for long term identified remains.	Scope of forensics in dentistry Advantages of dental radiographs in body identification,	2 hours
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4. Teaching schedule for Clinical / Practical Demonstrations

SI No.	TOPICS		Hours
1.	Demonstration of Maxillary and mandibular occlusal views		1
2.	Identification of Radiographic Anatomical Landmarks Of Maxilla		1
3.	Identification of Radiographic Anatomical Landmarks Of Mandible		1
4.	Radiographic Interpretation of Pulp & Peri Apical Lesions		1
5.	Radiographic Interpretation of Periodontal Diseases		1
6.	Radiographic Interpretation Peri Coronal Diseases		1
7.	Demonstration of	<ul style="list-style-type: none"> • Orthopanthamograph • Lateral cephalogram 	1
8.	Demonstration of	<ul style="list-style-type: none"> • Postero anterior view of mandible • Paranasal sinus view • Reverse townes's view • Submentovertex view • Lateral oblique view for ramus and body of mandible 	1

PRACTICALS / CLINICALS:

1. Students are trained to arrive at proper diagnosis by following a scientific and systematic procedure of history taking and examination of the orofacial region. Training is also imparted in management wherever possible.
2. Training also shall be imparted on saliva diagnostic procedures.
 - In view of above, a record of work done will be maintained with Recording of Routine case Histories - 15
Recording of detailed case histories of Interesting case Histories - 10
3. Training also shall be imparted in various radiographic procedures and interpretation of radiographs.
 - In view of the above each student shall maintain, record of Interpretations of Intra-oral radiographs (Periapical, bitewing, occlusal) - 25
4. Each student will be evaluated for clinical examination & radiographic skills at the end of clinical postings.
5. Each student will be assessed for competencies based on Problem based clinical scenarios.
6. Each student will be assessed with MCQs (10 number) at the end of clinical postings.
7. Objective Structured Clinical Evaluation will be followed for Clinical examinations.
8. Pedagogy topics will be allotted to the UG's, and students will have to submit a copy of the assigned topic.

5. Recommended Text and Reference Books

a) Oral Diagnosis, Oral Medicine & Oral Pathology

- Burkit's Oral Medicine – 12th edition-Micheal Glick
- Principles of Oral Diagnosis-Gary C Coleman
- Oral Manifestations of Systemic Diseases-Jh Jones
- Oral Diagnosis/Oral Medicine-David F Mitchell
- Oral Diagnosis-Donald A Kerr, Major M Ash Jr., H Dean Miller
- Oral Diagnosis, Oral Medicine And Treatment Planning-Sтивен I Bricker, Robert P Langlais, Craig Smiller
- Hutchinson's Clinical Methods-Mitchell Glynn, William M Drake
- Shafer's Textbook of Oral Pathology-Shafer, Hine, Levy
- Oral and maxillofacial pathology-Neville, Dam, Allen, Chi
- Principle and Practice of Oral Medicine -Sonis, Fazio, Fang

- Manual on Clinical Surgery-S Das

b) Oral Radiology

- Oral radiology Principles and Interpretation-Stuart C White, Michael J Pharaoh
- Principles of Dental Imaging – Olaf Langland, Robert Langlais, John Preece
- Oral Radiology Principles and Interpretation-Goaz, White
- Oral Radiology-White and Goaz
- Dental Radiology-Arthur Wuehrmann
- Oral Roentgenographic Diagnosis-Edward C Stafne
- Dental Radiography and Radiology-Eric Whites.

c) Forensic Odontology

1. Derek H.Clark – Practical Forensic Odontology - Butterworth-Heinemann (1992)
2. C Michael Bowers, Gary Bell – Manual of Forensic Odontology - Forensic Pr (1995)

4. Examination Pattern

A) Theory Marks

University Written Exam : 70 Marks
 Viva Voce : 20 Marks
 Internal Assessment (Theory): 10 Marks
 Total : 100 Marks

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short Answers	10	10	2	20
Total				70

Topics distribution and Weightage of marks – Theory

Subject Name : Oral Medicine & Radiology							
Sl. No	Topics	Recom mended Marks	Actual Marks in the Question Paper				
			MCQ	SLEQ	SEQ	SAQ	Total
1	SLEQ: One Question from Oral Medicine	1x8		8			16
	One Question from Oral Radiology	1x8		8			
2	SEQ: Four Questions from Oral Medicine	4x4			16		24
	Two Questions from Oral Radiology	2x4			8		
3	SAQ: Five Questions from Oral Medicine	5x2				10	20
	Three Questions from Oral Radiology	3x2				6	
	Two Question from Forensic Odontology	2x2				4	
4	MCQ: Five Questions from Oral Medicine	5x1	5				10
	Four Questions from Oral Radiology	4x1	4				
	One Question from Forensic Odontology	1x1	1				
							70

B. Practical/ Clinical Examination:

University Examination : 90 Marks
 Internal Assessment : 10 Marks
 Total : 100 Marks

Clinicals	90 Marks
I. Clinicals in Oral Medicine (Final Exams) <ul style="list-style-type: none"> a. Case History taking b. Diagnosis & Differential Diagnosis c. Investigations d. Management 	60 Marks (recording of Long Case) <ul style="list-style-type: none"> 30 Marks 10 Marks 10 Marks 10 Marks
II. Clinicals in Radiology: (Final Exams) (One Intra.a-Oral Periapical Radiograph to be taken) <ul style="list-style-type: none"> a. Technique b. Processing c. Interpretation 	30 Marks <ul style="list-style-type: none"> 10 Marks 10 Marks 10 Marks

CONSERVATIVE DENTISTRY & ENDODONTICS

1. AIMS AND OBJECTIVES:

AIMS:

1. To provide training and develop skills in the Cavity preparation, root canal procedure, restorations of various types on patients.
2. To provide training and develop skills in manipulation of various cements and restorative materials used for restoration of teeth.

OBJECTIVES:

1. Knowledge & understanding about
 - a. To understand the cavity designs, restorative materials and apply the same for restorations of teeth.
 - b. To understand aesthetic restorative materials and apply the same to patients needs in future.
 - c. To gain the knowledge about endodontic treatment on the basis of scientific foundation.
2. Skills : Psychomotor
 - a. To use medium and high speed hand pieces to carry out restorative work.
 - b. Possess the skills to familiarize endodontic instruments and materials needed for simple endodontic treatment.

2. Teaching hours:

Lecture Hours – 80 hours

Practical Hours – 300 hours

Total – 380 hours

3. Teaching schedule for Theory

Sl. No	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
1.	Pin Amalgam Restoration Indication Contra Indication : Advantages disadvantages of each types of pin methods of placement use of auto matrix. Failure of pin amalgam restoration.	Pin Amalgam Restoration Indication Contra Indication : Advantages disadvantages of each types of pin	methods of placement use of auto matrix. Failure of pin amalgam restoration.	3
2.	Cast Restorations Indications, contra indications, advantages and disadvantages materials cavity preparation for inlays fabrication of wax pattern spurring investing and casting procedures casting defects.	Cast Restorations Indications, contra indications, advantages and disadvantages materials fabrication of wax pattern spurring investing and casting procedures casting defects.	Ceramic inlay 3D printing cavity preparation for inlays	6
3.	Die Materials And Preparation Of Dies.	Die Materials	Preparation Of Dies. 3 D printing	3
4.	Gingival Tissue Management For Cast Restoration And Impression Procedures	Gingival Tissue Management For Cast Restoration And Impression Procedures	Intra oral scanners Recent advances in Gingival tissue managemant	2
5.	Applied Dental Materials, Recent advances in Composites, GIC and Dental Ceramics	Selection of various dental materials for the case presented	Application of dental materials for complex cases	5
6.	Emergency endodontic procedures	Endodontic Emergencies Treatment of various endodontic emergency procedures	Hot tooth Protocol for management of sodium hypochlorite accident	4

7.	Anatomy of the pulp cavity: root canals apical foramen. Anomalies of pulp cavities access cavity preparation of anterior and premolar teeth.	Anatomy of pulp cavity of all teeth Access opening for anterior teeth Failure due to improper access opening	Access opening for Posterior teeth	4
8.	Determination of working length,	Definition Ingle and grossman method of WL determination Radiographic and non radiographic method of working length determination Uses of apex locators Uses of stoppers	Latest generation of apex locators.	3
9.	Root canal irrigants	Classification of irrigants Ideal properties Detail about sodium hypochlorite, hydrogen peroxide, EDTA, Chlorhexidine, MTAD Method of irrigation	Recent advances in irrigating solutions, and instruments Chitosan Herbal extracts used for irrigation Experimental irrigants	3
10	Disinfection of root canal space intracanal medicaments, bacteriological examinations, culture methods.	Purpose of Disinfection of root canal space Classification of intracanal medicaments, Ideal properties, Endodontic Microflora Applications of various intracanal medications as per the case bacteriological examinations.	Intracanal medicaments for regenerative endodontics. culture methods. Various culture medias	2
11	Methods of cleaning and shaping like step back crown down and conventional methods.	Method of use of files, reamers Classification of biomechanical preparation	Step down technique Hybrid technique Balanced force technique Use of rotary	3

		Step back technique Conventional technique Circumferential filing recapitulation	instruments Cleaning and shaping for c shaped canals, and complex root canal	
12	Problems during cleaning and shaping of root canal spaces. Perforation and its management. Broken instruments and its management, management of single and double curved root canals.	What is gauging, apical transportation, wedging, Causes for perforation, instrument separation, gauging, apical foramen transportation Methods to retrieve separated instrument	In detail about Masseran Kit. Terauchi Kit. Ultrasonic for retrieval for broken instruments, management of double curved root canals.	3
13	Obturation of the root canal system. Requirements of an ideal root canal filling material obturation methods using gutta percha healing after endodontic treatment.	Classification of Obturation techniques Obturing materials When to obturate Ideal properties of obturating materials Gutta Percha in detail, Single visit endodontics Endo Perio lesions	Recent advances in Obturation techniques . Healing after endodontic treatment	4
14	Failures in endodontics	Persistence of bacteria (intra-canal and extra-canal) Inadequate filling of the canal (canals that are poorly cleaned and obturated)	Overextensions of root filling materials.	3
16	Root canal sealers. Ideal properties classification. Manipulation of root canal sealers.	Ideal properties classification. Manipulation of root canal sealers.	Recent advances of root canal sealers.	2
17	post endodontic restoration fabrication and components of post core preparation	post endodontic restorative materials Post materials post fabrication and components of post core	Biologic post Tooth coloured post Recent advances	5

18	smear layer and its importance in endodontics and conservative treatment	Definition Components of smear layer Advantage and disadvantage of smear layer	Methods to alter or remove the smear layer Water tree effect	2
19	Esthetic dentistry Ceramics Simple gingival contouring to enhance the appearance Simple clinical procedures for BDS students Veneers with various materials Preventive and interceptive esthetic	Ceramics Simple esthetic procedures Diastema closure Golden proportion Veneer materials Advantages and disadvantages of various veneer materials	Laser Lumineers Preventive and interceptive esthetic procedures	4
20	Direct Filling Gold Restorations	Classification Advantages and disadvantages of gold restoration Mat gold Mat alloy Electrolyte ppt gold Degassing/annealing Types of annealing	History of gold restorations Chicago fire	2
21	Traumatic Injuries [Detail]	Ellie's Classification Management of all traumatic injuries Post treatment medication, Root resorption	WHO and Anderson classification Soft tissue management Forced eruption Splints and splinting	4
22	Endodontic Surgery	Classification Corrective surgeries Indications and contraindications for each endodontic surgery Flap designs Suturing techniques	Magnification, Flap retraction Retrograde preparation and materials Healing after surgery Endodontic Micro surgery, Replantation & Transplantation,	4

		and suture materials Pre and post treatment medication	Endodontic Implants	
23	Endodontic Instruments	Classification Standardization Types of instruments in detail Differences between file and reamer Method of use of each instrument Materials used for instrument fabrication, Sonics & Ultrasonics	NiTi instruments Rotary instruments	4
24	Failures of Amalgam Restoration	Causes, Technical Considerations of Amalgam Management		2
25	Dentin Bonding Agents	Composition Mechanism of Action Generations of Bonding agents Factors affecting adhesion Hybrid layer	Recent advances	4
26	Control of Pain	Direct and Indirect methods of pain control		2
27	Lasers in Operative Dentistry and Endodontics	Physics of Lasers Types of lasers Applications of laser		3

5. Teaching schedule for Clinicals / Practicals

S. No.	Topic	Hours
1	Steps in cavity preparation for amalgam	1
2	Matrices and wedges	1
3	Variation in Class II Cavity designs	1
4	Root canal Treatemnt: Access opening	1
5	Root canal Treatemnt: working length determination	1
6	Root canal Treatemnt: Biomechanical preparation	1
7	Root canal Treatment: obturation	1
8	Composite restorations	1
9	Cast restorations	1

6. Recommended Text and Reference books, Journals and Atlases (as per your preference modify the title)

Test Book recommended:

1. Sturdevant - The art and Science of Operative Dentistry - 5th edition
2. Charbeneau - Principles & Practice of Operative Dentistry - 3rd edition
3. Phillipi's Sciences of Dental Materials
4. Grossman - Endodontic Practice - 11th edition
5. Ingle's Endodontics
6. Pathways of pulp – Cohen

7. Scheme of examination:

A. Theory Marks

University Written Exam : 70 Marks

Viva Voce : 20 Marks

Internal Assessment (Theory): 10 Marks

Total : 100 Marks

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short answers	10	10	2	20
Total				70

Topics distribution and Weightage of marks – Theory

Subject Name : Conservative Dentistry & Endodontics						
Topics	Recommended Marks	Actual Marks in the Question Paper				
		MCQ	SLEQ	SEQ	SAQ	Total
SLEQ: One Question from Operative Dentistry/Dental Materials	1x8		8			16
One Question from Endodontic	1x8		8			
SEQ: Two Questions from Operative	2x4			8		24
Three Questions from Endodontics	3x4			12		
One Question from Dental Materials	1x4			4		

SAQ: Three Questions from Operative Dentistry	3x2				6	20
Three Questions from Endodontics	3x2				6	
Two Questions from Esthetic Dentistry	2x2				4	
Two Questions from Dental Materials	2x2				4	
MCQ: Four Questions from Operative Dentistry	4x1	4				10
Three Questions from Endodontics	3x1	3				
Two Questions from Dental Materials	2x1	2				
One Question from Esthetic Dentistry	1x1	1				
Total						70

B. Practical/ Clinical Examination:

University Examination	: 90 Marks
Internal Assessment	: 10 Marks
Total	: 100 Marks

Clinicals: 90 Marks

Case History	10 marks
Cavity Preparation	25 marks
Base and Matrix	20 marks
Restoration	35 marks
Total	90 marks

ORAL AND MAXILLOFACIAL SURGERY

I. AIMS AND OBJETIVES:

AIMS:

- To produce a dental surgeon competent enough to perform tooth extraction under local anaesthesia and General anaesthesia
- To anticipate, prevent and manage associated complications.
- To recognize underlying medical conditions and modify treatment plan, acquire adequate knowledge and understanding of various congenital, developmental and acquired pathologies, dysfunctions, defects and injuries occurring in the oral and Maxillofacial region, and has an exposure into in-patient management of Maxillofacial problems
- To provide treatment options for common conditions and at the same time able to diagnose maxillofacial pathologies, fractures and refer them to concerned specialty.

OBJECTIVES:

a) Knowledge & Understanding: By the end of the course of the clinical training the graduate is expected to –

1. Application of the knowledge acquired in the related medical subjects like pathology, microbiology and general medicine in the management of patients with oral surgical problem.
2. Good understanding of the evaluation, diagnosis and perioperative management of oral surgical patient.
3. Knowledge of different range of oral surgical treatments.
4. Patient counselling regarding morbidity and dysfunction associated with craniofacial pathologies and anomalies and referring such patients to specialists.
5. Understand the principles of in patient management.
6. Understanding of the diagnosis of major oral surgical procedures and principles involved in patient management.
7. Adequate knowledge of pain and anxiety management.
8. Should know ethical and medicolegal issues and communication ability.
9. Gain knowledge about oral infections in dentistry
10. Importance of infection control in den

b) Skills:

1. Acquire skill to examine any patient with oral surgical problem in a systematic manner and requisition of various clinical and laboratory investigations to arrive at a specific diagnosis.
2. Should be efficient in exodontia (Extraction of teeth) both under local and general anaesthesia.
3. Perform minor surgical procedures under local anesthesia like frenectomy, Alveoplasty, Biopsy and suturing techniques.
4. Ability to anticipate prevent and manage complications during and after surgery.
5. Understanding of management of major oral surgical problems and principles involved in inpatient management.
6. Diagnosis and Management of medical emergencies occurring on dental chair.
7. Identify the medically compromised patients and modify the treatment plan whenever required

c) Communication Skills:

1. Develop adequate communication skills particularly with the patients in local language and obtain a true informed consent from them for the most appropriate treatment available at that point of time.

d) Computer Science:

1. Use of computers in surgery
2. Interpretation of digital radiographs

II TEACHING HOURS

Lecture Hours	50
Practical Hours	200
Total	250

Teaching Methods:

1. **Traditional class room teaching**

- a. Use of black board
- b. Computer aid – PPTs

2. **Multimedia online teaching**

- a. Google classroom / Meet
- b. Skype
- c. Zoom

3. **Small group discussions**

- a. Students posted in the department (Clinical batch) are divided into two or three groups (5-6 students in each group) and are allotted clinical based topic (subdivided into 5-6 micro topics), which each student has to present for 4-5mins in presence of staff on rotation

** This activity will be conducted in the department seminar hall once every week*

4. **Demonstration of clinical procedures**

5. Case history taking

- a. Examination of the patient
- b. Recording blood pressure
- c. Use of different instruments in Oral & Maxillofacial surgery
- d. Various local anaesthetic injection techniques on patients
- e. Extraction of mobile and firm teeth
- f. Trans-alveolar extraction of root stumps
- g. Surgical removal of Simple impacted teeth
- h. Management of dento-alveolar fractures with arch bar fixation, eyelets and inter-maxillary fixations.
- i. Training in basic life support skills.
- j. Discussion and management of medically compromised patients.
- k. Understanding and management of medical emergencies.

II. TEACHING SCHEDULE FOR THEORY:

Sl.No	Topic	Learning Content Distribution		Teaching Methodology with Hours
		Must Know	Desirable to Know	
1	<p>Impacted teeth Incidence, definition, etiology</p> <p>a) Impacted mandibular third molar</p> <ul style="list-style-type: none"> • Classification, reasons for removal • Assessment both clinical and radiological • Surgical procedures for removal • Complications during and after removal • Prevention and management <p>b) Maxillary third molar</p> <ul style="list-style-type: none"> • Indications for removal, classification • Surgical procedure for removal <p>c) Impacted maxillary canine</p> <ul style="list-style-type: none"> • Reasons for canine impaction • Localisation, indications for removal • Methods of management, 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

	labial and palatal approach Surgical exposure, transplantation, removal etc.			
2	<p>Pre prosthetic surgery Definition, Classification of procedures</p> <p>a) Corrective procedures</p> <ul style="list-style-type: none"> • Alveoloplasty, • reduction of maxillary tuberosities, • frenectomies and removal of tori <p>b) Ridge extension or sulcus extension procedures</p> <ul style="list-style-type: none"> • Indications and various surgical procedures <p>c) Ridge augmentation and reconstruction</p> <ul style="list-style-type: none"> • Indications, use of bone grafts, hydroxyapatite • Implants – concept of osseointegration <p>Knowledge of various types of implants and surgical procedures to place implants</p>	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
3	<p>General Anaesthesia</p> <ul style="list-style-type: none"> • Concept of general anaesthesia • Indications of general anaesthesia in dentistry • Pre-anaesthetic 	Must Know		<p>2 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

	<p>evaluation of the patient</p> <ul style="list-style-type: none"> • Pre-anaesthetic medication – advantages, drugs used • Commonly used anaesthetic agents • Complications during and after G.A • I.V sedation with Diazepam and Midazolam • Indication, mode of action, techniques etc. • Cardiopulmonary resuscitation • Use of oxygen and emergency drugs tracheostomy 			
4	<p>Disease of maxillary sinus</p> <ul style="list-style-type: none"> • Surgical anatomy of the sinus • Sinusitis both acute and chronic • Surgical approach of the sinus Caldwell- Luc procedure • Removal of root from the sinus • Oro-antral fistula- aetiology, clinical features and various surgical methods for closure 	Must Know		<p>2 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

5	<p>Disorders of the Temporo-Mandibular joint</p> <ul style="list-style-type: none"> • Applied anatomy of the TMJ • Dislocation – types, etiology. Clinical features and management • Ankylosis- Definition, aetiology, clinical features and management • myofacial pain dysfunction syndrome, aetiology, clinical features, management – surgical and non-surgical • internal derangement of the joint • Arthritis of T.M joint 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
6	<p>Infections of the oral cavity</p> <ul style="list-style-type: none"> • Introduction, factors responsible for infection, cause of odontogenic infections, spread of odontogenic infections through various facial spaces • Dento-alveolar abscess–aetiology, clinical features and management • Osteomyelitis of the jaws- definition, aetiology predisposing factors, classification, clinical 	Must Know		<p>5 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

	<p>features and management</p> <ul style="list-style-type: none"> • Ludwigs angina- definition, aetiology, clinical features, management and complications 			
7	<p>Benign cystic lesions of the jaws</p> <ul style="list-style-type: none"> • Definition, classification , pathogenesis • Diagnosis- clinical features, radiological features, aspiration biopsy, use of contrast media and histopathology • Management – types of surgical procedures, rationale of the techniques, indications, procedures, complications etc. 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
8	<p>Tumours of the oral cavity</p> <ul style="list-style-type: none"> • General considerations • Non odontogenic benign tumours of the oral cavity- fibroma, papilloma, lipoma, ossifying fibroma, myxoma etc. • Ameloblastoma- Clinical features, radiologic appearance, and methods of management. 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

9	<p>Oral Cancer</p> <ul style="list-style-type: none"> • Carcinoma of the oral cavity • Biopsy – types • TNM classification • Outline of management of squamous cell carcinoma: surgery, radiation and chemotherapy • Role of dental surgeons in the prevention and early detection of oral cancer 	Must Know		<p>4 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
10	<p>Fractures of the Jaws</p> <ul style="list-style-type: none"> • General considerations, types of fractures, aetiology, clinical features and general principles of management • Mandibular fractures- applied anatomy, classification • Diagnosis- clinical and radiological • Management- reduction – closed and open • Fixation and immobilization methods • Outline of rigid and semi-rigid internal fixation • Fractures of the condyle- aetiology, classification, clinical features, principles of management • Fractures of the middle third of the face • Definition of the mid 	Must Know		<p>9 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

	<p>face, applied surgical anatomy, classification, clinical features and outline of management</p> <ul style="list-style-type: none"> • Alveolar fractures- methods of management • Fractures of the zygomatic complex • Classification, clinical features, indications for treatment, various methods of reduction and fixation • Orbital and nasal bone fractures • Complication of fractures- delayed union, non-union and mal-union 			
11	<p>Salivary glands</p> <ul style="list-style-type: none"> • Diagnosis of salivary gland diseases • Sialography, contrast media, procedures • Infections of the salivary glands • Sialolithiasis- Submandibular duct and gland and parotid duct • Clinical features, management • Salivary fistulae • Common tumours of salivary glands like pleomorphic adenoma including minor salivary glands 	Must Know		<p>2 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
12	<p>Jaw deformities</p> <ul style="list-style-type: none"> • Basic forms – 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room

	<p>prognathism, retrognathism and open bite</p> <ul style="list-style-type: none"> • Reasons for correction • Outline of surgical methods carried out on mandible and maxilla 			<p>teaching</p> <ul style="list-style-type: none"> • Multimedia online teaching
13	<p>Neurological disorders</p> <ul style="list-style-type: none"> • Trigeminal neuralgia - definition, aetiology, clinical features and methods of management including surgery • Facial paralysis - aetiology, clinical features • Nerve injuries – classification, neurorrhaphy etc 	Must Know		<p>1 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
14	<p>Cleft lip and Palate</p> <ul style="list-style-type: none"> • Aetiology of the clefts, incidence. Classification, role of dental surgeon in the management of cleft patients. Outline of the closure procedure. 	Must Know		<p>3 Hours</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
15	<p>Endodontic Surgery</p> <ul style="list-style-type: none"> • Indications diagnosis and management 	Must Know		<p>1 Hour</p> <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

16	Oral Implantology <ul style="list-style-type: none"> • Indications, diagnosis, armamentarium, surgical and prosthetic rehabilitation 	Must Know		2 Hours <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching
17	Ethics <ul style="list-style-type: none"> • Principles code of professional conduct 		Desirable to Know	1 Hour <ul style="list-style-type: none"> • Traditional class room teaching • Multimedia online teaching

III TEACHING SCHEDULE FOR CLINICALS/PRACTICALS

1. Students are required to learn the following

- a. Case history taking
- b. Examination of the patient
- c. Recording blood pressure
- d. Various anesthetic injections techniques
- e. Use of different instruments in Oral surgery
- f. Suturing techniques on models – orange peel/gloves

2. Supervision of students (Chairside/clinical activity)

- a. Case history taking
- b. Examination of the patient
- c. Recording blood pressure
- d. Various anesthetic injections techniques
- e. Use of different instruments in Oral surgery
- f. Suturing techniques on models

RECOMMENDED TEXT AND REFERENCE BOOKS, JOURNALS AND ATLASES

1. Impacted teeth: Alling John F & et al
2. Minor Oral surgery; Howe.GL
3. Essentials of Safe dentistry for the medically compromised patients; Mccarthy F
4. Kruger: Textbook of Oral and Maxillofacial Surgery 6th Edition
5. LJ Peterson: Principles of Oral & Maxillofacial surgery 3rd edition
6. DM Laskin: Oral & Maxillofacial Surgery (Vol. 1 & 2)
7. Geoffrey Howe: Extraction of Teeth: 2nd edition
8. Stanley F Malamed: Medical emergencies in dental office: 7th edition
9. Stanley F Malamed: Handbook of Local Anesthesia: 6th edition
10. Monheims: Local anesthesia and pain control in dental practice
11. Richard G.Topazian: Oral and maxillofacial infections 4th edition
12. HC Killey & Kay's: Outline of Oral Surgery (Part 1 & 2)
13. Killey's fractures of the middle third of the facial skeleton
14. H.C Killey: Fractures of the Mandible
15. Neelima Anil Malik: Textbook of Oral & Maxillofacial Surgery
16. S M Balaji: Textbook of oral and Maxillofacial surgery: 3rd edition
17. Little and Falace's Dental Management of the Medically Compromised Patient
18. Contemporary Dental ethics and professionalism Quintessence publishing

III. SCHEME OF EXAMINATION

A. Theory Marks

University Written Exam : 70 Marks

Viva Voce : 20 Marks

Internal Assessment (Theory): 10 Marks

Total : 100 Marks

Contents	Type of questions and marks	Marks
Multiple choice questions	10X1	10
Long essay	2X8	16
Short essay	6X4	24
Short answers questions	10X2	20
TOTAL		70

Topics distribution and Weightage of marks – Theory

Subject Name: Oral & Maxillofacial Surgery							
Sl. No	Topics	Recommended Marks	Actual Marks in the Question Paper				
			MCQ Total	SLEQ	SEQ	SAQ	
1	SLEQ 1 Question from 1. Local Anesthesia OR 2 Exodontia OR 3. Impaction	1 x 8		8			16
	1 Question from 1. Maxillofacial Trauma OR 2. Infections OR 3. Cysts & Tumors	1 x 8		8			
2	SEQ: 2 Questions from 1. Local Anesthesia OR 2. Exodontia OR 3. Impaction OR 4. Pain OR 5. Nerve Injuries 2 Questions from 1. Maxillofacial Trauma OR 2. Infections OR 3. Cysts & Tumors OR 4. TMJ OR 5. General Anesthesia 2 Questions from 1. Orthognathic Surgery OR 2. Endodontic Surgery OR 3. Pre-Prosthetic Surgery OR	4x2=8				8	24

B. Clinicals

Contents	Marks
Clinicals in Oral Surgery: Extraction of firm tooth	
• Case History	30
• Local anaesthesia technique	30
• Extraction of firm tooth (Maxillary / Mandibular tooth) and management of the patient	30
Internal Assessment	10
TOTAL	100

Prosthodontics & Crown and Bridge

1. Aims and Objectives:

To train undergraduate students so as to ensure competence in general areas of Prosthodontics with adequate knowledge, necessary skills and such attitude which are required for carrying out all the activities essential to replace some or all missing natural teeth. To train the students to understand the basic anatomy of edentulous oral structures and step by step procedures and various techniques involved in the fabrication of removable complete denture prosthesis.

Upon completion of this course the graduating student should be able to:

- a. Demonstrate sound knowledge of the biological and technical aspects of complete and removable partial dentures and their integration with the clinical procedures which will be taught in the succeeding clinical prosthodontics courses.
- b. Apply all the laboratory procedures related to the construction of complete dentures
- c. Identify the different materials, instruments and devices involved in the construction of complete dentures and removable partial dentures as well as their uses.

2. Teaching hours:

Lecture Hours – 74 hours
 Practical Hours – 300 hours
 Total – 374 hours

3. Teaching schedule for Theory

SL. No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
		Complete Denture Prosthodontics		
1	Relating the patient to the articulator	Articulators <ul style="list-style-type: none"> • Articulators based on adjustability • Articulators based on theories of occlusion • Articulators based on the type of record used for their adjustment Selection of Articulator for complete dentures <ul style="list-style-type: none"> • Mean value articulator • Hanau articulator 		1 hour

		<ul style="list-style-type: none"> • Whip mix articulator • Dentatus articulator 		
2	Selecting artificial teeth for edentulous patient	<p>Anterior tooth selection-</p> <ul style="list-style-type: none"> • Pre extraction guides • Size of the anterior teeth • Form of the anterior teeth • The dentogenic concept in selecting artificial teeth <p>Posterior tooth selection</p> <ul style="list-style-type: none"> • Bucco lingual width of posterior teeth • Mesiodistal length of posterior teeth • Cervico Occlusal Length of Posterior Teeth • Types of posterior teeth according to materials • Types of posterior teeth according to cusp inclines 		1 hour
3	Preliminary Arrangement Of Artificial Teeth	<ul style="list-style-type: none"> • Guides for preliminarily arranging anterior teeth • Relationship to incisive papilla • Factors governing the anteroposterior position of the dental arch <p>Setting Maxillary anterior teeth in wax for try in</p> <ul style="list-style-type: none"> • Importance of proper Anteroposterior positioning of the anterior teeth • Setting mandibular anterior teeth in the wax for try in --Horizontal overlap • Preliminary arrangement of Posterior teeth • Orientation of occlusal plane • Tentative buccolingual position of the posterior teeth • Tentative arch form of the posterior teeth <p>Setting posterior teeth</p> <ul style="list-style-type: none"> • Giving guidelines for centric occlusion esthetics and leverage 		1 hour

4	Perfection and verification of jaw relation records	<ul style="list-style-type: none"> • Verifying Vertical Dimension • Verifying the centric relation • Intraoral observation of intercuspation - Intraoral interocclusal records • Extra oral articulator method • Creating Facial And Functional Harmony With Anterior Teeth • Anatomy of natural appearance and facial expression • Normal facial landmarks • Maintaining facial support and neuromuscular balance. <p><i>Basic guides to developing facial and functional harmony</i></p> <ul style="list-style-type: none"> • Preliminary selection of the artificial teeth • Horizontal orientation of the anterior teeth • Vertical orientation of the anterior teeth • Phonetics in the orientation of the anterior teeth • Inclination of the anterior teeth • Harmony in the general composition of anterior teeth • Refinement of individual tooth positions • Concept of harmony with sex, personality and age of the patient • Correlating esthetics and incisal guidance • Patient acceptance of arrangement of anterior teeth 		1 hour
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5	Completion of the try in	<ul style="list-style-type: none"> • Eccentric Jaw relation adjustment, establishing the posterior palatal seal • Protrusive and lateral relations • Controlling factors of movement • Eccentric relation records • Establishing the posterior palatal seal • Arranging posterior teeth for functional harmony • Importance of occlusion • Maintenance of the arches • Maintenance of occlusal harmony Differences in artificial occlusion and natural occlusion • Rational for arranging posterior teeth in TMJ disturbances • Factors of Centric occlusion • Critical components in arranging posterior teeth • Laws protrusive occlusion • Laws of lateral occlusion • Occlusal schemes used in complete • Dentures for the edentulous patients • Anatomic teeth • Non anatomic teeth • Other tooth forms Techniques for arranging cusped teeth in Balanced occlusion • Techniques for arranging cusplless teeth in occlusion. • Appearance and Functional Harmony of Denture Bases • Materials used for denture bases • Acrylic Resin • Metal • Formation and preparation of the mold packing the mold • Preserving the orientation relations • Construction of remounting casts • Completing the rehabilitation of the patient 		2 hours
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		<ul style="list-style-type: none"> • Dentists evaluations • Patients evaluations • Friends evaluations • Elimination of basal surface errors • Errors in occlusion • Interocclusal records for remounting dentures • Interocclusal record of centric relation • Remounting the mandibular denture • Verifying centric relation • Phonetics - Production of voice and Articulation of sounds position of teeth and phonetics • Neutral, Zone, Relief <p>Processing errors</p> <ul style="list-style-type: none"> • Reasons and care • Selective grinding • Remount and correction of occlusal discrepancies • Prosthesis – Insertion • Laboratory procedures in CD • Sequelae of wearing dentures 		
6	Patient instructions, after care and recall and management of patient complaints	<ul style="list-style-type: none"> • Protrusive inter occlusal record • Alternative use of plaster inter occlusal records • Advantages of balanced occlusion in complete dentures • Special instructions to the patient • Individuality of patients • Appearance with new dentures • Mastication with new dentures • Speaking with new dentures • Oral hygiene with dentures <p>Maintaining the comfort and health of the oral cavity in a rehabilitated edentulous patient</p> <ul style="list-style-type: none"> • Post Insertion Adjustments • Adjustments related to the occlusion • Adjustments related to the Denture bases • Subsequent oral examinations and treatments 		1 hour

7	Rehabilitation of the partially edentulous patients (over dentures) tooth-supported complete dentures	<ul style="list-style-type: none"> • Indications and contraindications for over dentures • Selection of abutment teeth • Clinical procedures 		1 hour
8	Immediate Denture Treatment	<ul style="list-style-type: none"> • Indication for immediate dentures • Contraindications to immediate denture service • Delayed and transitional dentures • Treatment planning • Clinical procedures • Waxing and flasking • Preparation of the surgical template • Processing occlusal correcting, and final preparation of the immediate dentures • Surgery and the insertion of the dentures • Postoperative patient instructions • Perfecting the occlusion • Subsequent service for immediate dentures 		1 hour
9	Single complete dentures opposing natural teeth	<ul style="list-style-type: none"> • Maxillary single dentures • Clinical and laboratory procedures • Subsequent problems with single dentures against natural teeth • Mandibular single dentures • Supplemental prosthodontic procedures for the edentulous patient • Over Denture 		1 hour

10	Relining or Rebasing of Complete Dentures	<ul style="list-style-type: none"> • Treatment rationale • Diagnosis • Clinical procedures • <i>Static impression technique closed and open mouth relines/rebases</i> • Functional impression technique • Chair side technique <p>Repair of Complete Dentures And Duplication Of Casts</p> <ul style="list-style-type: none"> • Maxillary and mandibular fracture repair • Repairs using cold-curing resin • Duplication of casts • Reversible hydrocolloid technique • Irreversible hydrocolloid technique 		2 hours
11	Geriatric Dentistry	Management of aged, senior citizens, physically, mentally handicapped patients		1 hr
REMOVABLE PARTIAL DENTURE PROSTHESIS				
12	Introduction , scope and terminologies in RPD	Introduction , scope and terminologies in RPD		1 hr
13	Classification of partially edentulous arches			1 hr
14	Components of removable partial dentures and their functions			1 hr
15	6 Phases of RPD.			1 hr
16	Examination, Diagnosis and Treatment planning			1 hr
17	Oral surgical preparation of the mouth Conditioning of abused and irritated tissues			1 hr

18	Periodontal preparation of the mouth for removable partial denture.	<p>Periodontal diagnosis and treatment planning</p> <p>Initial disease control therapy</p> <p>Definitive periodontal therapy</p> <p>Recall and maintenance</p> <p>Advantages of periodontal therapy</p>		1 hr
19	Surveying	<ul style="list-style-type: none"> • Description of a dental surveyor • Purposes of a surveyor • Factors that determine path of placement and removal • Step by step procedures in surveying a diagnostic cast • Final path of placement • Recording relation of cast to surveyor • Surveying the master cast • Measuring retention and balancing of retention • Influence of survey line in designing of clasps. • Blocking out the master cast. • Relieving the master cast • Paralleled block out, shaped block out, arbitrary block out and relief 		2 hrs
20	Preparation of abutment teeth	<ul style="list-style-type: none"> • Classification of abutment teeth • Sequence of abutment preparation on sound enamel • Abutment preparation using conservative restorations • Abutment preparation using crowns • Splinting of abutment teeth • Use of isolated teeth <i>as abutment</i> 		1 hr

21	Support in distal extension partial denture base	<ul style="list-style-type: none"> • Distal extension removable partial dentures • Factors influencing the support of distal extension bases • Method for obtaining functional support for distal extension base 		1 hr
22	Impression materials and procedures for removable partial dentures	<ul style="list-style-type: none"> • Rigid materials thermoplastic materials • Elastic materials • Impressions of the partially edentulous arch individual impression trays 		1 hr
23	Major connectors	<ul style="list-style-type: none"> • Maxillary Major connectors • Mandibular Major connectors 		2 hrs
24	Minor connectors	<ul style="list-style-type: none"> • Functions • Form and location • Tissue stops • Finishing lines. • reaction of tissues to metallic coverage • Form of occlusal rests and rest seats 		1 hr
25	Rests and rest seat preparation	<ul style="list-style-type: none"> • Interproximal occlusal rest seats • Internal occlusal rests • Incisal rests and rest seats • Lingual rests on canines and incisor teeth • Possible movements of partial denture • Support for rests 		2 hrs
26	Direct retainers	<ul style="list-style-type: none"> • Internal attachments • Extra coronal direct retainers • Relative uniformity of retention • Criteria for selecting a given clasp design • Basic principles of clasp design • Designs of clasps 		4 hrs
27	Indirect retainers	<ul style="list-style-type: none"> • Denture rotation about an axis • Factors influencing effectiveness of indirect retainers • Auxiliary functions of indirect retainers • Forms of indirect retainers • Auxiliary occlusal rests 		2 hrs

		<ul style="list-style-type: none"> • Canine extensions from occlusal rests • Canine rests • Continuous bar retainers and lingual plates • Modification areas • Rugae support • Direct indirect retention • Denture base considerations • Tooth supported partial denture base 		
28	Denture base considerations	<ul style="list-style-type: none"> • Functions of denture bases • Methods of attaching denture bases • Ideal denture base material • Advantages of metal bases • Methods of attaching artificial teeth • Need for relining 		1 hr
29	Laboratory procedures	<ul style="list-style-type: none"> • Duplicating a stone cast • Waxing the partial denture framework • Anatomic replica pattern • Spruing, investing, burnout, casting and finishing of the partial denture framework • Making record base • Occlusal rims • Making a stone occlusal template from a functional occlusal record • Arranging posterior teeth to an opposing cast • Types of anterior teeth • Waxing and investing the partial denture before processing the acrylic resin base • Processing the denture • Remounting and occlusal corrections to an occlusal template • Polishing the denture 		1 hr
30	Initial placement, adjustment and servicing of RPD	Initial placement, adjustment and servicing of RPD		1 hr
31	Temporary removable partial denture	<ul style="list-style-type: none"> • Appearance • Space maintenance • Reestablishing occlusal relationships • Conditioning teeth and residual ridge 		1 hr

		<ul style="list-style-type: none"> • Conditioning the patient for wearing a prosthesis 		
32	Immediate RPD			<i>1 hr</i>
33	RPD opposing complete denture			<i>1 hr</i>
34	Maxillofacial prosthesis	<ul style="list-style-type: none"> ➤ Intraoral prosthesis design considerations <ul style="list-style-type: none"> • Maxillary prosthesis • Mandibular prosthesis ➤ Treatment planning ➤ Framework design ➤ Class I resections ➤ Class II resections ➤ Mandibular flange prosthesis 		<i>1 hr</i>
35	Repair and additions to removable partial denture	<ul style="list-style-type: none"> ➤ Broken clasp arms ➤ Fractured occlusal rests ➤ Distortion or breakage of other components ➤ Loss of teeth not involved in the support or retention of the restoration. ➤ Loss of an abutment tooth necessitating its replacement and making a new direct retainer ➤ <i>Other types of repair</i> ➤ <i>Repair by soldering</i> 		<i>1 hr</i>

ELEMENTS OF FIXED PROSTHODONTICS (CROWN AND BRIDGE PROSTHESIS)

36	Introduction and definitions	<ul style="list-style-type: none"> • Terminologies • Indication and contraindications 		<i>2 hrs</i>
37	Examination, diagnosis and treatment planning and radiological interpretation	<ul style="list-style-type: none"> • Examination, diagnosis and treatment planning and radiological interpretation 		<i>1 hr</i>
38	Selection and choice of abutment teeth	Selection and choice of abutment teeth		<i>1 hr</i>
39	Biomechanical principles of tooth preparation	<ul style="list-style-type: none"> • Preservation of tooth structure • Retention and resistance form • Structural durability of the restoration • Marginal integrity • Preservation of the periodontium • Finish lines and the periodontium • Occlusal bevels • Flares • Gingival finish lines • Preservation of the periodontium • Instrumentation • Water air cooling • Armamentarium 		<i>3 hrs</i>
40	Partial veneer crowns	<ul style="list-style-type: none"> • Maxillary and mandibular posterior three quarter crowns • Anterior three quarter crown • Pin modified three quarter crowns • Seven eighths crown • Proximal half crowns • Inlay • MOD • Onlay 		<i>2 hrs</i>
41	Full veneer crowns	<ul style="list-style-type: none"> • Anterior porcelain fused to metal crowns • Posterior porcelain fused to metal crowns • All ceramic crowns • <i>All metal crowns</i> 		<i>2 hrs</i>

42	Restoration of endodontically treated tooth			2 hrs
43	Provisional restorations			1 hr
44	Isolation of working field and Gingival retractions			1 hr
45	Impression procedures in FPD			1 hr
46	Working Casts and Dies			1 hr
47	<i>Wax pattern</i>			1 hr
48	<i>Pontics & Edentulous ridges</i>			1 hr
49	<i>Finishing, cementing and maintenance of crowns and bridges</i>			1 hr
50	<i>Resin bonded Bridges</i>			1 hr
51	<i>Preparations for Periodontally weakened teeth</i>			1 hr
52	<i>The Functionally Generated Path Technique</i>			1 hr

IMPLANT DENTISTRY				
53	<i>Osseointegration</i>			<i>1 hr</i>
54	<i>Implant materials</i>			<i>1 hr</i>
55	<i>Basic Dental Implant surgery for single Implant</i>			<i>1 hr</i>
56	<i>Implant Prosthodontics</i>			<i>1 hr</i>
57	Aesthetic Dentistry	<ul style="list-style-type: none"> • <i>Introduction and scope of aesthetic dentistry</i> • <i>Anatomy & Physiology of smile</i> • <i>Role of the colour in asthetic dentistry</i> • <i>Simple procedures (roundening of central incisors to enhance esthetic appearance)</i> • <i>Veneers with various materials</i> • <i>Bruxism and management of occlusal attrition</i> 		<i>3 hrs</i>

4. Teaching schedule for Clinicals / Practicals

Sl. No.	Demonstrations of Clinical and Laboratory procedures
1	Primary Impression
2	Border molding and Final impression
3	Recording of Jaw relation
4	Try in
5	Denture insertion
6	RPD
7	Tooth preparation on typhodont to receive full veneer crown
8	Tooth preparation on typhodont to receive porcelain jacket crown
9	Demonstration on RPD designing
10	3- Unit Fixed Partial Denture
11	Maxillofacial prosthesis
12	Obturator and implant supported prosthesis

Sl. No.	CLINICAL ASSIGNMENTS III & IV BDS	Quota
1	Treatment for completely edentulous patients- 4 Patients	04
2	Treatment for Partially Edentulous Patients - Provisional R.P.D	05
3	F.P - preparation of crown - anterior and posterior, one each. D.	01 each
4	Relining & Rebasing, Repair - 1 each.	01 each
5	Immediate denture – 1	01 each
6	Single denture -1	01 each
7	Crown and Bridge Practical : Tooth preparation on typhodont to receive full veneer crown	5
8	Tooth preparation on typhodont to receive porcelain jacket crown	05

5. Recommended Text and Reference books, Journals and Atlases (as per your preference modify the title)

SL NO	AUTHOR	NAME OF THE BOOK AND TITLE	Ed	YEAR OF PUBLICATION	PUBLISHER'S NAME
1	Boucher	Prosthodontic Treatment of edentulous patient	XI	1997	Mosby St. Louis, Missouri,USA
2	Heartwell	Syllabus of complete denture	IV	1992	Varghese publishing house Hind Rajasthan Building,Bombay India
3	Rosensteil	Contemporary fixed Prosthodontics	III	2001	Mosby,st.louis, Missouri,USA
4	Sharry	Complete denture Prosthetics	--	--	--
5	Shilingburg	Fundamentals of tooth preparation	I	1987	Quintessence publications 551 north kimberly drive, Carol stream il-60188-1881
6	Tylman	Theory and practice of fixed prosthodontics	VIII	1993	Ishivaku euroamerica inc,716,hanley industrial court,st. Louis Missouri,USA
7	Jhonston	Modern practice in Fixed prosthodontics	--	--	--
8	Mc Giveney Glen P	Mc Cracken's Removable partial prosthodontics	9 th	1995	Mosby
9	Shillingburg	Fundamentals of fixed prosthodontics	III	1997	Quintessance publications 551,north Kimberly Drive, Carol Street,ii
10	Stewart	Clinical removable partial Prosthodontics	II	1997	All India publishers and distributors

11	Skinner	Science of dental materials	X	1996	W.b. Saunders Company, Philadelphia, USA
12	Craig	Dental Materials, Properties and manipulation	VI	1996	Mosby, Mt. Louis Missouri, USA
13	Combe	Notes on dental materials	VI	1993	Churchill Livingstone, NY, USA
14	Carl Misch	Contemporary implant dentistry	--	--	--
15	Branemark	Tissue integrated prosthesis	--	--	--
16	Bernard G N Smith	Dental crowns and bridges: design and preparation	--	1986	--
17	Aa Grant/ w Johnson	Removable denture prosthodontics	2 nd	--	--
18	Dr Sybille K Lechner, Prof. a Roy, MC Gregor	Removable partial prosthodontics	2 nd	--	--
19	Grant Heath MC Cord	Complete Denture	--	--	Wolfe publishing Europe
20	George F Kantorowicz	A clinical handbook inlays, crowns and Bridges	--	--	Indian edition by Varghese Company
21	Bengt 'o Wall, Arud Kayser	Prosthodontics	--	--	Mosby, Wolfe
22	Gunnar E Carrison	Principles and Management Strategies	--	--	Mosby, Wolfe

6. Scheme of examination:

A) Theory Marks

University Written Exam	: 70 Marks
Viva Voce	: 20 Marks
Internal Assessment (Theory):	10 Marks
Total	: 100 Marks

SCHEME OF EXAMINATION

a. Theory (university written examination)

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short Answers	10	10	2	20
Maximum Marks				70

Topics distribution and Weightage of marks – Theory

Subject Name: Prosthodontics							
Sl. No	Topics	Recommen ded Marks	Actual Marks in the Question Paper				Total
			MCQ	SLEQ	SEQ	SAQ	
1	SLEQ: 1 Question from Complete Denture.	1 x 8		8			16
	1 Question from RPD/FPD	1 x 8		8			
2	SEQ: 2 Questions from CD	2x4=8			8		24
	2 Questions from RPD	2x4=8			8		
	2 Questions from FPD	2x4=8			8		
3	SAQ: 3 Questions from CD	3x2=6				6	20

	2 Questions from RPD	$2 \times 2 = 4$				4	
	3 Questions from FPD	$3 \times 2 = 6$				6	
	1 Question from MFP	$1 \times 2 = 2$				2	
	1 Question from IMPLANT	$1 \times 2 = 2$				2	
4.	MCQ: 3 Questions from CD 3 Questions from RPD 3 Questions from FPD 1 Question from IMPLANT	$3 \times 1 = 3$ $3 \times 1 = 3$ $3 \times 1 = 3$ $1 \times 1 = 1$	10				10
							70

B. Practical/ Clinical Examination:

University Examination: 90 Marks

Internal Assessment : 10 Marks

Total : 100 Marks

i. Case history 10 marks

ii. Complete denture exercise 50 marks

iii. RPD Designing or Tooth Preparation on Typhodont- 30 Marks

ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

1. Aims and Objectives:

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

Knowledge of

- The etiology, pathophysiology, diagnosis and treatment planning of various common Orthodontic problems.
- Various treatment modalities in Orthodontics preventive interceptive and corrective
- Interaction of social, cultural, economic, genetic and environmental factors and their relevance to oro-facial deformities.
- Factors affecting the long-range stability of orthodontic correction and their management
- Personal hygiene and infection control, prevention of cross infection and safe disposal waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases.

Skills

- 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.
- To be competent to fabricate and manage the most appropriate removable appliance for the correction of minor orthodontic problems.

Attitudes

- Develop an attitude to adopt ethical principles in all aspects of Orthodontic practice.
- Treatment care is to be delivered irrespective of the social status, cast, creed or colleagues
- Develop attitude to seek opinion from allied medical and dental specialists as and when required.

Communication skills

- Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular dentofacial problem and to obtain a true informed consent from them for the most appropriate treatment available at that point of time.
- Develop the ability to communicate with professional colleagues, in Orthodontics or other specialties through various media like correspondence, internet, e-video, conference, etc. To render the best possible treatment.

IV. Teaching hours:

Lecture Hours – 40

Practical Hours – 100

Total – 140

V. Teaching schedule for Theory

Sl. No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
1	Diagnostic aids	Classification of diagnostic aids. Essential diagnostic aids, supplemental diagnostic aids	Digital diagnostic aids. CBCT, MRI, Occlusograms	2 hours
2	Case history	Routine case history, Intra and extra oral examination	Functional analysis Palpation for muscles of mastication	1 hour
3	Skeletal Maturity Indicators	Hand wrist radiograph. Cervical vertebrae	Grulich and Pyle method Bjork, Grave and Brown method Singer's method Fishman's method	1 hour

4	Model Analysis	Carey's, Ashley How's, Pond's, Bolton's analysis. Mixed dentition analysis.	Digital model analysis Clinical implications of model analysis.	3 hours
5	Cephalometrics	Cephalostat, types of cephalograms, anatomic land marks, derived land marks, Down's analysis, Steiner's analysis, Tweed analysis.	Wits appraisal Errors in cephalometry Cephalometric super imposition	3 hours
6	Preventive orthodontics	Definition Different procedures undertaken in preventive orthodontics and their limitations Habits Space maintainer	Management of habits Planning for space maintenance.	1 hour
7	Interceptive orthodontics	Definition Different procedures undertaken in interceptive procedure Serial Extraction: Role of muscle exercise as an interceptive orthodontics	Space regainer, interception of habits Interception of skeletal malrelations.	1 hour
8	Methods of Gaining space	Methods of gaining space in the arch: - Indications, relative merits and demerits of proximal stripping, arch expansion and extractions	Distalization appliance design – Pendulum, Jones Jig.	1 hour

9	Expansion in Orthodontics	Expansion appliances in orthodontics Principles Indication for arch expansion Description of expansion appliances and different types of expansion devices and their uses Rapid maxillary expansion	Tissue changes during expansions. Surgically assisted rapid maxillary expansion	1 hour
10	Extractions in orthodontics	Extractions in Orthodontics - indications and selection of teeth for extraction	Contra indications of individual tooth extractions Wilkinson's extraction Compensatory extraction Balancing extraction	2 hours
11	Biomechanical principles of orthodontic tooth movement	Different types of tooth movements Tissue response to orthodontic force application Age factor in orthodontic tooth movement	Chemical mediators to orthodontic tooth movement Orthodontic v/s orthopedic forces Centre of resistance, centre of rotation and force vector in orthodontic tooth movement	3 hours
12	Anchorage	Anchorage in Orthodontics - Definition, Classification, Types and Stability of Anchorage	Extra oral anchorage Implants (temporary anchorage device) Anchorage requirement in orthodontic treatment	2 hours

13	Removable orthodontic Appliances	Components of removable appliances Different type of clasps and their use Different type of labial bows and their use Different types of springs and their uses	Modifications of labial bow Modifications of Adams clasp Properties of orthodontic wires Aligners in orthodontics.	2 hours
14	Myofunctional Appliances	Definition and principles Muscle exercises and their uses in orthodontics Individual Functional appliances namely: Activator, Oral Screens, Frankels function regulator, bionator twin blocks, lip bumper Inclined planes -	Modifications of activator Mechanism of action of various Myofunctional appliances Fixed functional appliance	4 hours
15	Orthopaedic appliances	Extraoral Appliances Headgears Chincup Reverse pull headgears	Clinical management of skeletal class-II and class-III using extra oral appliances.	1 hour
16	Fixed appliances	Fixed appliances - Definition, Indication and Contraindications Component parts and their uses Basic principles of different techniques: Edgewise, Begg straight wire	Stages in fixed appliance treatment. Self ligating brackets Ceramic brackets Lingual brackets	2 hours
17	Diagnosis & treatment planning	General Principles in Orthodontic Treatment Planning of Dental and Skeletal Malocclusions	Timing of orthodontic treatment Enlisting treatment objectives	1 hour
18	Management of class I,II and III malocclusion	Features of skeletal and dental class-I, II, and III malocclusion. Etiology diagnosis and	Stepwise management of class-I, class-II div-I, class-II div-II, class-III malocclusion	3 hours

		treatment.		
19	Management of cleft lip and palate	Incidence, embryological background and etiology of CLCP. Classification of CLCP	Problems associated with cleft stage wise treatment.	2 hours
20	Surgical Orthodontics	Principles of Surgical Orthodontics Surgical exposure of impacted teeth frenectomy, pericision, Orthognathic surgery.	Maxillary Prognathism and Retrognathism. Mandibular Prognathism and Retrognathism Genioplasty	2 hours
21	Adult Orthodontics	Differences between adult and adolescent patients. Multi-disciplinary approach	Biomechanical considerations. Adjunctive orthodontic treatment.	1 hour
22	Retention and Relapse	Definition, Need for retention, Causes of relapse, Methods of retention, Different types of retention devices, Duration of retention, Theories of retention	Fixed retainers. Thermoplastic retainers.	1 hour

2. Teaching schedule for Clinicals / Practicals

S. No.	Topic	Hours
1	Case History Training and Case Discussion – Total 5 case	20
2	Discussion on the given topic	4
3	Cephalometric tracings Down's Analysis Steiner's Analysis Tweed's Analysis	7
4	Adam's Clasp on Anterior teeth Gauge 0.7mm	3
5	Modified Adam's Clasp on upper arch Gauge 0.7mm	3
6	Labial bow Gauge 22 or 0.7mm	9

	One on both upper and lower Long labial bow	
7	Construction of Springs (On upper both sides) Gauge 24 or 0.5mm Finger Spring Single Cantilever Spring Double Cantilever Spring (Z-Spring) T-Springs on premolars	6
8	Construction of Canine retractors Gauge 23 or 0.6mm U - loop canine retractor (Upper and lower) Helical canine retractor (Upper and lower) Buccal canine retractor: - Self supported Buccal canine retractor with Sleeve - 5mm wire of 24 Gauge Sleeve - 19 Gauge needle on any one side Palatal canine retractor on upper both sides - Gauge 23 or 0.6mm	9
9	Model Analysis Carey's, Ashley How's, Pond's, Bolton's analysis. Mixed dentition analysis.	6
10	High Labial bow with Apron spring on upper arch (Gauge of Labial bow - 0.9mm, Apron Spring - 0.3mm)	3
11	Coffin spring on upper arch Gauge 1mm	3
12	Appliance Construction in Acrylic	3
13	Upper and lower Hawley's Appliance	3
14	Upper Hawley's with Anterior bite plane	3
15	Upper Hawley's with Posterior bite plane with 'Z' spring	3
16	Upper Habit breaking Appliance	3
17	Lower inclined plane / Catalan's Appliance	3
18	Upper Expansion plate with Expansion Screw	3
19	Construction of Activator	3
20	Completion of journal	3

3. Recommended Text and Reference books, Journals and Atlases

1. Contemporary Orthodontics – William R Proffit.
2. Orthodontics for Dental Students – White and Gradiner.
3. Handbook for Dental Students – Moyers.
4. Orthodontics – Principles and Practice – Graber.
5. Design, Construction and Use of Removable Orthodontic Appliances – C. Philip.
6. Adams.
7. Clinical Orthodontics: Vol 1 & 2 – Salzmann Orthodontics – Graber and Swine.
8. Textbook of Orthodontics-III Edition, M S Rani, All India Publishers & Distributors, New Delhi.

4. SCHEME OF EXAMINATION

A) Theory Marks	
University Written Exam	: 70 Marks
Viva Voce	: 20 Marks
Internal Assessment (Theory)	: 10 Marks
Total	: 100 Marks

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short Answers	10	10	2	20
Maximum Marks				70

Topics distribution and Weightage of marks – Theory

Subject Name: Orthodontics							
Sl.No	Topics	Recomm ended Marks	Actual Marks in the Question Paper				
			MCQ	SLEQ	SEQ	SEQ	Total
1	MCQ : 10 Questions from any chapter	10 x 1	10				10
2	SLEQ : 2 Question from following chapters Growth & development Classification of malocclusion Etiology of malocclusion and habits Model Analysis Methods of Gaining space Myofunctional Appliances Retention and relapse	2 x 8		16			16
3	SEQ: 6 Questions from the following chapters Development of Dentition Physiology of the stomatognathic system Cephalometrics	6 x 4=24			24		24

	Anchorage in orthodontics Biomechanical principles of orthodontic tooth movement Diagnostic aids Normal Occlusion Skeletal Maturity Indicators Orthopaedic appliances Diagnosis & treatment planning Cleft lip and palate						
4	SAQ: 10 Questions from any chapter	2 x10 =20				20	20
							70

B) Practical/ Clinical Examination:

University Examination : 90 Marks

Internal Assessment : 10 Marks

Total : 100 Marks

Practical: 90 Marks

Exercises	No.	Marks	Total
Spotters	12	2	24
Wire Bending			
a. Clasp		a. 15	
b. Bow		b. 15	40
c. Spring		c. 10	
Case History			20
Record Book			6
Total			90

PEDIATRIC AND PREVENTIVE DENTISTRY

1. Aims and Objectives:

Aims:

- To create a competent graduate in Dental Science who has adequate knowledge, necessary skills and such attitudes which are required for carrying out all the activities appropriate to general dental practice involving the prevention, diagnosis and treatment of anomalies and diseases of the teeth, mouth, jaws and associated tissues.
- The graduate should also understand the concept of community oral health education and be able to participate in the rural health care delivery programs.

Objectives:

(a) Knowledge and understanding:

The student should acquire the following during the period of training.

1. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyse scientifically various established facts and data.
2. Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general-state of health and also the bearing on physical and social well-being of the patient.
3. Adequate knowledge of clinical disciplines and methods, which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive, diagnostic and therapeutic aspects of dentistry.
4. Adequate clinical experience required for general dental practice.

5. Adequate knowledge of biological function and behaviour of persons in health and sickness as well as the influence of the natural and social environment on the state of health so far as it affects dentistry.

(b) Skills:

A graduate should be able to demonstrate the following skills necessary for practice of dentistry:

1. Able to diagnose and manage various common dental problems encountered in a child, keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible.
2. Acquire skill to prevent and manage complications if encountered while carrying out various dental surgical and other procedures.
3. Possess skill to carry out required investigative procedures and ability to interpret laboratory findings.
4. Promote oral health and help to prevent oral diseases wherever possible.
5. Competent in control of pain and anxiety during dental treatment.

(c) Attitudes:

A graduate should develop during the training period the following attitudes.

1. Willing to apply current knowledge of dentistry in the best interest of the patients and the community.
2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
4. Willingness to participate in the continuing education programs to update knowledge and professional skills from time to time.
5. To help and to participate in the implementation of national health programs

2. Teaching hours:

Lecture Hours – 45 hours

Practical Hours – 100 hours

Total – 145 hours

3. Teaching schedule for Theory

S. No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	
1	Child psychology	<ul style="list-style-type: none"> • Definition • Aims of understanding child psychology • Emotional development: Dental fear, Anxiety, Cry and its management • Psychological development from birth through adolescence: Theories • Principle of psychological application in pediatric dentistry dental management • Factors affecting child's reaction to dental treatment 	<ul style="list-style-type: none"> • Psychological disorders including anorexia, bulimia 	4 hours
2	Behaviour Science and its application in Paediatric dentistry	<ul style="list-style-type: none"> • Definition • Classification and types of behavior encountered in dental clinic. • Factors influencing behavior of child patient. • Pharmacological and Non pharmacological management of behavior • Pharmacological principles in pediatric dentistry <ul style="list-style-type: none"> ➤ Drug dosage formulae ➤ Anti-inflammatory Analgesics • Antibiotics commonly prescribed for child patient. • Conscious sedation including nitrous oxide, oxygen inhalation anesthesia: Sedation protocol • General anesthesia 	General anesthesia	4 hours

3	Fluorides	<ul style="list-style-type: none"> • Historical background • Systemic fluorides-availability, agents, concentrations, advantages and disadvantages • Topical fluorides-agents, composition, methods of application both for professional and home use, advantages and disadvantages • Recent fluoride delivery systems –Titanium Tetra Fluoride ,SDF • Mechanism of action and its anti-cariogenic effect • Fluoride toxicity and its management • De fluoridation techniques 		4 hours
4	Paediatric Endodontics	<ul style="list-style-type: none"> • Principles and diagnosis • Classification of pulp pathology • Endodontic Armamentarium <ul style="list-style-type: none"> ➤ Management of pulpally involved primary, young permanent and permanent ➤ teeth including materials used and techniques followed ➤ Pulp capping ➤ Pulpotomy ➤ Pulpectomy • Apexogenesis <ul style="list-style-type: none"> • Apexification • Polpotomy medicaments in primary and permanent tooth • Obturating materials in primary teeth 	<ul style="list-style-type: none"> • Rotary endodontics in primary teeth • Regenerative endodontics 	3 hours
5	Traumatic injuries to teeth	<ul style="list-style-type: none"> • Response of oral tissue to trauma • Definition Classification • Aetiology and incidence • IADT guidelines • Management of trauma to primary teeth • Sequelae and reaction following trauma to primary teeth • Management of trauma to young permanent teeth • Reimplantation 		4 hours

		<ul style="list-style-type: none"> • Storage media for avulsed teeth • Splinting • Effect of traumatic injuries on developing dentition • Prevention of trauma: mouth protectors (SPORTS Dentistry) 		
6	Preventive and Interceptive Orthodontics	<ul style="list-style-type: none"> • Definition • Problems seen during primary and mixed dentition periods and their management • Mixed dentition analysis • Serial extraction • Space management • Recent advances in space management techniques and appliances 	<ul style="list-style-type: none"> • Space Analysis and Cephalometrics • Serial extraction 	3 hours
7	Oral Habits in children	<ul style="list-style-type: none"> • Definition, • Classification and etiology of all deleterious oral habits • Non-nutritive sucking, • Mouth breathing, • Tongue thrusting • Non-functional grinding, • Masochistic and occupational habits • Management of oral habits in children 		3 hours
8	Dental management of children with special health care needs	<ul style="list-style-type: none"> • Definition (AAPD) • Classification • Physically disabled conditions <ul style="list-style-type: none"> ○ Etiology ○ Clinical features ○ Dental Management • Mentally challenged conditions <ul style="list-style-type: none"> ○ Etiology ○ Clinical features ○ Dental Management • Medically compromised conditions <ul style="list-style-type: none"> ○ Etiology ○ Clinical features ○ Dental Management • Visually and hearing impaired conditions <ul style="list-style-type: none"> ○ Etiology 	Genetic disorders and genetic counselling	4 hours

		<ul style="list-style-type: none"> ○ Clinical features ○ Dental Management ● Genetic disorders and genetic counselling 		
9	Pediatric exodontia oral surgical considerations in child	<ul style="list-style-type: none"> ● Extractions in children ● Indications and contraindications ● Advances in Local and general anaesthesia for Pediatric Dentistry ● Minor oral surgical procedures in children 	<ul style="list-style-type: none"> ● Minor oral surgical procedures in children 	4 hours
10	Preventive dentistry	<ul style="list-style-type: none"> ● Definition, Principle and Scope ● Levels of Prevention ● Pit and fissure sealants <p>Minimal Intervention</p> <p>Preventive resin restorations (PRR, CARR)</p> <ul style="list-style-type: none"> ● Silver diamine fluoride ● Fluoride and Non Fluoride Re-mineralizing Agents ● Caries Assessment tools/tests, ● Caries Vaccine 	Caries vaccine	4 hours
11	Dental health education school dental health programmes	<ul style="list-style-type: none"> ● Principles of health education, School Dental Health Programs ● principles and scope ● Levels and types of prevention 		1 hour
12	Dental emergencies in children and management	<ul style="list-style-type: none"> ● Medical emergencies in Dental office 	CPR and its application for Infants and Children.	1 hour
13	Setting up Pediatric dental practice	<ul style="list-style-type: none"> ● Design of Dental Clinic for Pediatric Dental Patients and Special Health Care Needs. ● Dental practice management 		1 hour
14	Dental ethics			1 hour
15	Nano dentistry	Introduction, Principles and techniques – an outline		1 hour

16	Laser dentistry	Applications of Lasers in pediatric dentistry		1 hour
17	Forensic pediatric dentistry	Child abuse and neglect Bite marks		1 hour
18	Implants		Pediatric dental implants	1 hour

4. Teaching schedule for Practical's

S. No.	Preclinical wire bending exercises	30 Hours
1	Straight wire (5 inch) - 1 in No.	
2	'C' Clasp - 2 in No.	
3	Jackson's Clasp (full clasp) - 2 in No.	
4	Adams clasp - 2 in No.	
5	Short labial bow - 2 in No.	
6	Short labial bow - 2 in No.	
7	Long labial bow - 2 in No.	
8	Hawley's appliance - 1 in No.	

Note: Please specify the particulars of the work to be completed by the students

5. Teaching schedule for Clinical

S. No.	Every student	Number
1	Case history discussion	10 quota
2	Scaling	10 quota
3	Topical fluoride application	
4	Extractions	
5	Restorations	

6. Recommended Text and Reference books, Journals and Atlases (as per your preference modify the title)

BOOKS FOR REFERENCE

1. Comprehensive paediatric dentistry - Nikhil Marwah, 4th Edition.
2. Textbook of Pedodontics - Shobha Tandon, 3rd Edition
3. Textbook of Pediatric Dentistry -Damle.S.G Edition
4. Principles and practice of Pedodontics - Arthi Rao
5. Pediatric dentistry principles & practice - Muthu, M.S
6. Dentistry for the Child and Adolescent- Mc Donald
7. Pediatric Dentistry (Infancy Through Adolescence)- Pinkham
8. Clinical Pedodontics- Sidney B.Finn
9. Paediatric Operative Dentistry-Kennedy
10. Behaviour Management- Wright
11. Clinical Use of Fluorides- Stephen H. Wei
12. Textbook of Pediatric Dentistry-Braham Morris
13. Understanding of Dental Caries-Nikiforuk

7. Scheme of examination:

A) Theory Marks	
University Written Exam	: 70 Marks
Viva Voce	: 20 Marks
Internal Assessment (Theory):	10 Marks
Total	: 100 Marks

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short Answers	10	10	2	20
Maximum Marks				70

+Topics distribution and Weightage of marks – Theory

Subject Name: Pediatric and Preventive Dentistry							
Sl. No	Topics	Recommended Marks	Actual Marks in the Question Paper				
			MCQ	SLEQ	SEQ	SAQ	Total
1	SLEQ 1 Question from 1. Development of Occlusion from birth to adolescence 2. Young Permanent teeth importance of First Permanent Molar 3. Dental Caries 4. Pediatric Operative Dentistry 5. Minimal Invasive Dentistry, 6. Preformed crowns / Stainless steel crowns/Anterior Crowns 7. Child psychology	1 x 8		8			16
	1 Question from 1. Behaviour Science and its application in Paediatric dentistry 2. Fluorides 3. Paediatric Endodontics 4. Traumatic injuries to teeth 5. Preventive and Interceptive Orthodontics 6. Oral Habits in children	1 x 8		8			

	7. Dental management of children with special health care needs 8. Preventive dentistry						
2	SEQ:						
	1 Question from 1. Introduction to Pediatric and Preventive Dentistry 2. Growth and Development 3. Development of Occlusion from birth to adolescence 4. Dental Anatomy and Histology 5. Young Permanent teeth importance of First Permanent Molar	1 x 4=4			4		24
	1 Question from 1. Dental Caries 2. Dental Home and Anticipatory Guidance 3. Dental materials used commonly in children and adolescents 4. Case history recording 5. Pediatric Operative Dentistry	1 x 4=4			4		
	1 Question from 1. Minimal Invasive Dentistry, 2. Preformed crowns / Stainless steel crowns/Anterior Crowns 3. Gingival and periodontal diseases in children 4. Dental radiology as related to Pedodontics 5. Setting up of Pediatric Dental Practice	1 x 4=4			4		
	1 Question from 1. Child psychology 2. Behaviour Science and its application in Paediatric dentistry 3. Fluorides 4. Paediatric Endodontics 5. Traumatic injuries to teeth	1 x 4=4			4		

	1 Question from 1. Preventive and Interceptve Orthodontics 2. Oral Habits in children 3. Dental management of children with special health care needs 4. Pediatric exodontia 5. Preventive dentistry	1 x 4=4			4		
	1 Question from 1. Dental health education school dental health programmes 2. Dental emergencies in children and management 3. Dental ethics 4. Nano dentistry 5. Forensic pediatric dentistry	1 x 4=4			4		
3	SAQ: 1 Questions from 1. Introduction to Pediatric and Preventive Dentistry 2. Growth and Development 3. Development of Occlusion from birth to adolescence 4. Dental Anatomy and Histology	1x2=2				2	20
	1 Question from 1. Young Permanent teeth importance of First Permanent Molar 2. Dental Caries 3. Dental Home and Anticipatory Guidance 4. Dental materials used commonly in children and adolescents 5. Case history recording	1x2=2				2	
	1 Question from 1. Pediatric Operative Dentistry 2. Minimal Invasive Dentistry,	1x2=2				2	

	3. Preformed crowns / Stainless steel crowns/Anterior Crowns					
	1 Question from 1. Gingival and periodontal diseases in children 2. Dental radiology as related to Pedodontics 3. Setting up of Pediatric Dental Practice	1x2=2				2
	1 Question from 1. Child psychology 2. Behaviour Science and its application in Paediatric dentistry	1x2=2				2
	1 Question from 1. Fluorides	1x2=2				2
	1 Question from 1. Paediatric Endodontics 2. Traumatic injuries to teeth	1x2=2				2
	1 Question from 1. Preventive and Interceptive Orthodontics 2. Oral Habits in children	1x2=2				2
	1 Question from 1. Dental management of children with special health care needs 2. Pediatric exodontia 3. Preventive dentistry 4. Dental health education school dental health programmes	1x2=2				2
	1 Question from 1. Dental ethics 2. Nano dentistry 3. Laser dentistry 4. Forensic pediatric dentistry 5. Pediatric Dental Implants	1x2=2				2

B. Clinical -100 marks

University exam –	90
Internal assessment (clinical) -10	
Total -	100

- Case history, clinical examination, diagnosis, and treatment planning:
30 marks
- Clinical procedure: 40 marks
 - Oral prophylaxis and topical fluoride application
 - Restoration of decayed teeth
 - Extraction of primary tooth
- Overall management of child patient and post operative instructions
20 marks

PERIODONTOLOGY

1. Aims and Objectives:

1. To educate the students about the biological basics of periodontology, gingival pathology, classification of periodontal diseases, epidemiology, diagnosis and prognosis of periodontal diseases, non-surgical and surgical periodontal therapy and implants.
2. To train the students in diagnosis of gingival diseases.
3. To train the students clinically in hand and ultrasonic scaling techniques and to assist the periodontal surgical procedures.
4. To inculcate good chair side manners and didactic skills

2. Teaching hours:

Lecture Hours – 60

Practical Hours – 100 (30 days approximately)

Total – 160

3. Teaching schedule for Theory

S.No.	Topic	Learning Content Distribution		Teaching methodology with hours
		Must know	Desirable to know	Lecture with audio-visual aids
1	Introduction	General idea about periodontology	Scope of the subject	1h
2	Classification of Periodontal disease	Nomenclature and classical signs of various gingival and periodontal diseases	Older and new concepts of classification	1h
3	Case analysis	Identification and	Clinical implications	2h

	& evaluation I & II	evaluation of signs and symptoms of periodontal diseases		
4	Powered instruments	Mechanics of sonic and ultrasonic instruments	Clinical implications	1h
5	Plaque I & II	Microbiology of periodontal diseases	Clinical implications	2h
6	Calculus and Other local factors	Structure and identification	Clinical implications	1h
7	Evidence based decision making	Study designs, Confounding factors and concepts in decision making	Clinical implications	1h
8	Plaque control (mechanical)	Brushing techniques and interdental cleaning	Indications, contraindications, Advantages and disadvantages of each	1h
9	Plaque control (chemical)	Indications, Purpose, Chlorhexidine mouthwash in detail	Classification, Mechanism of action, Advantages and disadvantages of various chemical plaque control agents	1h
10.	Risk factors	Definition, classification and their effects on progression of periodontal diseases	Clinical implications	1h
11.	Smoking & Periodontal disease	Modification of host bacteria relationship in	Smoking cessation	1h

		smoking		
12.	Basic immunology	Important aspects of host defense processes	Correlation to periodontal disease pathogenesis	1h
13.	Molecular biology	Mechanism of pathogenesis of diseases	Correlation to periodontal disease pathogenesis	1h
14.	Oral malodor	Diagnosis and pathogenesis of halitosis	Treatment	1h
15.	Host bacterial interaction	Biofilm, microbial complexes and pathogenicity	Suspected pathogens	1h
16.	Periodontal pocket (I & II)	Etiopathogenesis, signs and symptoms	Treatment	2 h
17.	Mechanism of bone loss & osseous defects	Patterns of bone loss and classification of defects	Treatment	1h
18.	Genetics & Periodontics	Heritability of major periodontal diseases	Clinical implications	1h
19	Nutritional influences	Effect of nutritional deficiency on periodontal diseases	Clinical implications	1h
20	Endocrinologic influences	Effect of endocrinal disorders and hormonal influences on periodontium	Clinical implications	1h
21	Hematological influences	Effect of hematological disorders on periodontal diseases	Clinical implications	1h

22	Trauma from occlusion	Definition, terminology, classification, concepts of trauma from occlusion	Treatment	1h
23	Pathologic migration & mobility	Etiopathogenesis, signs and symptoms	Treatment	1h
24	Periodontal medicine (I & II)	Association of periodontal disease as a risk for systemic diseases	Clinical implications	2h
25	Chronic & refractory Periodontitis (currently known as Periodontitis)	Etiopathogenesis, signs and symptoms	Treatment	1h
26	Aggressive Periodontitis (currently known as Periodontitis with molar-incisor involvement)	Etiopathogenesis, signs and symptoms	Treatment	1h
27	Periodontal problems in patients with HIV infection	Etiopathogenesis, CDC classification, signs and symptoms	Treatment	1h
28	Periodontitis as a consequence of systemic diseases	Modification of host bacterial relationship in systemic diseases	Clinical implications	1h
29	Splints	Indications, classification, application	Clinical implications	1h

30	Drugs in Periodontics	Drug delivery routes ,principles of therapy	Clinical implications	1h
31	Host modulation & therapy	Host modulation and comprehensive periodontal therapy	Clinical implications	1h
32	Dentinal hypersensitivity	Etiopathogenesis, signs and symptoms	Treatment	1h
33	Advanced diagnostic aids	Advances in clinical diagnosis, radiographic assessment, microbiological assessment and sampling	Clinical implications	1h
34	Prognosis	Types, determinant factors and relationship between diagnosis and prognosis	Clinical implications	1h
35	Rationale of Periodontal therapy & levels of clinical significance	Periodontal therapy accomplishment , healing after therapy and four levels of clinical significance	Effect of treatment	1h
36	Treatment plan	Master plan for total treatment and therapeutic procedures	Clinical implications	1h
37	Periodontal treatment of medically compromised patients	Considerations in treatment protocol of patients with cardiovascular, pulmonary, renal, liver diseases and	Management	1h

		endocrinal disorders		
38	Evaluation of periodontal tissues in Geriatric patients and their management	Periodontal tissues in elderly patients	Management of geriatric patients	1h
39	Periodontal therapy in female patients	Periodontal manifestations of pregnancy, puberty, menopause, contraceptives	Clinical implications	1h
40	Phase I therapy	Non-surgical therapy, detection and removal of dental calculus	Treatment	1h
41	Principles of periodontal surgery	Objectives, indications, local anesthesia, surgical instruments, suturing and periodontal dressings	Clinical implications	1h
42	Curettage & gingivectomy	Objectives, indications, contraindications and procedural methods	Clinical implications	1h
43	Periodontal flap surgery	Objectives, indications, contraindications and various	Clinical implications	1h

		procedural methods		
44	Resective osseous surgery	Objectives, indications, contraindications and various procedural methods	Clinical implications	1h
45	GTR & root conditioning agents	Clinical indications, relevance of the surgical approach, barrier materials, root surface biomodification and agents	Clinical implications	1h
46	Regenerative techniques (bone grafts)	Clinical indications, relevance of the surgical approach, bone replacement grafts, biologically active regenerative materials	Clinical implications	1h
47	Furcation involvement and therapy	Terminology, anatomy, diagnosis and procedural therapy	Clinical implications	1h
48	Failures	Causes of failure,	Management	1h
49	Perio-Endo relationships	Clinical presentations, mechanism, diagnosis and treatment of endo perio lesions	Clinical implications	1h

50	Interdisciplinary approach (Ortho- Perio and Resto – Perio)	Clinical presentations, mechanism, diagnosis and treatment	Clinical implications	1h
51	Periodontal procedures for enhancing esthetic Outcomes i. Esthetic evaluation ii. procedures for Enhancing esthetics	Gingival dimensions and periodontal health, root coverage procedures, papilla reconstruction, crown lengthening procedures and healing	Clinical implications	2h
52	Dental implants (Introduction) i. Concepts of hard & soft tissue integration ii. Possibilities with dental implants iii. Management of dental implant complications	Reosseointegration, timing of implant placement, implant materials, surgical procedures and complications	Clinical implications	1h
53	Recent advances in surgical technology	Newer surgical procedures, materials, lasers, microsurgery	Clinical implications	1h
54	Supportive periodontal therapy	Paradigms for prevention of periodontal diseases, Merin classification	Clinical implications	1h

55	Dental ethics	Dental organization and boards, scope of specialty practice, legal principles, dental insurance	Clinical implications	1h
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4. Teaching schedule for Clinicals / Practicals (Discussion of topic for 15-20minutes followed by patient treatment)

S. No.	Discussion Topic	Hours
1	Introduction and revision of III BDS Portion	3
2	Ultrasonic scaling- demonstration	3
3	Case history discussion (clinical diagnosis)	3
4	Case history discussion - demonstration	3
5	Infection control exam	3
6	Plaque control	3
7	Gingival enlargement	3
8	Classification of periodontal disease	3
9	Chronic & aggressive periodontitis	3
10	Drugs in periodontal therapy	3
11	Curettes-demonstration	3
12	Surgical instruments –demonstration	3
13	Curettage	3
14	Gingivectomy	3
15	Periodontal flap surgery	3
16	Resective osseous surgery	3
17	Regenerative osseous sugery	3
18	Mucogingival sugery	3
19	VIVA-VOCE on the last day of posting (30 th day)	3

5. Recommended Text and Reference books, Journals and Atlases (as per your preference modify the title)

1. Newman and Carranza's Clinical Periodontology – 13th edition
2. Fundamentals Of Periodontal Instrumentation And Advanced Root Instrumentation - 8th edition
3. Clinical Periodontology and Implant Dentistry (Jan lindhe)-6th edition

6. Scheme of examination:

A. Theory Marks

University Written Exam	: 70 Marks
Viva Voce	: 20 Marks
Internal Assessment (Theory):	10 Marks
Total	: 100 Marks

Type of Questions	Questions to be set	Questions to be answered	Marks per Question	Total Marks
M.C.Q.'s	10	10	1	10
Long Essays OR SLEQ	2	2	8	16
Short Essays OR SEQ	6	6	4	24
SAQ or Short Answers	10	10	2	20
Maximum Marks				70

Topics distribution and Weightage of marks – Theory

Subject Name: Periodontics							
Sl. No	Topics	Recommended Marks	Actual Marks in the Question Paper				
			MCQ	SLEQ	SEQ	SAQ	Total
1	SLEQ 1 Question from The Periodontium/ Etiology and Pathology of Periodontal diseases.	1 x 8		8			16
	1 Question from Periodontal Surgical Therapy	1 x 8		8			
2	SEQ: 1 Question from Etiology of Periodontal diseases	1x4=4			4		24
	1 Question from Periodontal Pathology	1x4=4			4		
	1 Question from Diagnosis/Prognosis/ Treatment plan	1x4=4			4		
	2 Questions from Relationship between periodontal disease and systemic health	2x4=8			8		
	1 Question from Surgical therapy	1x4=4			4		

3	SAQ: 2 Questions from Normal periodontium and classification of periodontal diseases	2x2=4			4		20
	2 Questions from Periodontal restorative interrelationships/ Periodontal endodontic continuum	2x2=4			4		
	2 Questions from Oral Implantology	2x2=4			4		
	2 Questions from Part Recent advances / Supportive periodontal therapy	2*2=4			4		
	2 Questions from Non surgical periodontal therapy	2x2=4			4		
4	MCQ 10 Questions from any topic	1x10= 10			10		10

B) Practical/ Clinical Examination:

University Examination : 90 Marks

Internal Assessment : 10 Marks

Total : 100 Marks

Clinicals: 90 Marks

Case history	45 marks
Scaling	45 marks
Total	90Marks

PUBLIC HEALTH DENTISTRY

COURSE CONTENT

A. Aims and Objectives:

AIM:

To acquire knowledge and skills about diseases prevention and control at the community level.

OBJECTIVES:

1. To understand the concepts of health, diseases, epidemiology, preventive dentistry, public health administration, biostatistics and community behavior.
2. To gain the basic skill in health education, health promotion and prevention of common oral diseases.

B. Teaching hours:

Lecture Hours – 60 hours

Practical Hours – 200 hours

Total – 260 hours

C. Teaching schedule for Theory

Sl. No	Topic	Learning Content Distribution	Teaching methodology with hours
1	Introduction to Dentistry	Definition of dentistry, history of dentistry, scope, aims and objectives of dentistry	1
2	Public Health	Health and Disease: - Concepts, philosophy, definition and characteristics	4
		Public Health: - Definition and concepts, history of public health	2
		Dental Council of India (DCI): - Dentist Act 1948 with amendment, Dental Council of India and state Dental Councils Composition and responsibilities	1
		Indian Dental Association (IDA): - Head office, state and local branches	1
		General Epidemiology: - Definition, objectives, methods	6
		Environment Health: - Concepts, principles, protection, sources, purification environmental sanitation of water disposal of waste sanitation, then role in mass disorders	4
		Health Education: - Definition, concepts, principles, methods, and health education aids	4

		<p>Public Health Administration: -</p> <p>Priority, establishment, manpower, private practice management, hospital management</p>	2
		<p>Ethics and Jurisprudence: -</p> <p>Professional liabilities, negligence, malpractice, consents, evidence, contrasts, and methods of identification in forensic dentistry.</p>	2
		<p>Behavior Sciences: -</p> <p>Definition of sociology, anthropology and psychology and their in dental practice and community</p>	2
		<p>Health Care Delivery System: -</p> <p>Center and state, oral health policy, primary health care, national programs, health organizations</p>	2
3	Dental Public Health	<ul style="list-style-type: none"> • Definition and difference between community and clinical health • Epidemiology of dental diseases-dental caries, periodontal diseases, malocclusion, dental fluorosis and oral cancer. • Survey procedures: Planning, implementation and evaluation, WHO oral health survey methods 1997, indices for dental diseases 	1 5 5
		<p>Delivery of Dental Care: -</p> <p>Dental auxiliaries, operational and non- operational, incremental and comprehensive health care, school dental health, planning & evaluation</p>	4
		<p>Payments of Dental Care: -</p> <p>Methods of payments and dental insurance, government plans</p>	2

4	Preventive Dentistry	Definition, levels, role of individual community and profession, fluorides in dentistry, plaque control programs	6
		<ul style="list-style-type: none"> • Prevention of dental caries • Prevention of periodontal disease • Prevention of oral cancer • Prevention of malocclusion • Atraumatic Restorative Treatment (ART) • Occupational Hazards • Evidence Based Dentistry (EBD) 	7
5	Research Methodology	Definition, types of research, designing a written protocol	1
6	Bio-Statistics	Introduction, collection of data, presentation of data, measures of central tendency, measures of dispersion, tests of significance, Sampling and sampling techniques-types, errors, bias, blind trail and calibration	6
7	Practice Management	Place and locality, premises and layout, selection of equipment's and maintenance of records/accounts/audit	2
		<ul style="list-style-type: none"> • Dentist Act 1948 with amendment, Dental council of India, state dental councils • Indian dental association 	2

D. Teaching schedule for Practicals

Sl. No.	Particulars of Work	Hours
1	Oral Health Education Talk	2 hours
2	Visit to: <ul style="list-style-type: none">• School and Water purification plant	10 hrs
3	Preventive Dentistry: <ul style="list-style-type: none">• Comprehensive case history,• Recording of indices,• Application of pit and fissure Sealants and fluoride gel application procedure	50 hrs
4	Exploring the setting of dental practice in rural and urban locations	10 hrs

Note: Please specify the particulars of the work to be completed by the students

E. Recommended Text and Reference books, Journals and Atlases (as per your preference modify the title)

1. Preventive Dentistry by Murray, 1997.
2. Textbook of Preventive and Social Medicine by park, 20th edition.
3. Textbook of Preventive and Community dentistry by Dr S S Hiremath.
4. Introduction to Bio-statistics by B.K. Mahajan.
5. Research methodology- Methods and techniques by C.R. Kothari, 2nd edition.
6. Essentials of Public Health dentistry (community dentistry) by Dr. Soben Peter, 6th edition

F. Scheme of examination:

Theory:

A) Theory Marks

University Written Exam : 70 Marks

Viva Voce : 20 Marks

Internal Assessment (Theory): 10 Marks

Total : 100 Marks

SI No	Type of question	No of questions	Marks per question	Total Maximum marks
1	Multiple choice question	10	1	10
2	Long Essay	2	8	16
3	Short Essay	6	4	24
4	Short notes	10	2	20
Total				70

Topics distribution and Weightage of marks – Theory

SI no	Type of question	No of questions to be set	Marks per question	Total Maximum marks	Lesson content for the question (see the reference list below)
1	Multiple choice question	10	1	10	At-least one question from each section 1-7
2	Long Essay	2	8	2	One question of 8 marks from one of the following sections : 2.1, 2.5, 2.6, 2.7, 2.11, 3.2, 3.3 and 3.4 One question of 8 marks from one of the following sections : 4.1, 4.2, 4.3, 4.5, 6
3	Short Essay	6	4	6	Any topic
4	Short notes	10	2	10	Any topic

Content with number

1. Introduction to dentistry : definition, history, objectives
2. Public Health
 - 2.1. Health and disease
 - 2.2. Public Health Definition and history
 - 2.3. Dental council of India
 - 2.4. Indian dental association
 - 2.5. General epidemiology
 - 2.6. Environment and health
 - 2.7. Health education
 - 2.8. Public health administration
 - 2.9. Ethics and Jurisprudence
 - 2.10. Behavioral sciences
 - 2.11. Health care delivery systems
 - 2.11.1. Centre, state, Oral health policy,
 - 2.11.2. primary health care
 - 2.11.3. National health programs
 - 2.11.4. Health organizations
3. Dental public health
 - 3.1. Definition and differences between community and clinical health
 - 3.2. Epidemiology of dental diseases-dental caries, periodontal diseases, malocclusion, dental fluorosis and oral cancer.
 - 3.3. Survey procedures: Planning, implementation and evaluation, WHO oral health survey methods 1997, indices for dental diseases
 - 3.4. Delivery of dental care: Dental auxiliaries, Incremental and comprehensive health care, School dental health, Planning and evaluation
 - 3.5. Payments of dental care
4. Preventive dentistry
 - 4.1. Prevention of dental caries
 - 4.2. Prevention of Periodontal disease
 - 4.3. Prevention of oral cancer
 - 4.4. Prevention of mal-occlusion
 - 4.5. Atraumatic restorative technique
 - 4.6. Occupational Hazards
 - 4.7. Evidence based dentistry
5. Research methodology
6. Bio-statistics
7. Practice management

B. Practical's: 100 Marks
University Practical Exam – 90 Marks
Internal Assessment – 10 Marks

Sl. No	Exercise	Marks allotted
1	Case History Taking	15
2	Assessment of Oral Health Status using any two relevant Indices	35
3	Preventive Clinical procedures (Any one) (Topical fluoride application & Pit and fissure sealants)	25
4	Oral Health Education Talk	15



SDM College of Medical Sciences & Hospital



SDM College of Dental Sciences & Hospital



SDM College of Physiotherapy &
SDM Institute of Nursing Sciences



Shri Dharmasthala Manjunatheshwara University



SDM Research Institute for Biomedical Sciences



Panoramic View of Campus