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Message from the Dean

Warmest Greetings to All of You.

As all of you continue your journey at this prestigious institute after two successful and colorful academic years, I am pleased to welcome all of you once again to the world of Manipal and wish to compliment for your excellent performance in achieving the ***Number one*** *private dental school in India for the fourth continuous year.*

At the beginning of your second innings where you would be getting trained in your clinical skill, we would like to introduce you to the principles, decorum and discipline in the clinics that we would expect of our students at the institution and the university through this student handbook. The clinical section of the curriculum follows the meticulous simulative training rendered at the various departments during pre-clinical years. This includes the academic requirement with details of the syllabi in each clinical subject as well as other rules set forth for your conduct. This handbook is meant for this very purpose and I hope that you would find it a useful and handy tool for your reference. I also trust that after having perused through its text, you would try and follow the printed letter in spirit during your daily routine. Should there be any queries or problems, you are free to approach the faculty as well as me. We are always available to help you as the course progresses along.

The college has much to offer you for every aspect of life, be it studies, research, community care, sports, cultural activities amongst several others. I would recommend that you to utilize these facilities in the right proportions to find success during your time at the college. I wish you all the success and hope that the clinical training will impart knowledge and skill expected of a profession dentist.

Dr. Nirmala N Rao

Introduction

This handbook is meant to orient the student entering third year of the BDS course to the clinical disciplines of dentistry in which training will be imparted in the forthcoming two academic years. The students shall be responsible for knowing the contents of this handbook and for observing the published regulations diligently.

In this handbook, an attempt has been made to provide a concise overview of the rules and regulations governing the BDS degree programme, curriculum of the third and fourth BDS as per DCI regulations 2007, which include the academic calendar, time-table, syllabus, list of reference books and model question paper in the various subjects of each academic year. Any necessary modifications will be notified during the next two years and these should be followed as well.

Theory classes for the students

The theory classes in various dental and two medical subjects will be held as per the time-table provided. These lectures will be held in the classrooms on the third floor of Centre for Basic Sciences Block. A minimum of 75% attendance is required as per DCI guidelines and has to be rigidly followed. No excuse will be accepted for shortage of attendance and strict action shall be taken. The student is expected to be punctual and be present well-ahead of the scheduled time of the class. Once the concerned teacher has entered the class, the student may not be allowed inside to prevent disrupting the flow of the class. During the lecture, the student should not disturb the proceedings in any manner failing which strict action will be taken.

Clinical postings of the students

In the third year, the student shall have postings in the General Medicine and General Surgery departments of Kasturba Hospital, Manipal in the mornings as per the time-table. Afternoon sessions involve postings in the various clinical disciplines in the Dental Clinics. The clinical training sessions for the fourth year will be held in the morning session.

Dress code for students

The student is expected to dress up in neat and clean formal clothes in accordance with the university guidelines. The student should bear in mind that he/she is representing the medical fraternity while dressing up. No marked make-up, fashion accessories should be displayed on the person. Requisite levels of personal hygiene should be maintained (no long nails, clean hands, neatly maintained hair, etc)

Behaviour (Code of conduct) of students towards patients (when dealing/handling patients)

The patient is a key component in the student's clinical training and hence the student should maintain a high level of responsibility, accountability and respect towards any and every patient they interact with during their training. Being regular during clinical posting is very important to keep up the patient appointments. The student should treat the patient with utmost courtesy and respect, the same kind he/she would expect for self (as if handling one's own relatives). The student should maintain a thorough professional attitude and should not make any disturbing or disparaging comments/ statements towards the patient. The patient comes to you with some problem and needs help regarding the same, and therefore a sympathetic and caring attitude is of prime importance.

Maintenance of patient records/confidentiality

The student will come across patient's hospital and other personal records during interactions with the patients. These should be handled only if the student is authorized and according to the system followed in the concerned department. The details of these records are confidential (as per the law) and should never be discussed with any unauthorized individual, including other students.

Work under supervision

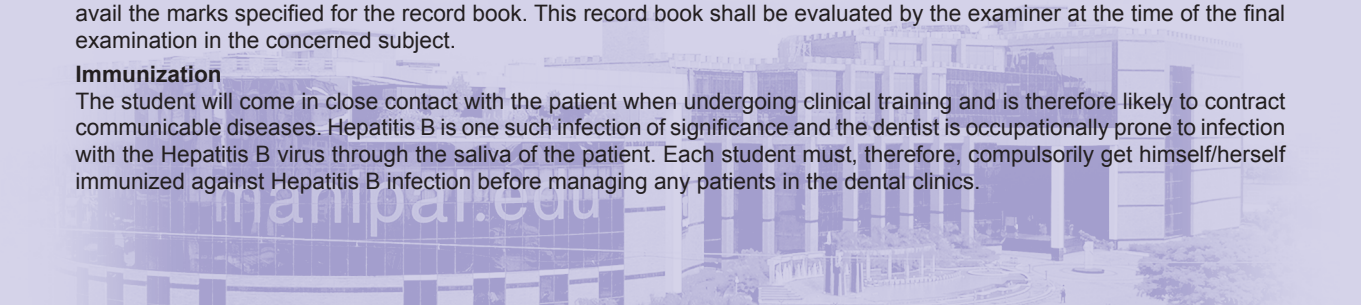
The student during the training period (third and fourth BDS) should always work under supervision of the staff members of the concerned department. The student should intimate a staff member prior to starting either diagnostic or therapeutic procedures involving patients. Once the concerned staff member approves, the student may begin the work. Every step of the procedure should be discussed and shown to the staff member for approval. Correct documentation is to be ensured by duly noting down in the patient's records, the procedure performed and the supervising staff signature should be obtained. Unsigned case sheets or failure to obtain counter signature of the staff on the case sheets will be liable for action.

Log book/record book

The student has to maintain a record of the clinical work done in the concerned department as per the prescribed format provided by the department. This record should be updated and all the work should be countersigned by the supervising staff member. This book should be neatly maintained till the end of the academic year and submitted to the department to avail the marks specified for the record book. This record book shall be evaluated by the examiner at the time of the final examination in the concerned subject.

Immunization

The student will come in close contact with the patient when undergoing clinical training and is therefore likely to contract communicable diseases. Hepatitis B is one such infection of significance and the dentist is occupationally prone to infection with the Hepatitis B virus through the saliva of the patient. Each student must, therefore, compulsorily get himself/herself immunized against Hepatitis B infection before managing any patients in the dental clinics.



Infection control
Infections pose a significant risk to both the patient and the student, especially when providing treatment for oral problems. Therefore the student must maintain the highest possible methods of infection control. The student should ALWAYS use universal barrier protection when examining/treating patients, such as mouth-masks and gloves.

Post-exposure prophylaxis
HIV infection is of serious concern and the student should be aware of the protocol to be observed in cases of suspected exposure to HIV. The student must immediately inform a staff member and wash the area of contact thoroughly. He/she should then report to the casualty section of Kasturba Hospital, Manipal for obtaining post-exposure prophylaxis against HIV infection.

Instruments
In the next two years, the student will have to use a variety of instruments in the diagnosis and therapy for patients. Those instruments that are provided by the institution to the students should be handled with utmost care and the responsibility for any damage lies with the student using them. The student, upon issue of an instrument, should immediately bring to the notice of the concerned staff member, if any damage or malfunction exists. After use, the instruments should be diligently returned back to the department. All necessary instruments and armamentarium that the student has been instructed to obtain for his/her private use should be bought without fail and used in the appropriate situations. No borrowing of instruments will be allowed. The student should take care of his/her personal instruments and the college shall not bear responsibility for their loss or malfunction.

MCODS, Manipal - Set Up and Facilities

<table>
<tr><th colspan="2">III floor of the Centre for Basic Sciences</th></tr>
<tr><td colspan="2">▪ Department of Dental Materials with a unique museum
▪ Department of Oral Pathology & Microbiology
▪ Central Laboratory along with plaster room and casting room for students
▪ Lecture halls
▪ Pre-clinical simulation laboratory for Conservative Dentistry
▪ Pre-clinical Prosthodontics and Dental Material laboratories for development of skills</td></tr>
<tr><th colspan="2">Dental Clinics (housed on three floors) adjacent to Kasturba Hospital</th></tr>
<tr><td>Ground floor:
▪ Reception
▪ Department of Oral Medicine & Radiology
▪ Department of Conservative Dentistry and Endodontics
▪ Department of Periodontology
▪ Department of Oral & Maxillofacial Surgery
▪ Central Autoclave unit</td><td>First floor:
▪ Dean’s Office
▪ Associate Dean’s Office
▪ Administrative Office
▪ Accounts Section
▪ Post Graduate Section of Oral Medicine & Radiology</td></tr>
<tr><td>Second Floor:
▪ Department of Prosthodontics and Crown & Bridge
▪ Department of Pedodontics & Preventive Dentistry
▪ Department of Orthodontics and Dentofacial Orthopedics
▪ Department of Public Health Dentistry
▪ Department of Advanced Courses in Dentistry</td><td>Third Floor:
▪ Board Room
▪ Students Common Room
▪ Seminar Rooms
▪ Post Graduate Computer Center
▪ Dental Stores
▪ Research Room
▪ Ladies & Men’s Rooms for Support Staff</td></tr>
</table>

Facilities available:

- State-of-the-art dental clinics with sophisticated infrastructure equipped with endosonics, cryosurgery, ultrasonic scalers, orthopantomography, digital radiography, computerized cephalometrics, laser fluorescence caries detectors as well as a host of other recent paraphernalia in each dental specialty.
- Excellent laboratory facilities especially, phantom head labs, equipped with 80 dental workstations for pre-clinical training, simulating clinical dental treatment.
- A well equipped Central Laboratory (Bego) for crown and bridge fabrication to gain technical skills in dentistry.
- Dental Materials Museum of the college is one of the best in the country, with an invaluable collection of several fabricated models and various materials that are used in dentistry.
- For undergraduate training programme, the college has air-conditioned lecture halls equipped with LCD facilities.
- Besides these facilities, college also offers public dental health through its various satellite centers in and around Manipal.
- Centre for Advanced Courses in Dentistry (CACD, Manipal) is equipped with the very best of facilities such as the Empress II system for all ceramic work, Obtura II Injectable Thermoplasticized Gutta Percha system, Diagnodent, Friacom and a Closed Circuit Television system, all of which enrich the teaching learning experience.
- Well equipped Mobile Dental Van for rural oral health care services.
- Universal testing machine for mechanical evaluation of various dental materials.
- Multi-viewing trinocular Microscope.

Manipal University Administrators

Dr. Ramdas M. Pai
President and Chancellor

Dr. H.S. Ballal
Pro Chancellor

Dr. Ramnarayan
Vice Chancellor

Dr. G.K. Prabhu
Registrar

Dr. Indira Bairy
Director (Student Affairs)

Dr. H. Vinod Bhat
Pro Vice Chancellor

MCODS, Manipal Administrators

Dr. Nirmala N. Rao
Dean

Dr. Keerthilatha M. Pai
Associate Dean

Heads of the Departments

Dr. Keerthilatha M. Pai
Oral Medicine & Radiology

Dr. Vidya Saraswati
Conservative Dentistry & Endodontics

Dr. G. Subraya Bhat
Periodontology

Dr. Abhay T. Kamath
Oral & Maxillofacial Surgery

Dr. Aparna I N
Prosthodontics and
Crown & Bridge

Dr. Rashmi Nayak
Paediatric &
Preventive Dentistry

Dr. Arun Urala
Orthodontics &
Dentofacial Orthopedics

Dr. Shashidhar Acharya
Public Health Dentistry

Dr. A. R. Raghu
Oral Pathology & Microbiology

Dr. Nagaraja Upadhya P.
Dental Materials

College Office Staff

Mrs. Rekha Rao
Junior Management Executive

Mrs. Sumathi C.
Senior Clerk

Regulations Governing the BDS Degree Programme

Title of the programme:

The programme is named as Bachelor of Dental Surgery (BDS)

Duration of the programme:

The undergraduate dental training programme leading to BDS degree is of four years with 240 teaching days in each academic year. In addition to this, student has to undergo one year of compulsory internship.

Medium:

The medium of instruction and examination in BDS programme is English. However, students are encouraged to learn the local language (Kannada) to communicate better with the patients during treatment process.

Course Curriculum :

In the BDS curriculum, subjects are taught in the form of lectures and demonstrations. Students attend dental clinics from third year onwards. In addition to this, students also attend lectures, demonstrations and clinics in General Medicine and General Surgery in Third year. This is mainly to orient them to the role of dentists in general practice.

This course as a whole is an integration of Basic Sciences, Clinical Dentistry and Practical or Laboratory Skills. The undergraduate course consists of three main components:

The first component consists of subjects common to Medicine and Dentistry like Anatomy, Physiology and Biochemistry, leading to Pharmacology, Pathology, Microbiology and then General Medicine and General Surgery.

The second component runs concurrently with the first and deals with the special aspects of oral and dental tissues, Oral Anatomy and Oral Pathology.

Finally, the third component is based on the foundations of the first two, deals with the clinical and technical aspects of dentistry as is required for general dental practice.

Subjects of Study:

Third Year

1. General Medicine
2. General Surgery
3. Oral Pathology and Oral Microbiology
4. Conservative Dentistry and Endodontics
5. Oral and Maxillofacial Surgery
6. Oral Medicine and Radiology
7. Orthodontics and Dentofacial Orthopedics
8. Paediatric & Preventive Dentistry
9. Periodontology
10. Prosthodontics and Crown & Bridge

Final Year - Part I

1. Orthodontics and Dentofacial Orthopedics
2. Oral Medicine and Radiology
3. Paediatric & Preventive Dentistry
4. Periodontology
5. Oral & Maxillofacial Surgery
6. Prosthodontics and Crown & Bridge
7. Conservative Dentistry and Endodontics
8. Public Health Dentistry

Final Year - Part II

1. Oral & Maxillofacial Surgery
2. Prosthodontics and Crown & Bridge
3. Conservative Dentistry and Endodontics
4. Paediatric & Preventive Dentistry

Attendance:

A minimum of 75% in Theory/Practical/Clinicals separately in all the subjects is mandatory at the end of each academic year. There shall be no condonation of shortage of attendance.

In case of a subject in which there is no examination at the end of the academic year (Non-exam going subject), the percentage of attendance shall not be less that 70% in Theory/Practical/Clinicals separately.

If a candidate does not satisfy the requirement of attendance he/she shall not be permitted to take the university examination.

If a candidate is detained for attendance shortage in any of the subjects, he/she cannot carry the subject to the next year until he/she makes up the attendance in that subject.

A candidate who attends all the classes conducted in an academic year shall be awarded a **Certificate of Excellence**.

Pattern of examination:

Evaluation is a continuous process and is achieved by

1. Formative or Internal Assessment
2. Summative or University Examination

Evaluation is carried out by

- Written test
- Practicals
- Clinicals
- Viva Voce

Internal Assessment:

Three sessional examinations per academic year are conducted periodically by the college in Theory, Practicals/Clinicals and Viva voce in each subject and the marks obtained in these examinations are displayed on the notice board. An average of all the sessional examinations, in theory, practical and clinicals will be added to the marks obtained in the University examination. The university has the access to these academic records maintained in the institution.

DISTRIBUTION OF MARKS FOR EXAM GOING SUBJECTS :

Subjects	Theory					Clinics/Practical			Grand total
	MCQ	Descriptive	Viva voce	Internal Assessment	Total	University	Internal Assessment	Total	
Third Year BDS									
General Medicine	10	60	20	10	100	90	10	100	200
General Surgery	10	60	20	10	100	90	10	100	200
Oral Pathology and Oral Microbiology	10	60	20	10	100	90	10	100	200

Subjects	Theory					Clinics/Practical			Grand total
	MCQ	Descriptive	Viva voce	Internal Assessment	Total	University	Internal Assessment	Total	
Final Year - Part I									
Public Health Dentistry	10	60	20	10	100	90	10	100	200
Periodontology	10	60	20	10	100	90	10	100	200
Orthodontics & Dentofacial Orthopaedics	10	60	20	10	100	90	10	100	200
Oral Medicine and Radiology	10	60	20	10	100	90	10	100	200
Final Year - Part II									
Prosthodontics and Crown & Bridge	10	60	20	10	100	90	10	100	200
Conservative Dentistry and Endodontics	10	60	20	10	100	90	10	100	200
Oral and Maxillofacial Surgery	10	60	20	10	100	90	10	100	200
Paediatric and Preventive Dentistry	10	60	20	10	100	90	10	100	200

Criteria for a pass and classification of successful candidates:

For declaration of pass in a subject, a candidate shall secure 50% marks in the University examination both in Theory and Practical / Clinical examinations separately, as stipulated below:

- A candidate shall secure 50% marks in aggregate of the University theory, Viva Voce and Internal assessment combined together.
- In the University Practical / clinical examination, a candidate shall secure 50% of University practical marks and Internal Assessment combined together.
- In case of Preclinical Prosthetic Dentistry and Preclinical Conservative Dentistry in II BDS, where there is no written examination, minimum for pass is 50% of marks in Practical and Viva voce combined together in University examination including Internal Assessment i.e. 50 / 100 marks.
- Successful candidates who obtain 65% of the total marks or more shall be declared to have passed the examination in First Class. Other successful candidates will be placed in Second Class. A candidate who obtains 75% and above is eligible for Distinction. Only those candidates who have been declared pass in the university examination in the first attempt will be eligible for distinction or class.

Unsuccessful Candidates:

Students who have failed in the examination can appear for the supplementary examination conducted within six months after the regular examination. A student can only appear **twice** for the university examination in an academic year.

A candidate who fails in only one subject in university examination is permitted to go the next higher class. However the candidate must appear for the university examination (six months after the regular examination) in that subject and complete it successfully before he/she is permitted to appear for the next higher examination.

A student, who does not clear the first BDS University Examination in all subjects within three years from the date of admission, shall be discharged from the Course.

Guidelines for appearing for the examinations:

- Except when prevented by illness or other sufficient cause, a student who fails to present himself/herself for examination at the time and place indicated in the published timetable will be deemed to have failed in that part of the examination. Misreading of the timetable will not be regarded as 'sufficient cause'.
- Candidates without the possession of Identity card and Hall ticket (Hall ticket is for university examination only) will not be allowed to enter the examination hall.
- No candidate will be permitted to enter the examination room after the lapse of half-an-hour from the commencement of the examination, and no candidate will be allowed to leave the examination room until after the expiration of half-an-hour from the commencement of the examination. No extra time will be provided for late comers.
- Candidates are forbidden to take into the examination room any unauthorized book, manuscript or other article or any case or bag in which books, papers or unauthorized articles can be carried.
- Any candidate suspected of introducing into the examination room any such items or making use of or copying such material or the papers of another candidate; obtaining or endeavouring to obtain, directly or indirectly, assistance in his/her work or giving or endeavouring to give, directly or indirectly, assistance to any other candidate will be reported to the Chief Superintendent by the invigilator, who shall have power to exclude the candidate from the examination room and will report the matter to the Dean.
- Candidates must not indulge in any behaviour which in the opinion of the Invigilator may disturb other candidates or in any form of conduct which may disrupt the smooth conduct of an examination.
- Candidates are forbidden to communicate with each other in the examination room. All enquiries must be addressed to the Invigilator.
- The impersonation of examination candidates is prohibited and candidates must not allow themselves to be impersonated.
- The use of scrap paper is not permitted and all rough work must be done in the answer books provided.
- Candidates must not leave the examination room until all their written work has been handed in. Candidates must not take from the examination room any answer books (whether used or unused), or other items of examination stationery except for any non-returnable question papers.

In addition, students are expected to strictly abide by the rules and regulations as specified in the hall ticket issued by the university and the candidate found guilty will not be permitted to take practical and viva-voce examination till clearance is obtained from an appropriate authority.

CURRICULUM
OF
THIRD YEAR B.D.S

Academic Calendar for Third BDS students

Commencement of the course	30-07-2012
Annual sports	08 to 13-10-2012
I sessional theory examination	23, 24, 26-11-2012 (Theory)
I sessional practical examination	December - Clinicals/Practicals
Last working day of the I term	22-12-2012
Mid-term vacation	23-12-2012 to 13-01-2012
Commencement of the II term	14-01-2012
II sessional theory examination	1st week of March
II sessional practical examination	
Interclass cultural competition	3rd week of March
College Annual Day	23-03-2013 (tentative)
III sessional theory examination	3rd week of May
III sessional practical examination	
Last date for submission of internal assessment	08-06-2013
Last working day of the II term	08-06-2013
University theory examination	21, 22, 24-06-2013
University practical examination	27 to 29th June and 1st & 2nd July (tentative)
Annual vacation	03-07-2012 to 31-07-2013
Commencement of the next academic year	01-08-2013

Time-table for Third B.D.S.

Days	8 to 9 AM	9 to 10 AM	10.30 to 11.30 AM	11.30 AM to 12.30 PM	2 to 4.30/ 5.00 PM
Monday	Surgery lecture	Oral Pathology lecture	Oral Pathology practical		Dental clinics
Tuesday	Medicine lecture	9.30 a.m. to 12.30 p.m. Medicine Clinics – Batch I Surgery Clinics – Batch II			--do--
Wednesday	Medicine lecture	Oral Pathology lecture	Paediatric dentistry lecture	Perio lecture - I term	--do--
				OMR lecture - II term	
Thursday	Surgery lecture	9.30 a.m. to 12.30 p.m. Surgery Clinics – Batch I Medicine Clinics –– Batch II			--do--
Friday	Oral surgery lecture	Prosthetic lecture	Conservative Dent. lecture	Orthodontics lecture	--do--
Saturday	Public health dentistry lecture	Oral Path. lecture	OMR lecture	Perio lecture	-do-

Batch I : Sl. No. 1 to 50 Batch II: Sl. No. 51 onwards

All lecture classes **will** be held in L.H.2, Centre for Basic Science building and practical classes in the respective department labs.

General Medicine

Introduction

The subject is taught in the third year of BDS program. It involves didactic lectures and clinical sessions. The University exam in the subject is held at the end of third year of the course.

Learning Objectives

- To know the fundamental procedures in systematic examination of patients
- To know the oral manifestations of various diseases
- To know the medical emergencies in dental practice

Theory

S. No.	Description	No. of Hrs.
01	**Introduction** ▪ Aims of medicine ▪ Definitions of signs, symptoms, diagnosis, differential diagnosis Treatment and prognosis	02
02	**Infections** ▪ Enteric fever, AIDS, Herpes simplex ▪ Herpes, zoster, syphilis diphtheria ▪ Infectious mononucleosis, mumps, measles, rubella, malaria	07
03	**Gastro intestinal diseases** ▪ Stomatitis, Gingival Hyperplasia, Dysphagia, Acid Peptic Disease, Jaundice, Acute and Chronic Hepatitis, Cirrhosis of Liver Ascites, Diarrhoea ▪ Dysentery, Amoebiasis, Malabsorption	07
04	**Diseases associated with cardio vascular system** ▪ Acute rheumatic fever, rheumatic valvular heart disease, hypertension, ischemic heart disease, infective endocarditis, common arrhythmias, congenital heart disease, congestive cardiac failure	07
05	**Diseases associated with respiratory system** ▪ Pneumonia, COPD, Pulmonary T.B, Bronchial asthma, Lung abscess, Pleural effusion, Pneumothorax, Bronchiectasis, Lung cancers	07
06	**Hematology** ▪ Anemias, bleeding and clotting disorders, leukemias, lymphomas, agranulocytosis, splenomegaly, oral manifestations of hematologic disorders, generalized lymphadenopathy	06
07	**Diseases associated with the Renal system** ▪ Acute nephritis, Nephrotic syndrome, Renal failure	04
08	**Nutrition** ▪ Balanced diet, Avitaminosis, PEM	03
09	**Diseases associated with Central nerve system** ▪ Facial palsy, facial pain including trigeminal neuralgia, epilepsy, headache including migraine, Meningitis; Examination of comatose patient, Examination of cranial nerve	07
10	**Diseases associated with Endocrinal System** ▪ Diabetes Mellitus, acromegaly, hypothyroidism, thyrotoxicosis, calcium metabolism and parathyroids, Addison's disease, Cushing's syndrome	07
11	**Critical Care** ▪ Syncope, cardiac arrest, CPR, Shock, ACLVF, ARDS	03
12	**Revision**	20
	Total number of hours	**80**

Clinicals

S. No.	Description	No. of Hrs.
01	▪ Clinical training ▪ Taking history ▪ General physical examination including Pulse, BP, Respiration, Clubbing ▪ Cyanosis, jaundice, lymphadenopathy, oral cavity examination CVS, RS, abdomen and facial nerve	120
Total number of hours		**120**

Reference Books

1. Davidson's Principles & Practice of Medicine.
2. Kumar and Clarks text book of Medicine.
3. Medical Problems in Dentistry Crispian Scullly, Rodrick A. Cawson.
4. Medical Emergencies in the dental Office - Stanly F. Malamed.
5. Hutchison's clinical methods.
6. Manipal Manual of Medicine for Dental students.

Model Question Paper

Subject: General Medicine

PART I: 20 MCQ — 15 MINUTES — 10 MARKS

PART II: DESCRIPTIVE PAPER — 2 HOURS 45 MINUTES — 60 MARKS

1. Define anemia. Discuss etiology, clinical features, and management of iron deficiency anemia (2+2+4+2 = 10 marks)

2. Define cirrhosis of liver. Discuss etiology, clinical features, and complications of cirrhosis of liver(2+2+4+2 = 10 marks)

3. Write Short Notes on: (4 x 10 = 40 marks)
   a. Herpes zoster
   b. Oral manifestations of AIDS
   c. Acute viral hepatitis
   d. Clinical features and treatment of lobar pneumonia
   e. Nephrotic syndrome
   f. Acute rheumatic fever
   g. Protein Energy Malnutrition
   h. Pyogenic meningitis
   i. Thyrotoxicosis
   j. Cardio Pulmonary Resuscitation

General Surgery

Introduction

The subject is taught in the third year of BDS course and the University exam is held in the subject at the end of the third year.

Learning Objectives

- To acquaint with various diseases requiring surgical expertise
- To analyze the history and be able to do a thorough physical examination of the patient
- To differentiate benign and malignant diseases

Theory

S. No.	Description	No. of Hrs.
	General Principles of Surgery	
01	**History and General Principles of Surgery** ▪ Sepsis, Asepsis, Antiseptics, disinfectants, sterilization, principles and methods	02
02	**Fluid , Electrolyte and Acid base balance** ▪ Types of Electrolyte and Acid base imbalance, their clinical feature and how to diagnose and manage	02
	Wounds	
03	▪ Classification and types, complications, management with particular reference to oral cavity	01
	Inflammation	
04	▪ Pathophysiology, sequelae, clinical features, management	01
	Infections	
05	**Infections** ▪ Acute and chronic abscess, carbuncle, sinus, fistula, ulceration, Cellulitis, erysipelas, septicemia, pyaemia, toxemia, Cancrum oris, tuberculosis, syphilis, gonorrhea, Actinomycosis, anthrax, tetanus, Gas gangrene	06
06	**Transmissible viral infections** ▪ HIV and Hepatitis with special reference to their prevention and precautions while treating patients in carrier state	01
	Shock and Hemorrhage	
07	**Hemorrhage** ▪ Classification, Clinical features, Management	01
08	**Shock** ▪ Definition, Classification, Pathophysiology, Clinical features and Management of different types of shock	01
09	**Blood transfusion** ▪ Blood groups, Blood products, Indications of transfusion, Complications of Blood transfusion, Blood substitutes. Hemophilia: clinical features and management in relation to minor dental procedures	01
	Tumours, Cysts, Ulcers, Sinus and Fistulae	
10	**Skin tumours** ▪ Squamous cell carcinoma, basal cell carcinoma, Malignant melanoma and Marjolins ulcer	03
11	**Venous disorders** ▪ Varicose veins, Venous Ulcer, Deep vein thrombosis, Thrombophlebitis	02

12	**Arterial disorders** ▪ Arterial occlusion and its effects, clinical features and management of ischemia, Raynauds disease, TAO, Gangrene, Amputations, Haemangiomas, Aneurysms, Arteriovenous fistula	02
13	**Neck swellings excluding thyroid and parathyroid and swellings in general** ▪ Branchial cyst, Branchial fistula, Thyroglossal cyst and fistula, Ranula, laryngocele, Dermoid cyst, lipoma etc.	04
	Diseases of Lymphatic System	
14	**Diseases of Lymphatic system** ▪ Diseases of lymphatics and lymphatic glands of the neck, Tuberculous lymphadenitis, Lymphoma, metastatic lymph node diseases	03
	Diseases of Oral Cavity and Salivary Glands	
15	**Diseases of oral cavity** ▪ Benign disorders, premalignant conditions of oral cavity, oral malignancy	05
16	**Salivary glands** ▪ Benign disorders – inflammation, salivary gland calculi, Tumours of salivary glands	02
	Diseases of the Larynx and Nasopharynx	
17	**Larynx** ▪ Infection and diseases of larynx	03
18	**Tracheotomy** ▪ Principles, classification, procedure, complications	01
19	**Tonsils** ▪ Tonsillitis, complications, Indications of tonsillectomy	01
	Nervous System	
20	**Nervous system** ▪ Principles of peripheral nerve injuries, their regeneration and principles of treatment of nerve injuries	01
	Injuries: Fractures and Burns	
21	**Fractures** ▪ General principles of fractures, clinical presentation and treatment; fracture healing and rehabilitation	03
22	**Burns** ▪ Mechanism of burns, Classification Assessment of burns area, Fluid management and general principle in management in burns and complications	01
	Principles of Operative Surgery	
23	▪ Asepsis, antisepsis and sterilization, Principles of anaesthesia, Principles of tissue replacement, Diathermy, Laser, Suture materials, drains etc.	01
	Anomalies of Development Of Face	
24	▪ Surgical anatomy and development of face, Cleft lip, Cleft palate – principles of management	02
	Diseases of Thyroid and Parathyroid	
25	**Thyroid and Parathyroid** ▪ Surgical anatomy, Disorders of thyroid, hypothyroidism, hyperthyroidism, Thyroid malignancy, inflammatory conditions of thyroid, Hyperparathyroidism	06

Swellings of Jaws		
26	**Swellings of jaws** ▪ Classification, Differential diagnosis and management	03
27	**Biopsy** ▪ Different types of biopsy and techniques	01
28	**Revision**	20
Total number of hours		**80**

Clinics

S. No.	Description	No. of Hrs.
01	**Clinical Training** ▪ History taking, Case sheet writing, ward procedures. ▪ Examination of Ulcers, swellings, thyroid, varicose veins, peripheral vascular diseases, oral malignancy, neck swellings etc.	120
Total number of hours		**120**

Reference Books:

1. Bailey and Love – Short practice of Surgery.
2. Das text book of Surgery.
3. Manipal manual of surgery for dental students – K. R. Shenoy.
4. SRB manual of surgery for dental students.
5. Sabiston's text book of Surgery.
6. Schwartz text book of Surgery.
7. Clinical methods by S. Das.

Model Question Paper

Subject: General Surgery

PART I: 20 MCQ — 15 MINUTES — 10 MARKS

PART II: DESCRIPTIVE PAPER — 2 HOURS 45 MINUTES — 60 MARKS

1. Classify shock. Discuss the pathophysiology, clinical features and management of a case of septic shock. (2+2+2+4 = 10 marks)

2. Classify Hemorrhage. Discuss the Clinical features and management of Hemorrhage. (3+2+5 = 10 marks)

3. Write Short Notes on: (10X 4 = 40 marks)
   a. Rodent ulcer
   b. Cleft Palate
   c. Cystic Hygroma
   d. Complications of Thyroidectomy
   e. Absorbable suture materials
   f. Fluid management in burns
   g. Tuberculous cervical lymphadenopathy
   h. Adamantinoma
   i. Pleomorphic adenoma
   j. Acute laryngitis

Oral Pathology and Microbiology

Introduction

Oral Pathology program in the third year begins with an intensive didactic curriculum that provides a broad understanding of the pathophysiology and behavior of oral and maxillofacial soft and hard tissue disorders. A strong theoretical background of these cystic, neoplastic and non neoplastic lesions will allow the student to review its microscopic features for an exact understanding of the disease process. It is important to notice that making a diagnosis is a prerequisite for choosing the treatment which ensures the best prognosis. Students also have the opportunity to participate in discussion and make presentations, throughout the year.

Learning Objectives

To have a thorough understanding of the pathogenesis, clinical, relevant radiographic and pathological features of

- Odontogenic cysts and tumors
- Salivary gland tumors
- Potentially malignant oral disorders
- Non-odontogenic tumors and various neoplasms of oral soft tissues and jaw bones.
- Mucocutaneous disorders
- Bone disorders
- Oral aspect of metabolic disturbances

S. No.	Description	No. of Hrs.
	Benign and Malignant Neoplasms of the Oral Cavity	
01	**Benign Epithelial Neoplasms** ▪ Papilloma, Keratoacanthoma, Nevi	01
02	**Potentially malignant disorders of the oral cavity** ▪ Leukoplakia, Erythroplakia, Palatal changes associated with reverse smoking, Submucous fibrosis	05
03	**Malignant epithelial neoplasms** ▪ Oral cancer, Basal cell carcinoma, Verrucous carcinoma, Malignant melanoma	04
04	**Benign connective tissue neoplasms** ▪ Fibroma, Aggressive fibrous lesions, Neurofibroma, Schwannoma, Lipoma, Haemangioma, Lymphangioma, Tori, Chondroma, Osteoma, Tumor like lesions	05
05	**Malignant connective tissue neoplasms** ▪ Fibrosarcoma, Osteosarcoma, Giant cell tumor, Chondrosarcoma, Kaposi's sarcoma, Lymphomas, Ewing's sarcoma and Metastatic carcinomas	07
	Tumors of the Salivary Gland	
06	**Benign Neoplasms** ▪ Pleomorphic adenoma, Warthin's tumor and Oncocytoma	02
07	**Malignant neoplasms** ▪ Adenoid cystic carcinoma, Mucoepidermoid carcinoma, Acinic cell carcinoma, Adenocarcinoma	04
08	**Auto immune disorders** ▪ Sjogren's syndrome and Mickuliicz's disease	02
	Cysts of Odotogenic Origin	
09	**Odontogenic cysts** ▪ Odontogenic keratocyst, Dentigerous cyst, Radicular cyst, Gorlin cyst, Lateral periodontal cyst, Epstein's pearls and Bohn's nodules	07
10	**Non odontogenic cyst** ▪ Globulo-maxillary cyst, Nasopalatine cyst, Nasolabial cyst	02
11	**Pseudocysts** ▪ Mucocele, Ranula, Aneurysmal bone cyst, Solitary bone cyst, Stafne's bone cavity	03

	Tumors of Odontogenic Origin	
12	**Tumors of Epithelial origin** ▪ Enameloma, Ameloblastoma, Adenomatoid odontogenic tumor, Calcifying Epithelial Odontogenic Tumor	05
13	**Tumors of Mesenchymal origin** ▪ Peripheral and Central odontogenic fibroma, Odontogenic myxoma, Cementoblastoma	03
14	**Tumors of Mixed origin** ▪ Ameloblastic fibroma, Ameloblastic fibroodontoma, Odontoma	02
15	**Malignant Odontogenic Neoplasms** ▪ Classification, Malignant ameloblastoma, Ameloblastic carcinoma, Primary intra osseous carcinoma	02
	Regressive Alterations of Teeth	
16	**Regressive alterations of dental hard tissues** ▪ Attrition, Abrasion, Erosion, Dentinal sclerosis, Dead tracts, Secondary dentin, Cementicles	02
17	**Regressive alteration of the dental pulp** ▪ Pulp stones, Internal resorption of teeth, External resorption of teeth	02
	Physical and Chemical Injuries of the Oral Cavity	
18	**Physical injuries** ▪ Bruxism, Ankylosed teeth, Traumatic ulcers, Denture sore mouth, Inflammatory fibrous hyperplasia, Inflammatory papillary hyperplasia, Angular Cheilitis, Sialolithiasis, Effects of Radiation	03
19	**Chemical injuries** ▪ Aspirin, Bismuth, Dilantin Sodium, Lead, Mercury, Acrodynia, Silver, Tetracycline, Angioneurotic edema, Drug allergy, Contact stomatitis	03
	Healing of Oral Wounds	
20	▪ Factors affecting healing of oral wounds, Biopsy and exfoliative cytology, Healing of biopsy wound, Healing of extraction socket, Dry socket.	04
	Oral Aspect of Metabolic Disorders	
21	**Non Lipid Reticuloendotheliosis** ▪ Langerhans cell hystiocytosis	02
22	**Disorders associated with Vitamin metabolism** ▪ Rickets, Osteomalacia, Hypophosphatasia, Scurvy, Riboflavin deficiency	03
23	**Disorders in Hormone Metabolism** ▪ Primary and Secondary hyperparathyroidism	01
	Diseases of Bone and Joints	
24	**Diseases of the Bone** ▪ Osteogenesis imperfecta, Cherubism, Cleidocranial dysplasia, Paget's disease of the bone, Fibrous dysplasia, Achondroplasia, Marfan's syndrome ▪ Cemento-osseous dysplasia	09
25	**Disorders of the TMJ** ▪ Ankylosis, Myofacial Pain dysfunction syndrome, Injuries of the articular disk, Rheumatoid arthritis	03
	Diseases of Blood and Blood Forming Organs	
26	**Disorders related to Red Blood Cells** ▪ Pernicious anemia, Iron deficiency anemia, Aplastic anemia, Sickle cell anemia, Erythroblastosis fetalis	03
27	**Disorders related to White Blood Cells** ▪ Agranulocytosis, Cyclic neutropenia, Infectious mononucleosis, Leukemias	02
28	**Disorders related to Platelets** ▪ Thrombocytopenic purpura	01
29	**Diseases involving specific Blood Factors** ▪ Haemophilia, Von Willebrand's disease	02

	Diseases of the Periodontium	
30	**Deposits on the Teeth** ▪ Pellicle, Calculus and Stains	01
31	**Diseases of the Gingiva** ▪ Gingivitis, Gingival hyperplasia, Acute necrotizing ulcerative gingivitis, Desquamative gingivitis	03
32	**Diseases of the Periodontium** ▪ Periodontitis, Localized aggressive periodontitis	01
	Diseases of the Skin	
33	▪ White Spongy Nevus, Ectodermal dysplasia, Lichen Planus, Psoriasis, Pemphigus and Pemphigoid, Erythema Multiforme, Epidermolysis bullosa, Lupus erythematosus, Scleroderma	12
	Allergic and Immunologic disorder of the oral cavity	
34	▪ Recurrent aphthous stomatitis, Orofacial granulomatosis	03
	Diseases of the Nerves and Muscles	
35	**Disturbance of 5th cranial nerve** ▪ Trigeminal neuralgia	01
36	**Disturbance of 7th cranial nerve** ▪ Bell's palsy	01
37	**Other Neurological disorders** ▪ Glossopharyngeal neuralgia, Burning mouth syndrome, Causalgia	01
	Forensic Odontology	
38	**Forensic Odontology** ▪ Introduction, Definition, Aims and its Scope, Determination of age and sex, Bite marks, Rugae pattern, Lip prints and DNA methods for identification	03
	Total number of hours	**120**

Practicals

S. No.	Description	No. of Hrs.
	Benign and Malignant Neoplasms of the Oral Cavity	
01	**Benign epithelial neoplasms** ▪ Papilloma, Nevus	04
02	**Premalignant lesions** ▪ Mild dysplasia, Carcinoma in situ	04
03	**Premalignant condition** ▪ Oral submucous fibrosis	04
04	**Malignant epithelial neoplasms** ▪ Oral squamous cell carcinoma, Verrucous carcinoma	04
05	**Benign connective tissue neoplasms** ▪ Fibroma, Peripheral ossifying fibroma	04
06	**Benign connective tissue neoplasms** ▪ Capillary hemangioma, Lymphangioma	04
07	**Benign connective tissue neoplasms** ▪ Compact osteoma, Cancellous osteoma	04
08	**Tumor- like lesions** ▪ Peripheral giant cell granuloma, Central giant cell granuloma, Pyogenic granuloma	04
	Tumors of the Salivary Gland	
09	**Benign salivary gland neoplasms** ▪ Pleomorphic adenoma, Adenolymphoma	04
10	**Malignant salivary gland neoplasms** ▪ Adenoid cystic carcinoma, Mucoepidermoid carcinoma	04
	Cysts of Oral Cavity	
11	**Developmental cysts** ▪ Orthokeratinized and Parakeratinized odontogenic keratocyst, Dentigerous cyst, Calcifying Odontogenic cyst	06

12	**Inflammatory cyst** ▪ Radicular cyst	02
13	**Cyst of minor salivary gland** ▪ Mucocele	04
	Odontogenic Tumors	
14	**Odontogenic Tumors of epithelial origin** ▪ Ameloblastoma - Follicular, Plexiform	04
15	**Odontogenic Tumors of epithelial origin** ▪ Adenomatoid odotogenic tumor, Calcifying epithelial odontogenic tumor	04
16	**Odontogenic Tumors of mixed origin** ▪ Central cementifying fibroma, Ameloblastic fibroma, Odontoma	04
	Regressive Alteration of Teeth	
17	▪ Attrition, Abrasion, Hypercementosis	04
	Physical and Chemical Injuries	
18	▪ Ankylosis	4
	Diseases of Bone and Joints	
19	▪ Paget's disease of bone, Fibrous dysplasia	4
	Disease of Skin	
20	▪ Lichen Planus, Pemphigus	4
	Total number of hours	**80**

Reference Books:

1 Shafer's Text Book of Oral Pathology (6th Edition) 2009, Rajendran R, Sivapathasundaram. Elsevier
2 Oral & maxillofacial pathology, (3rd Edition) 2009, Brad Neville, Douglas D. Damn, Carl M. Allen, Jerry Bouquot Saunders .
3 Oral Diseases in the tropics. 1993, SR Prabhu, Oxford University Press.
4 Essentials of oral pathology and oral medicine (8th Edition) 2008, RA Cawson, EW Odell, Cawson's. Churchill Livingstone.
5 Oral pathology: Clinical pathologic correlations (5th Edition) 2008, Joseph A. Regezi, James J Sciubba, Richard C. K. Jordan, Saunders
6 Cysts of the oral region (4th Edition) 2007, Mervyn Shear, Paul M Speight. Blackwell Munksgaard.
7 Oral pathology (4th Edition) 2005, JV Soames, JC Southam. Oxford Medical publications.
8 Oral pathology and Diagnosis - Colour atlas with integrated text. 1987, Roderick A Cawson, John W Eveson. Gower medical publishing.

Model Question Paper

Subject: Oral Pathology and Microbiology

PART I : 20 MCQS — 15 Minutes — 10 Marks
PART II : Descriptive Paper — 2 Hours 45 Minutes — 60 Marks

1 Classify hypoplasia of the enamel. Write in detail about environmental enamel hypoplasia. (2 + 8 = 10 marks)

2 Classify salivary gland neoplasms. Write the clinical and histopathological features of Pleomorphic adenoma. Add a note on its histogenesis (2 +2 + 4 + 2 = 10 marks)

3 **Write short notes on the following:** (4x10 = 40 marks)

a. Histopathological features of Necrotizing sialometaplasia
b. Trigeminal neuralgia
c. Myofacial pain dysfunction syndrome
d. Histopathological features of Oral submucous fibrosis
e. Oral manifestation in Cleidocranial dysplasia
f. Histopathological types of Ameloblastoma
g. Histopathological features of Paget's disease of the bone
h. Oral manifestations in Pernicious anemia
i. Histopathological features of Radicular cyst
j. Epithelial dysplasia

Oral Medicine and Radiology

Introduction

Oral medicine: Branch of dentistry which deals with the diagnosis and non surgical management of diseases that are localized to the oral cavity or are oral manifestations of systemic diseases and those phases of dental practice that are essentially concerned with the diagnosis and treatment of medically compromised patients.

Oral and maxillofacial radiology: It is the specialty of dentistry and discipline of radiology concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders and conditions of the oral and maxillofacial region.

Learning objectives

Graduates must be competent in the assessment and diagnosis of patients. More specifically posting in this department will evaluate your abilities with regards to the following:

Oral diagnosis and medicine:

- Record the chief complaint or reason for the patient's visit.
- Obtain and interpreting a thorough history of present illness, medical history, social history, review of systems and dental history.
- Conduct an appropriate clinical and radiographic exam and distinguish oral pathological hard and soft tissue abnormalities.
- Assess the risk of radiation exposure and diagnostic benefits of radiographic procedures, and select the appropriate radiographs required for diagnosis.
- Interpret findings from the history, clinical and radiographic examination and other aids.
- Using the existing data and resources, including consultations, apply critical thinking and problem solving to recognize oral diseases. Identify the etiology, pathogenesis and significance of common disorders. Establish necessary documentation.
- Inform the patient in understandable terms about the patient's oral health problems and their significance.
- Recognize the oral manifestations of systemic disease.
- Recognize the presence of systemic disease and how the disease and its treatment affect the delivery of dental care.

Oral and maxillofacial radiology:

- Using the radographic equipment optimally in due consideration of the radiation risks.
- Performing intraoral and the most common extraoral radiographic examinations on patients in dental practice.
- Interpreting radiographs and correlating the images with the clinical findings to arrive at a diagnosis.

Theory

S. No.	Description	No. of Hrs.
	Introduction & History Taking	
01	**Introduction to oral medicine** ▪ Various definitions and terminologies commonly used in oral medicine	01
02	**Case history and clinical examination** ▪ Parts of case history and relevance of each types of examination and diagnosis	01
03	**Laboratory investigations in oral medicine** ▪ Introduction, classification of laboratory tests, Indications ▪ Interpretation of laboratory tests	02
	Developmental Disorders	
04	**Developmental disorders of teeth** ▪ Disorders affecting number, shape, size etc.	01

05	**Developmental disorders of jaws** ▪ Aplasia, agenesis, hypoplasia, hyperplasia etc.	01
06	**Developmental disorders affecting tongue and oral mucosa** ▪ Macroglossia, microglossia, Aglossia, cheilitis glandularis, cheilitis granulomatosa etc.	01
07	**Lymphatic drainage of head & neck & Differential diagnosis of cervical lymphadenopathy** ▪ Anatomy of lymphatic drainage ▪ Examination of lymph nodes Pathologies affecting lymph nodes of the head and neck region, Differential diagnosis, Management	01
	Pulpal and Periapical Diseases and Spread of oral Infection	
08	**Pulpal diseases** ▪ Pulpal hyperemia, acute and chronic pulpitis	01
09	**Periapical diseases** ▪ Pathogenesis of periapical infection; clinical features	01
10	**Periodontal diseases** ▪ Pathogenesis of periodontal infection; clinical features	01
11	**Spread of oral infection (Focus of infection and focal infection)** ▪ Cellulitis, Osteomyelitis, classification, predisposing factors and treatment	01
	TMJ Disorders	
12	**TMJ disorders** ▪ TMJ anatomy, classification of disorders, clinical features and diagnosis	02
	Salivary Gland Disorders	
13	▪ Developmental disorders; Inflammatory disorders	01
14	▪ Reactive & obstructive disorders	01
15	▪ Autoimmune disorders; Sialosis	01
16	▪ Neoplastic disorders; Functional disorders; Bilateral salivary gland enlargement	01
	Pigmented Lesions	
17	**Pigmented lesions I- Endogenous** ▪ Causes; Clinical features, Differential diagnosis & management	01
18	**Pigmented lesions II- Exogenous** ▪ Causes; Clinical features, Differential diagnosis & management	01
	Nutritional disorders affecting the oral cavity	
19	▪ Vitamin deficiencies and their oral manifestations ▪ Mineral deficiencies and their oral manifestations	01
	Metabolic disorders affecting the oral cavity	
20	▪ Defects in carbohydrate, lipid, protein metabolism and their oral manifestations	01
	Oral Radiology	
19	**Radiology** ▪ Introduction ▪ Definition of Radiology, Brief historical background; Electromagnetic spectrum; Properties of X rays	01
20	**Construction and working of X-ray tube** ▪ Parts of X-ray machine and tube, Functioning of X-ray tube; Bremsstrahlung Radiation; Characteristic radiation	01
21	**Factors controlling X-ray beam** ▪ Tube voltage; Exposure time; Tube current ▪ Filtration; Collimation; Inverse Square Law	01

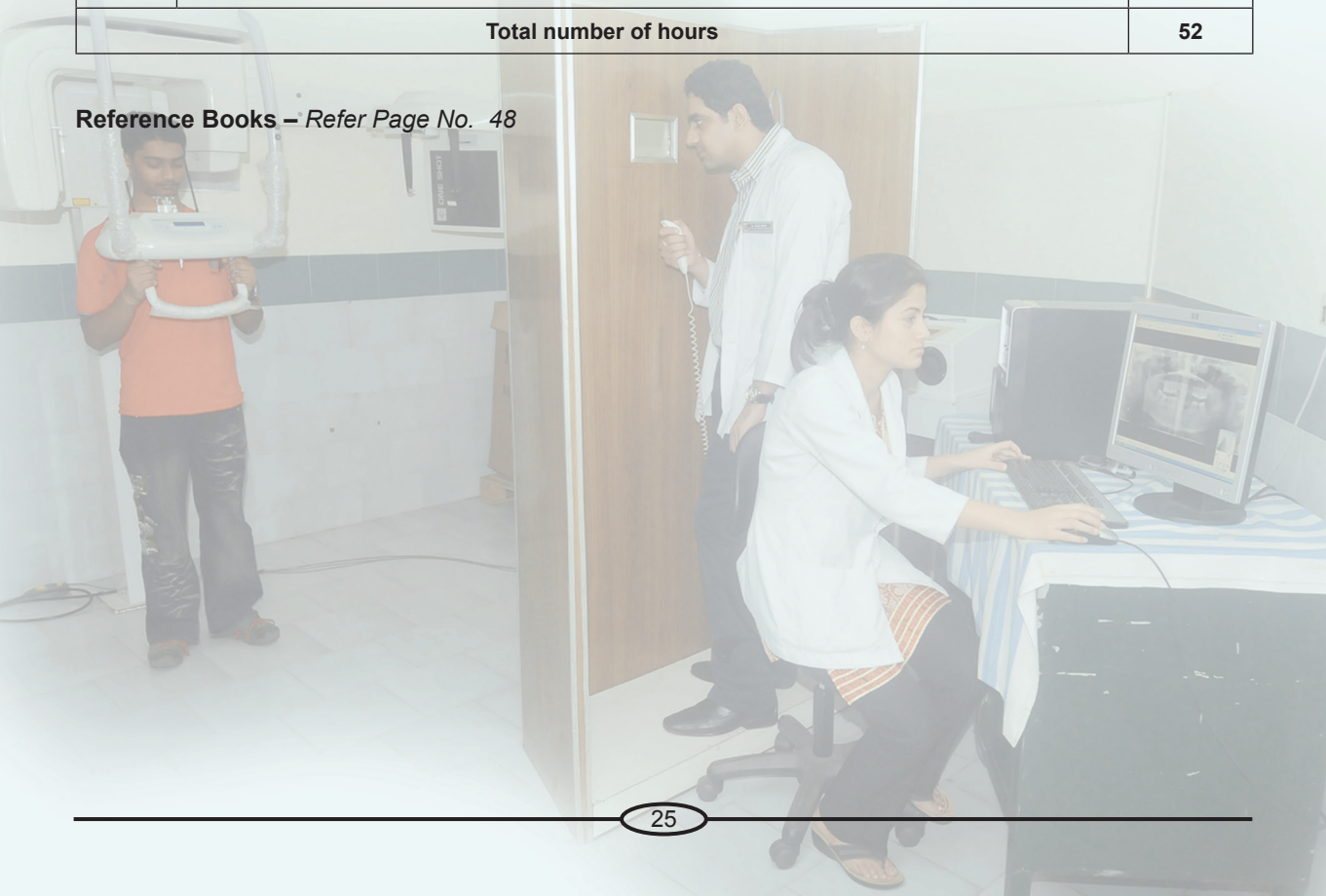
22	**Interaction of X-rays with matter** ▪ Beam attenuation; Coherent scatter ▪ Compton scatter; Photoelectric absorption	01
23	**Films used in dental radiology** ▪ Composition of X-ray film; Direct exposure film; Screen film; Periapical film; Bitewing film; Occlusal film; Film speed	01
24	**Intraoral radiographic techniques** ▪ Bisecting angle technique; Paralleling technique; Comparison of the two techniques; Bitewing radiography; Occlusal Radiography	02
25	**Processing of X-ray films** ▪ Concept of Latent image ▪ Composition and function of processing solutions; Darkroom requirements ▪ Manual processing; Automatic processing	01
26	**Ideal Radiograph** ▪ Definition, criteria to evaluate periapical radiograph, factors controlling diagnostic quality of radiograph	01
27	**Anatomic landmarks in IOPA radiographs** ▪ Those common to both jaws ▪ Maxillary landmarks ▪ Mandibular landmarks	01
	Forensic Odontogy	
28	▪ Forensic identification: Age estimation, bite mark analysis, palatal rugae analysis	01
29	▪ Dental and maxillofacial radiography in forensic science	01
	Endocrine Disorders	
30	▪ Pituitary gland disorders and Diabetes mellitus - Oral manifestations and dental considerations	01
31	▪ Thyroid and parathyroid disorders - Oral manifestations and dental considerations	01
32	▪ Adrenal glan and disorders - Oral manifestations and dental considerations	01
	Cardiovascular Disorders	
33	▪ Pathophysiology (In brief) & clinical features, Investigations; Dental implications	01
	Respiratory Disorders	
34	▪ Pathophysiology (In brief) & clinical features, Investigations; Dental implications	01
	Gastrointestinal Disorders	
35	▪ Pathophysiology (In brief) & clinical features, Investigations; Dental implications	01
	Renal Disorders	
36	▪ Pathophysiology (In brief) & clinical features, Investigations; Dental implications	01
	Hematologic Disorders	
37	▪ RBC disorders and their effects on oral cavity	01
38	▪ WBC disorders and their effects on oral cavity	01

39	▪ Platelet disorders. Causes of bleeding from oral cavity and its investigation, & management	01
Dental consideration in pregnant patient		
40	▪ Dental management of pregnant patients, Drugs contraindicated	01
HIV infection and AIDS		
41	▪ Infection control; Oral manifestations; Dental considerations	01
Total number of hours		**44**

Clinicals:

S. No.	Description	No. of Hrs.
01	**Orientation** ▪ Case history taking: class ▪ Clinical examination: demonstration ▪ Recording vital signs ▪ Vitality test for teeth: Heat, Cold and Electric Pulp testing	52
02	**Case history recording and examination of one another** ▪ Case history taking and examination of atleast three patients	
03	**Introduction to Radiology** ▪ Demonstration of IOPA technique- BAT ▪ Hands On experience of Radiographic examination ▪ Identification of radiograph and anatomic landmarks	
Total number of hours		**52**

Reference Books – *Refer Page No. 48*



Peadiatric and Preventive Dentistry

Introduction

The broad goal of the teaching of undergraduate students in Paedodontics aims at providing comprehensive, preventive and therapeutic oral and general health care knowledge and training in clinical skills in order to enable the students to effectively deal with the problems encountered in a child patient. This course consists of a lecture component and a clinical component.

Learning objectives

- Didactic lecture: The student is expected to acquire adequate knowledge regarding the theoretical basis towards understanding and managing pedodontic problems.
- Clinical postings: The student acquires the motor skills necessary to render care for children. Clinicalinstruction aims for a transition from the educational to the practice setting. The student willbe given an opportunity to perform the clinical procedures commonly associated with children'sdentistry, under staff supervision. The concept of comprehensive care will be adapted so that the student develops an awareness of the appreciation for the total child care.

Theory

S. No.	Description	No. of Hrs.
	Introduction to Pedodontics	
01	▪ History, definition, aims, objectives and scope	02
	Growth and development	
02	**Introduction** ▪ Definitions, importance of study of growth, prenatal growth, Factors affecting growth	02
03	**Pedologic anatomy** ▪ Post natal growth and development including development of maxilla and mandible and age related changes	03
04	**Principles and theories of growth** ▪ Differential growth, cephalocaudal gradient of growth, theories of growth, growth spurts and growth trends	02
05	**Growth assessment parameters** ▪ Various methods of growth assessment (invitro and invivo) including Krogman's ages	02
	Development of dentition and occlusion	
06	**Introduction** ▪ Development of teeth and associated structures ▪ Chronology of teeth, Eruption and shedding of teeth	02
07	**Predentate period** ▪ Gum pad stage with self correcting anomalies and changes occurring from 0-6 months of age	02
08	**Primary dentition** ▪ Features of primary dentition, Types of primary dentition, spaces in the dentition, occlusion, arch changes and self correcting anomalies, Teething disorders and management	02
09	**Mixed dentition** ▪ First transitional period, second transitional period, intertransitional period, occlusal characteristics, arch dimension changes and self correcting anomalies, Importance of first permanent molar	02
	Dental caries	
10	**Introduction** ▪ Definition, classification, etiology, including early theories and current concepts and risk factors	02

11	**Diagnosis of caries, caries risk assessment** ▪ Caries pattern in primary, young permanent and permanent teeth, Various methods of caries diagnosis including recent methods, caries risk assessment and caries activity tests	02
12	**Nursing caries and ECC with management** ▪ Definition, etiology, clinical features, clinical stages, management and prevention of nursing caries, concept of early childhood caries	02
13	**Rampant caries and management** ▪ Definition, etiology, clinical features, management and prevention of rampant caries. Differences between nursing caries and rampant caries	02
	Pediatric Restorative Dentistry	
14	**Principles and concepts of cavity preparation** ▪ Differences between primary and permanent teeth and relevance to cavity preparation, principles of operative dentistry and modifications, classification of cavities by Finn	03
15	**Isolation and matrices** ▪ Absorbents, saliva ejectors, rubber dam and other methods of isolation as applied to pediatric patients, matrices and wedges used in pediatric operative dentistry	03
16	**Minimal Intervention Dentistry** ▪ Principles and concepts, changing concepts and techniques in pediatric operative dentistry	03
17	**Modern restorative materials techniques** ▪ Modern restorative materials and cavity designs to suit the newer materials	02
18	**Semi permanent restorations** ▪ Indications, contraindications and technique of placement of stainless steel crowns	02
	Total number of hours	**40**

Clinicals

S. No.	Description	No. of Hrs.
01	Model work for restorative procedures on extracted teeth using airotor hand piece ▪ Class I cavity preparation and restoration with Amalgam ▪ Class II cavity preparation and restoration with Amalgam ▪ Class III cavity preparation and restoration with GIC ▪ Class IV cavity preparation and restoration with GIC ▪ Class I cavity preparation and restoration with Composite ▪ Pit and Fissure sealant application	53
02	Demonstration of use of various isolation techniques including use of rubber dam and matrices	
03	End posting exam (viva-voce)	
	Total number of hours	53

Reference Books – *Refer Page No. 83*

Orthodontics and Dentofacial Orthopedics

Introduction

Theory and practical classes are held in Third year BDS course. It involves didactic lectures and clinical postings.

Objectives

- To understand the basics of growth and development, diagnosis.
- To fabricate components of removable appliances.
- To fabricate simple removable appliance.

Theory

S. No.	Description	No. of Hrs.
	Introduction to Orthodontics	
01	▪ Definition & historic background ▪ Aims & Objectives, Need for Orthodontics	01
	Growth & Development	
02	Definition, Differential Growth	01
03	Growth spurts, Factors influencing growth and development	01
04	Methods of measuring growth, Clinical Application of Growth and Development	01
	Morphologic Development of Craniofacial Structures	
05	Osteology & Myology of the bones and muscles of cranium & face, Methods of bone growth	01
06	Prenatal growth of craniofacial structures	01
07	Postnatal growth of cranial base	01
08	Postnatal growth of maxilla	01
09	Postnatal growth of mandible	01
	Determinants of Facial Growth	
10	Genetic, Sutural, Cartilaginous theories	01
11	Functional matrix theory, Van Limborg's	01
12	Cybernetic theory	01
	Development of Dentition	
13	Development of tooth, Theories of eruption, Primary dentition	01
14	Mixed dentitional stage, Permanent dentition period	01
	Functional Development of Dental Arches and Occlusion	
15	Factors influencing functional development of dental arches and occlusion. Forces of occlusion, Wolfe's law of transformation of bone, Trajectories of forces	01
	Malocclusion	
16	Concept of normal occlusion, Definition of malocclusion, Description of different types of dental, skeletal and functional malocclusion	01
	Classification of Malocclusion	
17	Principle, description, advantages and disadvantages of classification of malocclusion, Angle's classification	01

18	Classification of malocclusion by Simon, Lischer and Ackerman and Proffitt	01
	Normal And Abnormal Function of Stomatognathic System	
19	Buccinator mechanism, speech, deglutition, maturation of other functions	01
	Etiology of Malocclusion	
20	▪ Definition, importance, classification, local and general etiological factors ▪ Etiology of following different types of malocclusion: Midline diastema, Spacing, Crowding, Cross Bite: Anterior/Posterior, Class II Malocclusion, Class III Malocclusion, Deep bite, Open bite	01
	Diagnosis and Diagnostic Aids	
21	▪ Definition, Importance and classification of diagnostic aids ▪ Importance of case history and clinical examination in orthodontics ▪ Study Models: Importance and uses, preparation and preservation of study models	01
22	▪ Importance of intraoral X-rays in orthodontics ▪ Panoramic radiographs: Principles, advantages, disadvantages and uses	01
	Cephalometrics	
23	▪ Advantages, disadvantages, definition, description and use of cephalostat ▪ Description and uses of anatomical landmarks lines and angles used in cephalometric analysis	01
24	▪ Analysis: Steiner's, Down's, Tweed's, Ricket's-E- line, Electromyography and its uses in orthodontics	01
25	**Revision**	16
	Total number of hours	**40**

Practicala/Clinics

S. No.	Description	No. of Hrs.
01	C- clasp (4 Samples)	06
02	Full clasp (4 Samples)	06
03	Adams Clasp (4 Samples)	06
04	Short labial bow (4 Samples)	06
05	Palatal finger spring (4 Samples)	06
06	Z spring (4 Samples)	06
07	Helical canine retractor (2 Samples)	06
	Total number of hours	**42**

Reference Books – *Refer Page No. 55*

Periodontology

Introduction

Periodontology is the specialty of dentistry which encompasses the prevention, diagnosis, and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes. It also includes the maintenance of health, function and esthetics of these tissues and the regeneration of supporting structures by grafting or implantation.

There would be dialectical lectures and clinical sessions scheduled for the students in third as well as fourth BDS.

Learning objectives

- To understand the basic structure and function of periodontium in health and disease.
- To diagnose the periodontal disease, plan and perform appropriate periodontal treatment.
- To be competent to perform thorough supra and subgingival scaling, root planing and minor periodontal surgical procedures.
- To understand the basic concepts of periodontal surgical procedures including the regeneration of periodontium.
- To be able to give proper post treatment instructions and do peridic recall and evaluation.
- To be familiar with the concepts of periodontal regeneration, osseointegration and basic surgical spects of implantology.

Theory

S. No.	Description	No. of Hrs.
	Introduction	
01	**Definitions:** Periodontology, Periodontics, Periodontia, brief historical background, Scope of Periodontics	01
	Development, structure and Biology of the Periodontium	
02	**Gingiva -1** ▪ Epithelium [Junctional epithelim in detail]	01
03	**Gingiva - 2** ▪ Connective tissue [Epithelial – Mesenchymal interactions], Periodontium of deciduous dentition	01
04	**Periodontal ligament** ▪ Structure and function	01
05	**Cementum** ▪ Classification, structure and function	01
06	**Alveolar bone** ▪ Structure and function	01
	Age Changes in the Periodontal Structures and their Significance in Geriatric Dentistry	
07	**Aging and Periodontium** ▪ Age changes in teeth and periodontal structures and their association with periodontal diseases	01
	Defense Mechanisms in the Oral Cavity	
08	**Epithelium, Saliva and other defense mechanisms in the oral environment** ▪ Oral epithelium, Junctional Epithelium, Antibacterial Factors in saliva, Salivary Antibodies, buffers, coagulation factors, other defense mechanisms	01
09	**Gingival Crevicular Fluid** ▪ Composition, Collection, Clinical Significance	01
	Classification of Periodontal Diseases	
10	**Classification of Gingival and periodontal diseases** ▪ Need for classification, Scientific basis of classification ▪ Classification of gingival and periodontal diseases [AAP World Workshop 1989, 1999]	01
	Gingival Diseases	
11	**Gingivitis - 1** ▪ Classification, Stages of gingivitis	01
12	**Gingivitis - 2** ▪ Clinical features of gingivitis and Physiologic gingival changes associated with tooth eruption	01

13	**Gingivitis - 3** ▪ Desquamative gingivitis, Oral mucous membrane in childhood diseases	01
14	**Acute gingival infections - 1: ANUG – 1 and ANUG – 2** ▪ Etiology and clinical features, Diagnosis and treatment	01
15	**Acute gingival infections - 3** ▪ Acute herpetic gingivostomatitis, Periocoronitis, Traumatic changes in periodontium of a child	01
16	**Gingival enlargements - 1** ▪ Classification, Inflammatory, Drug induced, Idiopathic	01
17	**Gingival enlargements - 2** ▪ Systemic, false and management	01
	Epidemiology of Gingival and Periodontal Diseases	
18	**Indices – 1** ▪ Definition of Epidemiology, Index, Incidence, Prevalence, Endemic, Epidemic, Pandemic, Public health significance, Classification of indices, detailed understanding of OHI-S	01
19	**Indices – 2** ▪ Detailed understanding of Plaque index [Silness and Loe], Gingival index [Loe and Silness], Russell's index, CPITN, CPI, PSR	01
	Etiopathogenesis	
20	**Dental Plaque – 1** ▪ Definitions: Dental Plaque, Materia alba Plaque as a Biofilm, composition, formation, maturation, types, Significance of Biofilm, Disclosing agent – relevance	01
21	**Dental Plaque – 2** ▪ Interaction among different plaque bacteria, early and late colonizers, food web, Sub gingival microbial complexes	01
22	**Dental Plaque – 3** ▪ Microbial specificity, Key characteristics of pathogens, Microbiology of periodontal diseases	01
23	**Dental Calculus** ▪ Calculus and other plaque retentive factors [anatomic] ▪ Definition, types, composition, attachment, theories of formation, role of calculus in periodontal disease	01
24	**Extension of gingival inflammation** ▪ Mechanism of spread of inflammation from gingival area to deeper periodontal structures. Factors that modify the spread	01
25	**Pocket** ▪ Definition, signs and symptoms, classification, pathogenesis, histopathology, root surface changes and contents of the pocket	01
26	**Patterns of bone destruction** ▪ Bone Loss and Patterns of bone destruction	01
27	**Trauma from Occlusion** ▪ Definition,Type, Tissue Response to Increased and Insufficient Occlusal Forces (Histopathological changes), Influence on marginal Periodontitis, Measures of Management	02
28	**Habits** ▪ Parafunctional habits and their periodontal significance: Bruxism, tongue thrusting, mouth breathing, lip biting and occupational habits	01
29	**Iatrogenic factors** ▪ Conservative dentistry – restorations, contact point, contour, surface roughness, marginal ridge, occlusal surface, overhanging restorations, interface between restorations and teeth, biologic width ▪ Prosthodontics – Interrelationship, bridges and other prostheses, pontics (types), Gingival protection theory, Muscle action theory and theory of access to oral hygiene ▪ Orthodontics – Interrelationships, Removable appliances, fixed appliances, retention of plaque, bacterial changes	01
30	**Food impaction** ▪ Definition, Types, Etiology, Hirschfeld's classification, signs, symptoms and sequelae of treatment	01

31	**Systemic diseases - 1** ▪ Nutrition: Vitamin C and Proteins	01
32	**Systemic diseases - 2** ▪ Sex hormones – Periodontal manifestations and management of changes occurring during puberty, menses, pregnancy, menopause, oral contraceptives	01
33	**Systemic diseases - 3** ▪ Hemorrhagic diseases (Leukemia, clotting factor disorder, platelet disorders) including lab investigations and Dental implications	01
34	**Systemic diseases - 4** ▪ AIDS and Periodontium ▪ CDC classification, Oral/Periodontal findings, Dental implications	01
	Risk Factors	
35	**Risk factor - 1** ▪ Terminologies related to risk assessment ▪ Smoking and periodontal disease	01
36	**Risk factor - 2** ▪ Diabetes and periodontal disease	01
	Systemic effects of periodontal diseases	
37	**Periodontal Medicine - 1** ▪ Focal infection theory, CVS	01
38	**Periodontal Medicine - 2** ▪ Pregnency outcome, COPD	01
	Host response	
39	**Host response - 1** ▪ Mechanism of initiation and progression of periodontal diseases ▪ Inflammatory cells [Masr cells, neutrophils, macrophases, lymphocytes] ▪ Immunoglobulins ▪ Complementory system ▪ Cytokines [in brief]	01
40	**Host response - 2** ▪ Transendothelial migration ▪ Leukocyte fuctions and alterations (PMN disorders)	01
41	**Host response - 3** ▪ Microbial interactions with host	01
42	**Host response - 4** ▪ Connective tissue destruction and periodontal disease activity ▪ Continuous paradigm ▪ Random burst and synchronous multiple burst hypothesis	01
	Periodontitis	
43	**Chronic periodontitis** ▪ Etiology, histopathology, clinical signs and symptoms, diagnosis and treatment ▪ Tooth mobility and pathologic migration	01
44	**Periodontal abscess** ▪ Definition, classification, pathogenesis, differential diagnosis and treatment	01
45	**Furcation involvement - 1** ▪ Etiology, diagnosis and classification (Glickma's classification)	01
46	**Furcation involvement - 2** ▪ Objectives of therapy and management	01
47	**Aggressive periodontitis - 1** ▪ Localized aggressive periodontitis: Definition, etiology, clinical features, radiographic findings and management	01
48	**Aggressive periodontitis - 2** ▪ Generalized aggressive periodontitis: Definition, etiology, clinical features, radiographic findins and management ▪ Prevalence of periodontal diseae in India and other countries	01

	Inter-disciplinary care	
49	**Endodontic-periodontic lesions** ▪ Pulpo-periodontal problems, routes of spread of infection, Simon's classification, management	01
	Plaque control	
50	**Plaque control - 1** ▪ Mechanical: Tooth brushes, interdental cleaning aids, dentifrices	01
51	**Plaque control - 2** ▪ Chemical: Classification, mechanism of action	01
	Hypersensitivity	
52	▪ Dentinal Hypersensitivity: Causes, theories and management	01
	Total number of hours	**52**

Clinicals

S. No.	Description	No. of Hrs.
	Demonstrations	
01	**Infection control** ▪ Demonstration and familiarization with infection control procedures	3.5
02	**Periodontal instruments and their maintenance** ▪ Cast wax up demonstration ▪ Methods of using various scaling instruments ▪ Anterior scaling on wax models ▪ Posterior scaling on wax models ▪ Sharpening of instruments	3.5
03	**Chair positions and principles of instrumentations** ▪ Demonstration of chair side position for instrumentation in different sites of oral cavity ▪ Demonstration of polishing of teeth	3.5
04	**Ultrasonic, Piezoelectric and sonic scaling** ▪ Demonstration of scaling using powered instruments	3.5
05	**History taking and clinical examination of the patients** ▪ Case history recording ▪ Clinical examination of normal and diseased gingiva ▪ Recording different indices ▪ Diagnosis of periodontal disease and determining the prognosis	3.5
06	**Radiographic interpretation and lab investigations** ▪ Interpretation of radiographic features in normal and chronic periodontitis ▪ Collection of GCF and plaque samples	3.5
07	**Motivation of patients and oral hygiene instructions** ▪ Demonstration of use of various mechanical plaque control methods ▪ Demonstration of use of various oral hygiene aids to patients ▪ Motivation of patients – Oral hygiene instructions ▪ Follow up procedures, post operative care and supervision	3.5
08	**Surgical procedures** ▪ Chair-side demonstration of methods of using various scaling and surgical instruments ▪ Demonstration of surgical procedures – gingivectomy, gingivoplasty, flap operations	3.5
	Patient clinical work	
09	**Patient clinical work** ▪ Recording of case history ▪ Clinical examination of gingiva ▪ Supragingival scaling and polishing ▪ Oral hygiene instructions	22 x 3.5
	Total number of hours	**105**

Reference Books – *Refer Page No. 59*

Oral and Maxillofacial Surgery

Introduction

Oral & Maxillofacial surgery is the branch of dentistry which deals with diagnosis and surgical management of diseases of oral cavity and perioral structures. This part of dentistry is very important to a dental student as it prepares him to deal with the emergencies arising in the dental office, management of medically compromised patients and place an important role in converting him/her from a dentist to a dental surgeon.

Learning Objectives

The aim is to make a graduate who

- Is competent in performing extraction of teeth under local anesthesia, prevention and management of related complications.
- Must acquire reasonable knowledge and understanding of the various diseases, injuries, infections occurring in the oral and maxillofacial region and offer solutions to some of those common conditions.
- Also have exposure in to the in-patient management of maxillofacial problems.

Theory

S. No.	Description	No. of Hrs.
	Introduction	
01	**Introduction & Ethics in Oral and Maxillofacial Surgery** ▪ Definition, scope, aims and objectives, principles of Oral and Maxillofacial Surgery ▪ Ethical issues	01
02	**Diagnosis in Oral and Maxillofacial Surgery** ▪ History taking, clinical examination, Basic investigations and Laboratory techniques	01
03	**Principles of Infection Control** ▪ Asepsis, sterilization, Universal Barrier techniques and Needle stick injuries **Principles of Oral & Maxillofacial Surgery** ▪ Asepsis, Painless surgery, access, control of bleeding, drainage & debridement, closure of wound and post operatiave care	01
	Local Anesthesia	
04	**Local Anesthesia - I** ▪ Introduction and Definition ▪ Advantages and disadvantages ▪ Indications and contraindications	01
05	**Local Anesthesia - II** ▪ Ideal requirements and composition ▪ Mechanism of action and theories of local anesthesia	01
06	**Local Anesthesia - III** ▪ Pharmacology of local anesthetics and vasoconstrictors ▪ Complications of local anesthesia (local and systemic)	01
	Exodontia	
07	**Exodontia - I** ▪ Introduction and Definition ▪ Indications and contraindications	01
08	**Exodontia - II** ▪ Methods of extraction and dental elevators ▪ Intraoral extraction	01

09	**Exodontia - III** ▪ Trans alveolar extraction ▪ Complications of exodontias ▪ Elevators used in exodontia	01
	Impacted Teeth	
10	**Impacted teeth - I** ▪ Introduction, definition, incidence, etiology and theories of impacted teeth	01
11	**Impacted teeth - II** ▪ Impacted mandibular third molars: Classification and assessment of impacted third molars ▪ Surgical procedure for removal and complications	01
12	**Impacted teeth - III** ▪ Impacted maxillary third molars: Classification ▪ Surgical procedure for removal of impacted maxillary third molars and complications	01
13	**Impacted teeth - IV** ▪ Impacted maxillary canines: Classification ▪ Localization and indications for removal, surgical procedure and complications	01
	Analgesic and pain control	
14	▪ Classification, Mechanism of action, Commonly used analgesics & anti-inflammatory drugs	01
	Antibiotics	
15	▪ Classification, mechanism of action and commonly used antibiotics	01
	Medically compromised patients	
16	▪ Extraction of teeth in Medically compromised patients and considerations	01
	Medical Emergencies in dental office	
17	▪ Management of cardiac respiratory and epileptic emergencies	01
18	▪ Use of emergency drugs ▪ IM/IV injection technique	01
	Fascial space infections	
19	**Fascial space infections - I** ▪ Introduction and microbiology of odontogenic infections ▪ Factors affecting spread of infection	01
20	**Fascial space infections - II** ▪ Etiology and classification of fascial spaces ▪ Maxillary space infection - Clinical features, diagnosis and management	01
21	**Fascial space infections - III** ▪ Mandibular space, masticatory space infection - Clinical features, diagnosis and management	02
22	**Fascial space infections - IV** ▪ Deep neck space involvement, spread of infection from mandibular third molar ▪ Complications of fascial space infections	01
23	**Fascial space infections - V** ▪ Ludwig's angina and cavernous sinus thrombosis	01
	Diseases of maxillary sinus	
24	**Diseass of maxillary sinus - I** ▪ Surgical anatomy and embryology of the maxillary sinus	01

25	**Diseass of maxillary sinus - II** ▪ Acute and chronic sinusitis: Clinical features, investigations and management	01
26	**Diseass of maxillary sinus - III** ▪ Removal of root from maxillary sinus and Cadwell Luc operation	01
27	**Diseass of maxillary sinus - IV** ▪ Oroantral fistula: Etiology, clinical features and various surgical methods for closure	02
	Osteomyelitis of the jaws	
28	**Osteomyelitis of the jaws - I** ▪ Introduction, definition, etiology and pathogenesis	01
29	**Osteomyelitis of the jaws - II** ▪ Classification: Acute and chronic, clinical feaures, radiological features, investigations and management	01
30	**Osteomyelitis of the jaws - III** ▪ Osteoradionecrosis: Clinical features, radiological features, investigations and management	01
	Total number of hours	**32**

Clinicals

S. No.	Description	No. of Hrs.
01	Chair position & operator's position	104
02	Anatomy of maxilla & mandible	
03	Innervations of the teeth – Anatomy of Trigeminal Nerve	
04	Nerve Blocks – Maxilla, Mandible	
	Total number of hours	**104**

Reference Books – *Refer Page No. 72*

Conservative Dentistry and Endodontics

Introduction

Conservative dentistry trains dental students with clinical skills and ability to make independent clinical decisions which is essential to become competent dental practitioners. In their third and fourth year of study they are required to perform a wide variety of clinical procedures in the field of Conserative Dentistry & Endodontics. Our integrated approach in teaching Conservative Dentistry & Endodontics encourages students to apply their knowledge in other clinical specialties coupled with basic and behavioral sciences in delivering treatment to patients.

Learning objectives:

- Competent to diagnose all carious lesions.
- Competent to perform Class I cavities and their restoration with amalgam.
- Restore Class V and Class III cavities with Glass ionomer cement.
- Able to diagnose and appropriately treat pulpally involved teeth(pulp capping procedure).
- Understand the principles of aesthetic dental procedures.

S. No.	Description	No. of Hrs.
01	Diagnosis in Conservative Dentistry	02
02	Infection control	01
03	Moisture control	02
04	Pins in dentistry	02
05	Adhesion in operative dentistry	02
06	Biological considerations in Conservative dentistry	01
07	Periodontal consideration in Conservative dentistry	01
08	**Direct filling gold** ▪ Material apsects ▪ Technical considerations	02
09	Noble and Non-noble metal alloys	02
10	**Cast restoration** ▪ Introduction ▪ Tooth preparation ▪ Difference between silver amalgam and inlay	02
11	Gingival tissue management	01
12	Impression materials and techniques	01
13	Die materials and preparation of the die	01
14	Wax pattern	01
15	Investment materials and techniques	01
16	Casting procedures	01
17	Finishing and polishing of cast restoration	01
18	Failure of cast restoration	01
19	**Ceramics** ▪ Materials and technical consideration	02
20	Pit and fissue sealants	01
21	Occlusion	01
22	Pain control during operative procedures	02
23	Dentinal hypersensitivity	02

24	Wasting diseases	02
25	Revision	06
Total number of hours		**40**

Clinics

S. No.	Description	No. of Hrs.
01	Instructions and orientation to clinics	03
02	Demonstrations	15
03	Model work	27
04	Patient care - History, examination, diagnosis and treatment planning, Class I, Class III, Class V cavith preparation and restoration with Glass Ionomer Cement and Silver amalgam	165
Total number of hours		**210**

Reference Books – *Refer Page No. 74*

Prosthodontics and Crown & Bridge

Introduction

The subject is taught in First, Second, Third and Final Year of BDS course. It involves comprehensive training for undergraduate students which enables them to expertise in dealing with completely edentulous and partially edentulous patients. University exam is held at the end of fourth year.

Learning Objectives

- Apply basic principles in the selection and utilization of appropriate materials, instruments and therapeutic agents in the treatment of removable partial denture and complete denture patients.
- Assess a patient's prosthetic requirements and formulate an appropriate treatment plan.
- Communicate and write prescription of partial dentures to a dental technician.
- Provide efficient service in treating patients requiring complete dentures, partial dentures and other removable and fixed prosthodontic works.
- Diagnose and refer patients with complex prosthodontic needs to the appropriate specialists.

Theory

S. No.	Description	No. of Hrs.
	Removable Partial Denture	
06	**Introduction to Removable partial dentures** ▪ Definitions, Terminologies, concept of tooth supported and Tissue supported partial dentures	01
07	**Classifications** ▪ Kennedy's classification and Applegate rules, Bailyn's and Freidman's system	01
08	**Maxillary major connector** ▪ Definition, Types, Description of each	01
09	**Mandibular major connectors** ▪ Definition, Types, Description of each	01
10	**Minor connectors** ▪ Definition, Types	01
11	**Rest and Rest seats** ▪ Definition of rest and rest seat, Functions, Types and forms of rests	01
	Direct Retainers	
12	▪ Definition, principles of cast design, uses and types	01
13	▪ Description of each circumferential clasp	01
14	▪ Bar clasp, RPI system	01
	Indirect Retainers	
15	▪ Definition, concept, functions	01
16	▪ Forms of indirect retainers, factors detemining their effectiveness	01
17	**Denture base** ▪ Classification, Requisites, Properties	01
18	**Surveyor** ▪ Definition, description of surveyor, tools, uses of surveyor ▪ Factors determining path of placement and removal, procedure of surveying	02

19	**Laboratory procedures** ▪ Laboratory steps involved in fabrication of RPD	02
20	**Fitting, try-in, completion of partial denture** ▪ Framework try-in, trimming and polishing	01
21	**Instructions for patients receiving RPD service** ▪ Maintenance, phonetics and esthetic instructions	01
22	**Stress breakers** ▪ Definition, classification and principles	01
23	**Mouth preparation** ▪ Relief of pain and infection, surgical preparation, periodontal preparation ▪ Correction of occlusal pain, obtument teeth preparation	02
24	**Impression registration procedures** ▪ Impression materials, procedures in general ▪ Distal extension situations	02
22	**Support for removable partial denture** ▪ Factors influencing support for tooth and tissue supported situations	01
23	**Principles in designing RPD** ▪ Principles of designing and designing Class III and Class IV situations ▪ Designing of distal extension situations	02
24	**Acrylic partial denture** ▪ Indications, space maintenance, conditioning of residual ridge	01
25	**RPD opposing complete dentures** ▪ Bite registration and fabrication	01
26	**Stresses in RPD and measures to control them** ▪ Types of stresses induced by RPD, practical measures to control them	02
27	**Revision**	03
Total number of hours		**37**

Clinics

S. No.	Description	No. of Hrs.
01	Case history for completely and partially edentulous patients	210
02	Diagnosis and treatment planning for completely and partially edentulous patients	
03	RPD fabrication on a simulator	
04	Treating patients requiring complete dentures, partial dentures and other removable appliances	
Total number of hours		**210**

Reference Books – *Refer Page No. 79*

Public Health Dentistry

Introduction

The undergraduate training programme commences in the IIIrd year and continues till final year Ist term. Students have clinical postings for 15 days in IIIrd year and for 1 month in final year. During the clinical postings, students have opportunity of examining the patients, evaluating oral health status with various oral health disease indices and planning suitable treatments. Theory classes are taken in the third year and final year Ist term. Students are trained in etiology, diagnosis and management of the prevention and treatment of all the oral conditions at the individual and community level. They are taught to identify social, economic, environmental and emotional determinants in a given individual patient or a community for the purpose of planning and execution of a community oral health program.

Public Health Dentistry is a subject designed to help the student to explore professional ethics as they relate to dentist's relationships to peers, patients and the community. Students attend dental camps and perform initial screening examinations. They are sensitized to specific needs of a variety of patient populations.

Learning Objectives

- Receive the opportunity to examine patients, evaluate oral health status with various oral health disease indices and plan suitable treatments.
- Trained in etiology, diagnosis and management of the prevention and treatment of all the oral conditions at the individual and community level.
- Taught to identify social, economic, environmental and emotional determinants in a given individual patient or a community with the purpose of planning and executing a community oral health program.

Theory

S. No.	Description	No. of Hrs.
01	**Introduction** ▪ Definition of Dentistry, History of dentistry, scope, aims and objectives of dentistry	01
	Public Health	
02	**Health and Disease** ▪ Concept, philosophy, definition, and characteristics	01
03	**Public Health** ▪ Definition and concepts ▪ History of public health	02
04	**General Epidemiology** ▪ Definition, objectives, methods of epidemiology	05
05	**Environmental Health** ▪ Concepts, Principles, protection, sources, purification, environmental sanitation of water, Disposal of water sanitation, Role in mass disaster	06
06	**Helath Education** ▪ Definition, Concepts, principles, methods and health education aids	04
07	**Public health administration** ▪ Priority, establishment, manpower, private practice management, hospital management, planning and evaluation	05

08	**Health care delivery system** ▪ Center and state, oral health policy, primary health care, national programs, health organizations	06
09	**Ethics and Jurisprudence** ▪ Professional liabilities, negligence, malpractice, consents, evidence, contracts and methods of identification in forensic dentistry, Consumer protection act	02
	Research Methodology and Dental Statistics	
10	**Health information** ▪ Basic knowledge of computers, MS office, Windows 2000, Statistical programs	01
11	**Research methodology** ▪ Definition, types of research, designing a written protocol	02
12	**Biostatistics** ▪ Introduction, collection of data, presentation of data, measures of central tendency, measures of dispersion, tests of significance, sampling and samlpling techniques - Types, errors, bias, blind trials and calibration	05
	Total number of hours	40

Clinicals

S. No.	Description	No. of Hrs.
01	Introduction to public health dentistry	15 days x 3.5 hours
02	Introduction to indices	
03	**Discussion, chair side demonstration and recording of following indeces** ▪ Oral Hygiene index simplified ▪ DMF - T and DMF - S index	
04	▪ Preparation of oral health education materials-Posters, models, slides, lectures, play acting kits etc.	
	Total number of hours	**52.5**

Reference Books – *Refer Page No. 66*

CURRICULUM
OF
FINAL B.D.S PART - I

Academic Calendar for Final BDS Part - I

Commencement of the course	30-07-2012
I sessional theory examination	14, 15, 17, 18-09-2012
Annual sports	08 to 13-10-2012 (tentative)
II sessional theory examination	02, 03, 05, 06-11-2012
III sessional theory examination	14, 15, 17, 18-12-2012
Last date for submission of internal assessment	31-12-2012
Last working day of the first term	31-12-2012
University theory examination	11, 12, 14, 15-01-2013 17, 18, 19, 21, 22-01-2013
University practical examination	
Commencement of the Second term	04-02-2013

Time-table for Final BDS Part - I

Days	8.00 to 1.30 AM	2.00 to 3.00 PM	3.00 to 4 PM
Monday	Dental Clinics	Orthodontics lecture	Oral Medicine lecture
Tuesday	-do-	Periodotics lecture	Pedodontics lecture
Wednesday	-do-	Public Health Dentistry lecture	Orthodotics lecture
Thursday	-do-	Prosthodontics lecture	Oral Surgery lecture
Friday	-do-	Oral Medicince lecture	Periodontics lecture
Saturday	-do-	Public Health Dentistry lecture	Conservative Dentistry lecture

All lecture classes will be held in L.H. 4, Centre for Basic Science building and practical/clinical classes in the respective department.

Oral Medicine and Radiology

Introduction

Oral medicine: Branch of dentistry which deals with the diagnosis and non surgical management of diseases that are localized to the oral cavity or are oral manifestations of systemic diseases and those phases of dental practice that are essentially concerned with the diagnosis and treatment of medically compromised patients.

Oral and maxillofacial radiology: It is the specialty of dentistry and discipline of radiology concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders and conditions of the oral and maxillofacial region.

Learning objectives

Graduates must be competent in the assessment and diagnosis of patients. More specifically posting in this department will evaluate your abilities with regards to the following:

Oral diagnosis and medicine:

- Record the chief complaint or reason for the patient's visit.
- Obtain and interpreting a thorough history of present illness, medical history, social history, review of systems and dental history.
- Conduct an appropriate clinical and radiographic exam and distinguish oral pathological hard and soft tissue abnormalities.
- Assess the risk of radiation exposure and diagnostic benefits of radiographic procedures, and select the appropriate radiographs required for diagnosis.
- Interpret findings from the history, clinical and radiographic examination and other aids.
- Using the existing data and resources, including consultations, apply critical thinking and problem solving to recognize oral diseases. Identify the etiology, pathogenesis and significance of common disorders. Establish necessary documentation.
- Inform the patient in understandable terms about the patient's oral health problems and their significance.
- Recognize the oral manifestations of systemic disease.
- Recognize the presence of systemic disease and how the disease and its treatment affect the delivery of dental care.

Oral and maxillofacial radiology:

- Using the radographic equipment optimally in due consideration of the radiation risks.
- Performing intraoral and the most common extraoral radiographic examinations on patients in dental practice.
- Interpreting radiographs and correlating the images with the clinical findings to arrive at a diagnosis.

Theory

S. No.	Description	No. of Hrs.
	Facial Pain	
01	**Facial Pain – I** ▪ Definition of pain, Types of pain, Mechanism of pain perception, Classification	01
02	**Facial Pain – II** ▪ Dentinal pain, Pulpal pain, periodontal pain, cracked tooth	01
03	**Facial pain of muscular origin and TMJ Pain** ▪ Clinical features, Differential diagnosis and management	01
04	**Facial pain of neurogenic origin** ▪ Neuralgias: Clinical features, Differential diagnosis and management	01
05	**Other facial pains** ▪ Migraine, Atypical facial pain, Burning mouth syndrome	01
	White lesions of oral cavity	
06	**White lesions – I** ▪ Introduction, variations in structure and appearance of normal mucosa, Classification of oral white lesions ▪ Precancerous lesions and conditions	01

07	**White lesions – II** ▪ Non keratotic white lesion, Oral candidiasis: classification, Clinical features, Differential diagnosis and management	01
08	**White lesions – III** ▪ Keratotic lesions with no malignant potential ▪ Oral genodermatoses, Clinical features, Differential diagnosis and management	01
09	**Leukoplakia** ▪ Etiology, Clinical features, Malignant potential, Differential diagnosis and management	01
10	**OSMF** ▪ Etiology, Clinical features, Malignant potential, Differential diagnosis and management	01
11	**Lichen planus, lichenoid reaction and others** ▪ Etiology, Clinical features, Malignant potential, Differential diagnosis and management	01
	Red lesions of the oral cavity	
12	▪ Erythroplakia, Erosive lesions, atrophic candidiasis, stomatitis	01
	Ulcerative and Vesiculo Bullous lesions	
13	**Ulcerative & Vesiculo Bullous lesions-Introduction & traumatic ulcer** ▪ Examination of an ulcer, Classification, Etiology ▪ Clinical features, Differential diagnosis and management	01
14	**Aphthous ulcer, Aphthous like ulcers** ▪ Etiology, Clinical features, Differential diagnosis and management	01
15	**Viral ulcers** ▪ Etiology, Clinical features, Differential diagnosis and management	01
16	**Pemphigus, Pemphigoid** ▪ Etiology, Clinical features, Differential diagnosis and management	01
17	**Erythema multiformae, Steven Johnson syndrome** ▪ Etiology, Clinical features, Differential diagnosis and management	01
	Oral cancer	
18	▪ Etiology, Signs and Symptoms, TNM classification	01
19	▪ Prognosis, Management, Rehabilitation	01
	Immunologic disorders	
20	▪ B and T cell disorders and other immune disorders	01
	Cysts and tumours of oral cavity	
21	**Cysts of the oral cavity** ▪ True and False cysts, Odontogenic and non odontogenic cysts	01
22	**Tumours of oral cavity** ▪ Soft tissue and hard tissue tumours, Odontogenic and non odontogenic tumours	01
	Therapeutics	
23	**Drugs commonly used in Oral Medicine** ▪ Antibiotics, NSAIDS, analgesics, astringents, mouth washes, sialogogues and antisialogogues, styptics, topical anesthetics and steroids etc.	01
	Radiographic accessories, techniques and others	
24	**Faulty radiographs** ▪ Causes and rectification	01
25	**Extraoral radiograph** ▪ Definition, Films used in extraoral radiography ▪ X-ray machine used, Types of extraoral radiographs ▪ Interpretation of extraoral radiographs	01
26	**Intensifying screens, Grids & Cassettes** ▪ Definition, Function, Composition, Types	01
27	**Localization techniques** ▪ Objectives, Methods: Clarke's technique, Miller's technique	01
28	**Sialography** ▪ Indications, Contraindications, Procedure, Interpretation	01

	Radiation Biology and Protection	
29	**Radiation Biology - I** ▪ Definition, Radiation chemistry(Direct and indirect effects), Changes in biologic molecules, Radiation effects at cellular level	01
30	**Radiation Biology - II** ▪ Concept of radio sensitivity, Radiation effects at tissue and organ level (Short term and long term effects), radiation effects on oral cavity, Radiation Genetics	01
31	**Radiation protection** ▪ Sources of Radiation, Natural Radiation, Manmade radiation, Exposure and Dose in radiography, Occupational exposure, Patient exposure ▪ Maximum Permissible dose, Principle of Radiation protection, Radiation protection measures, Dosimetry	01
	Radiographic Diagnosis	
32	**Role of radiography in diagnosis of dental caries** ▪ Rationale for radiographic examination ▪ Type of radiographs, Frequency of Radiographic examination, Radiographic features of dental caries ▪ Radiographic DD of dental caries	01
33	**Role of radiography in diagnosis of periodontal disease** ▪ Usefulness of radiography in diagnosis and treatment planning of periodontal disease, Limitations ▪ Radiographic features of different periodontal conditions	01
34	**Periapical radiolucencies** ▪ Anatomical, Pathological, True, False, Differential diagnosis	01
35	**Multi-locular radiolucencies** ▪ Types, Differential diagnosis	01
36	**Radiopacities in the jaws** ▪ Anatomical, Pathological, Generalized, Differential diagnosis	01
37	**Radiographic diagnosis of traumatized teeth** ▪ Type of radiographic examination, Radiographic features of traumatized teeth, Bennett's classification of traumatized teeth, Radiographic features and Differential Diagnosis of fractured teeth	01
38	**Radiographic diagnosis of mandibular fractures** ▪ Selection of radiograph, Radiographic features and Differential Diagnosis	01
39	**Radiographic diagnosis of midfacial fractures** ▪ Selection of radiograph, Radiographic features and Differential Diagnosis	01
40	**Radiographic features of the diseases of maxillary antrum** ▪ Selection of radiograph, Radiographic features and Differential Diagnosis of sinusitis, Cyst ▪ Neoplasms, Radiographic features and Differential Diagnosis	01
41	**Radiographic features of the diseases of TMJ** ▪ Trauma, Ankylosis, Degenerative diseases ▪ Radiographic features and Differential Diagnosis	01
42	**Soft tissue calcifications** ▪ Dystrophic calcification, Metastatic calcification ▪ Heterotrophic calcification	01
	Advances in Imaging and Forensic Odontology	
43	**Newer imaging modalities - I** ▪ Digital radiography and Computed tomography	01
44	**Newer imaging modalities - II** ▪ MRI, Ultrasound and Radionuclide imaging	01
	Total number of hours	**44**

Clinicals:

The following is the minimum prescibed work:

1. Recording of detailed case histories and clinical examination and diagnosis - 15
2. Intra-oral radiographs (Periapical, bitewing) - 25
3. Completion of problem solving exercises (clinical and radiological)
4. Seminar presentation on the allotted topic

S. No.	Description	No. of Hrs.
1	Review of III BDS assignments Case history taking and clinical examination/ Radiographic procedures Clinical problem – based assignments	150
2	Hands on experience of radiographic examination Radiology-Interpretation exercises Clinical problem-based assignments	
3	Case history taking and clinical examination Hands on experience of Radiographic examination Clinical problem-based assignments Seminar presentations	
4	End-posting assessment examination Viva voce Submission of record and problem-based assignment books	
Total number of hours		**150**

Reference Books

a) Oral Diagnosis, Oral Medicine & Oral Pathology

1. Burket's Oral Medicine: Diagnosis & Treatment (9th, 10th and 11th Edition), Greenberg MS, Glick M and Ship JA. J.B. Lippincott Company.
2. Principles of Orla Diagnosis - Coleman – Mosby Year Book.
3. Principles and Practice of Oral Medicine (2nd Edition), Sonis ST, Fazio RC and Fang L
4. Textbook of Oral Pathology (4th and 5th Edition), Shafer, Hine, Levy.
5. Oral and Maxillofacial Pathology (2nd and 3rd Edition), Neville, Damm, Allen and Buquot.
6. Textbook of Oral Medicine, Diagnosis and Radiology - Ongole R, Praveen BN. Elsevier Co.
7. Oral Manifestations of systemic diseases - Jones. WB Saunders Co.
8. Oral Daignosis and Oral Medicine - Mitchell.
9. Oral Diagnosis - Kerr.
10. Oral Daignosis and Treatment - Miller
11. Manual of Oral medicine and radiology - Ongole R, Praveen BN. Jaypee Publishers.
12. Hutchinson's Clinical methods
13. Oral pathology - Clinical and Pathologic correlation. Regezi, Sciubba and Jordan. Saunders Publications.
14. Differential Diagnosis of oral and maxillofacial lesions. Wood and Goaz. Mosby Publications.

b) Oral and Maxillofacial Radiology

1. Oral Radiology: Principles and interpretation (5th Edition), White & Pharaoh. Mosby Year Book.
2. Essentials of Dental Radiology and Radiography (4th Edition), Whaites E. Lippincott Publishers.
3. Textbook of Dental and Maxillofacial Radiology (2nd Edition), Freny Karjodka, JP Publishers.
4. Dental Radiology, Wuehrrman CV. Mosby Company.
5. Oral Roentgenographic Diagnosis - Stafne. WB Saunders Co.

c) Forensic Odontology

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

MODEL QUESTION PAPER

Subject: Oral Medicine and Radiology

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Define Leukoplakia. Write the etiology, clinical features, differential diagnosis and management of Oral Leukoplakia (2+2+2+2+2 = 10 marks)
2. Describe the parts of the x-ray tube with a diagram. Write the functioning of x ray tube in the production of x rays (4+6 = 10 marks)
3. Write short notes on: (4x10 = 40 marks)
   a. Clinical features of Recurrent aphthous stomatitis
   b. Macroglossia
   c. Treatment of acute osteomyelitis
   d. Diagnosis and treatment of Trigeminal neuralgia
   e. Dental considerations in a diabetic patient
   f. Submandibular sialolithiasis
   g. Bisecting angle technique
   h. Dark radiograph
   i. Direct Exposure film
   j. Radiographic differential diagnosis of dental caries

Paediatric and Preventive Dentistry

Introduction

In final year of BDS the subject includes didactic lectures and clinical postings. At the ends of year students have to appear for a university theory and clinical examination.

Learning objectives

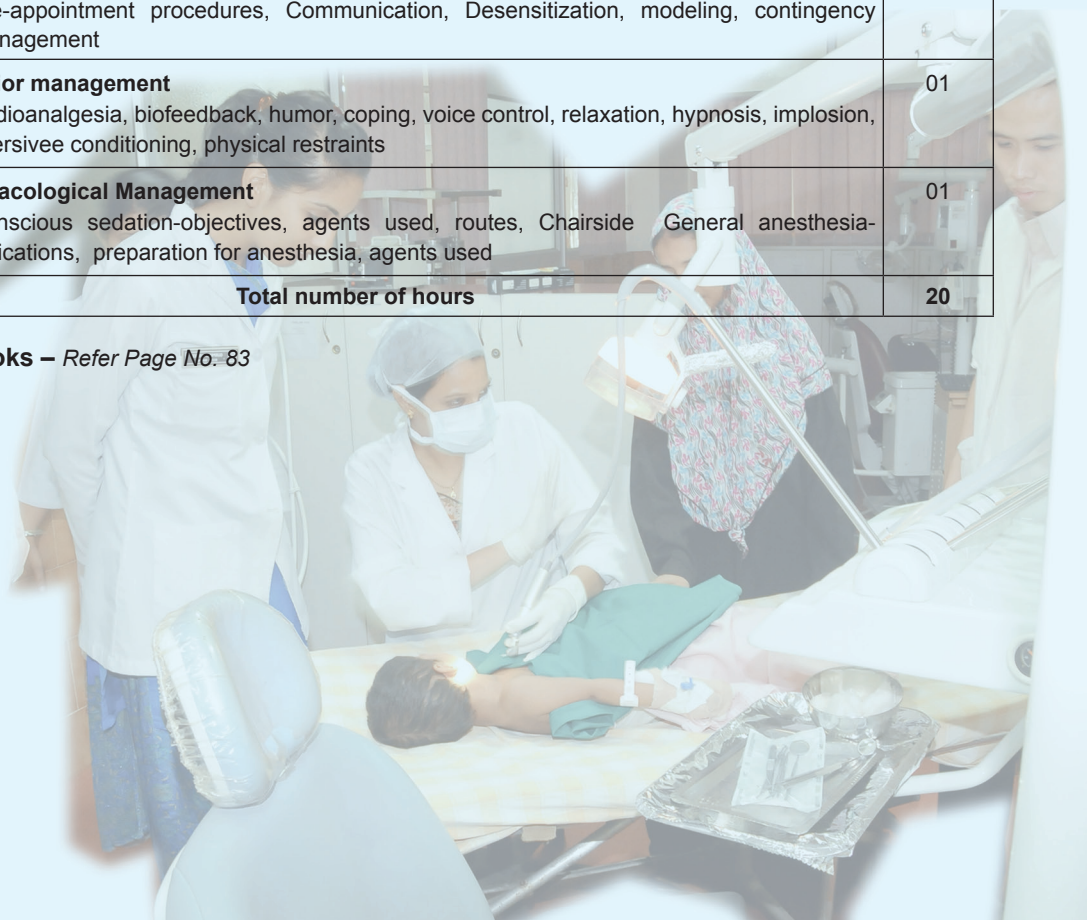
- The student will be able to understand child psychology and apply behavioral management techniques.
- Understand rationale of pediatric endodontics and apply the same.
- Understand the use of preventive techniques and application for prevention of caries.
- Identify space loss and apply suitable measures.
- Handle pediatric dental emergencies.

Theory

S. No.	Description	No. of Hrs.
	Radiology in peadiatric patients	
01	**Radiology in peadiatric patients** ▪ Introduction, differences in techniques for child, indications for radiographs in children and various intra-oral radiographic techniques	01
02	**Radiographic survey** ▪ Recommended radiographic surveys in children and radiation hygiene measures	01
	Preventive Dentistry	
03	**Introduction** ▪ Definitions, principles and scope	01
04	**Levels of prevention** ▪ Primordial, primary, secondary and tertiary levesl of prevention, role of dental health education and school dental health programs	01
05	**Pit and fissure sealants** ▪ Definition, indications, contraindications, classification and technique of placement, role in caries prevention	01
	Oral surgery for childern	
06	**Local anesthesia** ▪ Various techniques of local anesthesia as applied to childern	01
07	**Minor oral surgical procedures** ▪ Indications, contraindications for extractions of primary and permanent teeth, technique of extraction and minor oral surgical procedures	01
	Gingival and periodontal diseases	
08	**Gingival diseases** ▪ Normal gingiva, gingival diseases in childern-Herpetic stomatitis, ANUG and gingival abscess	01
09	**Periodontal disease** ▪ Common periodontal diseases in children and management-Prepubertal periodontitis, localized aggressive periodontitis	01
	Peadiatric prosthodontics	
10	**Peadiatric prosthodontics** ▪ Definition, differences between child and adults, various prosthetic treatment options including obturators	01

Child Psychology		
11	**Introduction and Freud's theory** ▪ Introduction and importance of child psychology, classification of theories of child psychology, topographical model of mind, psychic triad, ego defense mechanisms, stages of Freud's theory	01
12	**Erikson's theory** ▪ Stages of theory and it's dental implications	01
13	**Cognitive development theory** ▪ Functional variants of adaptation, stages of development, merits and demerits	01
14	**Behavioral learning theories** ▪ Different stages of social learning theory, classical conditioning, operant conditioning, hierarchy of needs	01
15	**Fear and its management** ▪ Definition, classification of fear, Objective and subjective fear, value of fear, causes of dental fear, signs and symptoms of fear	01
Behavior Management		
16	**Introduction** ▪ Definitions, classifications of child behavior (Frankel's, Lampshire's, Wright's)	01
17	**Factors affecting behavior** ▪ Factors under control of dentist, out of control of dentist, under control of parent's, maternal influence on personality development	01
18	**Behavior modification** ▪ Pre-appointment procedures, Communication, Desensitization, modeling, contingency management	01
19	**Behavior management** ▪ Audioanalgesia, biofeedback, humor, coping, voice control, relaxation, hypnosis, implosion, aversivee conditioning, physical restraints	01
20	**Pharmacological Management** ▪ Conscious sedation-objectives, agents used, routes, Chairside General anesthesia-indications, preparation for anesthesia, agents used	01
Total number of hours		**20**

Reference Books – *Refer Page No. 83*



Orthodontics and Dentofacial Orthopedics

Introduction

Fourth year of BDS course involves didactic lectures and clinical postings. The University exam in the subject will be at the end of Fourth year.

Learning Objectives

- Attain competence in using various diagnostic aids.
- Fabrication of complex components of removable appliance.
- Basics in design & fabrication of myofunctional appliances.

Theory

S. No.	Description	No. of Hrs.
	Hand wrist X-rays	
01	Importance in orthodontics skeletal maturity indicators, Greulich & Pyle, Bjork, Grave & Brown	01
02	Fishman's, Hassel & Farman's method of assessment	01
	General Principles in Orthodontic Treatment Planning	
03	Facial growth predictability, esthetic guidelines of Dental and Skeletal Malocclusions	01
	Anchorage in Orthodontics	
04	Definition, Classification, Types and Stability of Anchorage	01
	Biomechanical Principles in Orthodontic Tooth Movement	
05	Physiology of tooth movement, histology of tooth movement	01
06	Theories of tooth movement, Optimum force	01
07	Phases, biochemical reactions, mechanics of tooth movement	01
	Preventive Orthodontics	
08	Preventive Orthodontics Definition, Different procedures undertaken in preventive orthodontics and their limitations	01
	Interceptive Orthodontics	
09	Definition, Different procedures undertaken in interceptive orthodontics, Serial extractions: Definition, indications, contra-indication, technique, advantages and disadvantages Role of Muscle exercises as an interceptive procedure	01
	Corrective Orthodontics	
10	Definition, factors to be considered during treatment planning Model analysis: Pont's, Ashley Howe's, Bolton, Careys, Moyer's Mixed Dentition Analysis	01
11	Methods of gaining space in the arch: Indications, relative merits and demerits of Proximal stripping, arch expansion and extractions Extractions in Orthodontics - indications and selection of teeth for extraction	01
	Designing and Construction of Various Appliances	
12	General principles in selection designing and construction of various appliances and materials in orthodontics Materials used in construction of various orthodontic appliances, uses of stainless steel, composites, archwires, technical considerations in curing of acrylic	01

Orthodontic Appliances		
13	General requisite for orthodontic appliances Classification, indications of Removable and functional Appliances. Methods of force application	01
Removable Orthodontic Appliances		
14	Components of removable appliances Different types of clasps, labial bows, springs and their uses	01
15	Expansion appliances in orthodontics Principles, Indications for arch expansion Description of expansion appliances and different types of expansion devices and their uses Rapid maxillary expansion	01
Fixed Orthodontic Appliances		
16	Definition, Indications & Contraindications Component parts and their uses Basic principles of different fixed appliance techniques	01
Orthodontic Myofunctional Appliances		
17	Definition and principles, Muscle exercises and their uses in orthodontics Functional appliances: Activator, Oral screens	01
18	Frankels function regulator	01
19	Oral screens, Bionator, Twin block	01
20	Lip bumper Incline planes - upper and lower, fixed functional appliances	01
Orthodontic Management of Cleft Lip and Palate		
21	Orthodontic management of Cleft lip and palate Incidence, etiology, pathogenesis, management	01
Orthopaedic Appliances		
22	Head gear	01
23	Face mask, Chin cup	01
Surgical Orthodontics		
24	Diagnosis and treatment plan for orthognathic surgery, Pre and Post surgical orthodontics	01
25	Minor surgical procedures	01
26	Major surgical procedures for correction of Mandibular Prognathism and Retroguathism Maxillary Prognathism and Retrognathism Anterior open bite and deep bite, Cross bite	01
Principles Differential Diagnosis and Methods of Treatment of Some Common Malocclusions		
27	Midline diastema, Cross bite, Open bite Deep bite, Spacing, Crowding	01
28	Class II Division 1, Division 2	01
29	Class III Malocclusion - True and Psuedo Class III	01
Retention and Relapse		
30	Definition, Need for retention, Causes of relapse, Methods of retention, Different types of retention devices	01
31	Duration of retention, Theories of retention	01
Soldering and Welding		
32	Principles of soldering , Different methods of soldering, fluxes and antifluxes	01
33	Principles of welding, methods of welding, Principles of spot welding	01
34	**Revision**	09
Total number of hours		**42**

Clinics

S. No.	Description	No. of Hrs.
	Project 1: Impression Making	
01	Upper & Lower arch alginate impression making	07
02	Pouring, Trimming and finishing the study cast	05
	Project 2: Study Cast Analysis	
03	Ashley Howe's Analysis	02
04	Pont's analysis	02
05	Carey's analysis	02
06	Arch perimeter analysis	02
07	Bolton's analysis	02
	Project 3: Wire Bending Exercises	
08	C- clasp (2 Samples)	02
09	U-Clasp (2 Samples)	02
10	Adams Clasp (4 Samples)	06
11	Triangular clasp (2 Samples)	02
12	T-Spring (2 Samples)	02
13	Adam clasp on Anterior (2 Samples)	02
14	Adams clasp with Helix (2 Samples)	04
15	Adams clasp single arrow head (2 Samples)	02
16	Adams clasp Additional Arrow head (2 Samples)	02
17	Short labial bow (2 Samples)	02
18	Long labial bow (2 Samples)	04
19	Reverse labial bow (2 Samples)	04
20	Split labial bow (2 Samples)	02
21	Roberts retractor (2 Samples)	02
22	High labial bow with apron spring (2 Samples)	02
23	Palatal finger spring (4 Samples)	02
24	Modified finger spring (2 Samples)	02
25	Z spring (4 Samples)	02
26	Modified Z spring (2 Samples)	02
27	Helical canine retractor (2 Samples)	02
28	Buccal canine retractor (2 Samples)	02
29	Palatal canine retractor (2 Samples)	02
30	Coffin spring (2 Samples)	02
	Project 4: Hawley Appliance Fabrication	
31	Upper & Lower Arch	04
	Project 5: Cephalometric analysis	
32	Landmark identification	04
33	Tracing procedure and technique	06
34	Analysis and interpretation	01

35	Downs analysis	04
36	Steiner analysis	04
37	Tweed analysis	04
Project 6: Activator Appliance Fabrication		
38	Duplication of the dye	02
39	Wax bite registration	01
40	Orientation	01
41	Acrylisation	02
42	Trimming of activator	04
43	Finishing	02
44	Lower inclined plane (1 Sample)	04
45	Upper expansion plate with expansion screw (1 Sample)	04
46	Habit breaking appliances (1 Sample)	04
47	Upper Hawley's with anterior bite plane (1 Sample)	04
48	Upper Hawley's with posterior bite plane (1 Sample)	04
Project 7: Orthodontic Case Clinical Examination and Diagnosis		
49	Clinical Case presentation	03
Total number of hours		**140**

Reference Books

1. J.H. Gardiner, B.C.Leighton, J.K. Luffingham, Ashima Valiathan. Orthodontics for dental students. 4th edition, Oxford University Press, Delhi.
2. Michael Riolo, James Avery. Essentials of Orthodontic Practice, Needham Press, 1st edition, 2003.
3. C.P. Adams. The design, construction and use of removable orthodontic appliances, 5th edition.
4. Charles Tweed. Clinical Orthodontics, 1963 Vol. I and II.
5. W.J.B. Houston, K.G. Issaacson. Orthodontic treatment with removable appliances. 2nd edition.
6. William R.Proffit, Henry W. Fields, Jr. Contemporary Orthodontics, 3rd edition, 2000. Mosby.
7. Robert E. Moyers. Handbook of orthodontics. 4th edition, 1988, Year book medical publishers.
8. Bhalajhi. Orthodontics-The Art and Science. 2nd edition.
9. M.S. Rani. Synopsis of Orthodontics. 2nd edition.
10. Gurkeerat Singh. Textbook of Orthodontics. 1st edition, 2004.
11. Graber and Newmann. Removable orthodontic Appliances, 2nd edition.
12. Viken Sassouni, Edward Forrest. Orthodontics in Dental Practice.
13. Donald Enlow, Robert E. Moyers, William Merow. Handbook of Facial growth.
14. Thomas Graber, Thomas Rakosi, Alexander Petrovic. Dentofacial Orthopaedics with Functional Appliances.

Model Question Paper

Subject: Orthodontics and Dentofacial Orthopedics

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Describe briefly about theories of tooth movement and give a note on various types of tooth movement. (4 + 6 = 10 marks)

2. Define retention & relapse. Write in detail about theorems of retention. (4 + 6 = 10 marks)

3. Write short essays on the following: (4 x 10 = 40 marks)

   a. Local factors in the etiology of malocclusion
   b. Merits and demerits of Angle's classification of malocclusion
   c. Cephalostat and the application of cephalometrics
   d. Reciprocal Anchorage
   e. Interceptive measures for anterior crossbite correction
   f. Expansion in orthodontics
   g. Name Andrew's 6 keys to optimal occlusion
   h. Theories of craniofacial growth
   i. Methods of gaining space
   j. Local factors contributing to malocclusion

Periodontology

Introduction

The speciality of Periodontology is committed to transmitting scientific knowledge through enhancing the superior skills of our graduate students.

This would be accomplished through dialectical lectures and clinical sessions/demonstrations for the students in fourth BDS.

Learning objectives

- To interact and participate in exceptional patient care, education and scholarly work.
- To be able to incorporate knowledge into clinical work.
- To be competent to perform thorough supra and subgingival scaling, root planing and minor periodontal surgical procedures.
- To understand the basic concepts of periodontal surgical procedures including the regeneration of periodontium.
- To be able to give proper post treatment instructions and do periodic recall and evaluation.
- To be familiar with concepts of periodontal consideration, osseointegration and basic surgical aspects of implantology.

Theory:

S. No.	Description	No. of Hrs.
	Diagnosis	
01	**Diagnosis** ▪ Case history recording, Intraoral examination, ▪ Halitosis – Etiology and Treatment	01
02	**Advanced Diagnosis - 1** ▪ Types of probes and methods of probing	01
03	**Advanced Diagnosis - 2** ▪ Microbiologic and Chair side kits	01
04	**Advanced Diagnosis - 3** ▪ Radiographic and Biochemical	01
	Prognosis	
05	**Prognosis** ▪ Definition, types, purpose, Factors governing overall and individual tooth prognosis	01
	Treatment plan and Periodontal therapy	
06	**Treatment plan** ▪ General principles of Periodontal therapy ▪ Rationale for periodontal therapy ▪ Phase I, II, III, IV ▪ Definitions of Periodontal regeneration, Repair, New attachment and Reattachment	01
07	**Periodontal therapy in Medically compromised patients:** ▪ CVS , Endocrinal disorders (diabetes, Thyroid, parathyroid, adrenal insufficiency), renal, liver], Radiation and chemo therapy, Infectious diseases	01
	Pharmacotherapy	
08	**Chemotherapeutics - 1** ▪ Antimicrobials [in brief] and Local Drug Delivery (including pocket irrigation)	01
09	**Chemotherapeutics - 2** ▪ Host modulation	01

Pocket Eradication Procedures		
10	**Pocket eradication procedures** ▪ Classification ▪ Rationale for periodontal surgery	01
11	**Scaling and Root planing** ▪ Indications, aims and objectives, healing following root planning, hand instruments, sonic and ultrasonic scalers	01
12	**Curettage** ▪ Definition, indications, aims & objectives, procedure and healing response, Present concepts	01
13	**Gingivectomy** ▪ Indications, Procedure, Healing, Gingivoplasty, Electrosurgery, Laser, Chemotherapy	01
14	**Flap surgery - 1** ▪ Definition, types of flaps, Flap designs ▪ Papilla preservation- Indications and Contraindications	01
15	**Flap surgery - 2** ▪ Armamentarium, Procedure, Sutures, Healing ▪ Periodontal dressings	01
Osseous Surgery		
16	**Resective osseous surgery** ▪ Osseous defects, definition, classification, Osteoplasty and Ostectomy	01
17	**Reconstructive periodontal surgery - 1** ▪ Root surface biomodification and GTR	01
18	**Reconstructive periodontal surgery - 2** ▪ Classification of bone grafts, autogenous bone grafts, allografts	01
19	**Reconstructive periodontal surgery - 3** ▪ Xenografts and Alloplasts, Healing	01
Mucogingival Surgery and Periodontal Plastic Surgeries		
20	**Periodontal plastic surgery - 1** ▪ Definition, Mucogingival Problems: etiology, classification of gingival recession (PD Miller Jr. and Sullivan and Atkins) ▪ Indications and Objectives ▪ Techniques to increase attached gingival (Vestibuloplasty, Free Gingival Grafts)	01
21	**Periodontal plastic surgery - 2** ▪ Root coverage procedures ▪ Localized: Lateral Pedicle Graft and its modifications, Semilunar Flap ▪ Multiple Teeth : Sub- Epithelial Connective Tissue Graft, Coronally Positioned Flap	01
22	**Periodontal plastic surgery - 3** ▪ Frenotomy, Frenectomy & Criteria for selection of techniques [Crown lengthening procedures - APF, gingivectomy]	01
23	**Periodontal microsurgery** ▪ Recent advances in surgical technology [in brief] ▪ Lasers in Periodontal therapy	01
Splints		
24	**Periodontal splinting** ▪ Purpose & Classification ▪ Principles of splinting	01
Hypersensitivity		
25	**Dentinal hypersensitivity** ▪ Causes, theories and management	01

Implants		
26	Terminologies and basics of implantology, Biomaterials	01
27	Biologic aspects, Evaluation of patient and diagnostic imaging, One stage Vs Two stage procedure, Immediate implants	01
28	Implant complications (Peri-implantitis) and management, Ridge augmentation, Sinus lift	01
Maintenance Phase		
29	**Supportive periodontal therapy** ▪ Aims, objectives, principles ▪ Importance ▪ Procedures, recall protocol ▪ Maintenance of implants	01
Infection control		
30	**Infection control protocol** ▪ Sterilization and various aseptic procedures	01
Evidenced based Dentistry & Ethics		
31	▪ Evidenced based Periodontology ▪ Ethics in dentistry	01
Total number of hours		**31**

Clinicals:

S. No.	Description	No. of Hrs.
Patient clinical work		
01	▪ Detailed case history recording ▪ Recording of indices ▪ Detailed examination of gingiva ▪ Radiographic interpretation and lab investigation ▪ Determining prognosis ▪ Treatment plan ▪ Treatment of the patient	23 x 3.5 hrs.
Total number of hours		**100**

Reference Books

1. Clinical Periodontology Newman, Takei, Klokkevold and Carranza, 10th edition.
2. Clinical Periodontology and Implant Dentistry Jan Lindhe, Thorkild Karring and Nikaulus P. Lang 5th edition.
3. Text book of Clinical Periodontology. Grant, Stern and Listgarten.
4. Periodontal Therapy – Goldman.
5. Contemporary Periodontics – Cohen.
6. Essentials of Periodontology and Periodontics – Torquil Mac Phee.
7. Advanced Periodontal Disease – John Prichard.
8. Periodontics – Baer and Morris.
9. Orban's Periodontics – Orban.
10. Public Health Dentistry – Slack.
11. Preventive Periodontics – Young and Stiffler.
12. Oral Health Survey – WHO.

Model Question Paper
SUBJECT: Periodontology

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Discuss the role of diabetes mellitus on the periodontium. Add a note on laboratory investigations of Diabetes. (7+3=10marks)
2. Classify pocket eradication procedures. Write about indications of flap surgery. Describe the technique of modified widman flap. (2 + 3 + 5 = 10 marks)
3. **Write short notes on the following :** (4 x 10 = 40 marks)
   a. Principle fibers of periodontal ligament
   b. Formation of plaque
   c. Clinical features of ANUG
   d. Diagnosis of halitosis
   e. Periodontal complications associated with orthodontic therapy
   f. Antiplaque mechanism of Chlorhexidine
   g. Healing flollowing free gingival graft
   h. Types of trauma from occlusion
   i. Periimplantitis
   j. Classification of patients for supportive periodontal therapy

Oral and Maxillofacial Surgery

Introduction

Oral & Maxillofacial surgery is the branch of dentistry which deals with diagnosis and surgical management of diseases of oral cavity and perioral structures. This part of dentistry is very important to a dental student as it prepares him to deal with the emergencies arising in the dental office, management of medically compromised patients and place an important role in converting him/her from a dentist to a dental surgeon.

Learning Objectives

The aim is to make a graduate who

- Is competent in performing extraction of teeth under local anesthesia, prevention and management of related complications.
- Must acquire reasonable knowledge and understanding of the various diseases, injuries, infections occurring in the oral and maxillofacial region and offer solutions to some of those common conditions.
- Also have exposure in to the in-patient management of maxillofacial problems.

Theory

S. No.	Description	No. of Hrs.
	Cystic Lesions of the Jaws	
01	Introduction, definition, classification, and pathogenesis, Diagnosis, clinical, radiographic features. Aspiration, Histopathology, specialized techniques (Use of contrast media)	01
02	Surgical management and complication	01
03	Odontogenic keratocyst: clinical features, radiographic features and management	01
	Tumors of the Jaws	
04	Introduction, classification	01
05	Ameloblastoma: clinical features, radiology, investigation and surgical management	01
06	Odontome and other odontogenic tumors	01
	Premalignant Lesions	
07	Introduction, classification, diagnosis and treatment	01
	Biopsy	
08	Types, Indications	01
	Carcinoma of the Oral Cavity	
09	Introduction, etiology, TNM classification	01
10	Clinical features and outline of management of the cancers of the oral cavity	01
	Total number of hours	**10**

Clinicals

S. No.	Description	No. of Hrs.
01	Chair position & operator's position	50
02	Anatomy of maxilla & mandible	
03	Innervations of the teeth – Anatomy of Trigeminal Nerve	
04	Nerve Blocks – Maxilla, Mandible	
	Total number of hours	**50**

Reference Books – *Refer Page No. 72*

Conservative Dentistry and Endodontics

Introduction

Conservative dentistry trains dental students with clinical skills and ability to make independent clinical decisions which is essential to become competent dental practitioners. In their third and fourth year of study they are required to perform a wide variety of clinical procedures in the field of Conservative Dentistry & Endodontics. Our integrated approach in teaching Conservative Dentistry & Endodontics encourages students to apply their knowledge in other clinical specialties coupled with basic and behavioral sciences in delivering treatment to patients. In Final Year Part - I, only theory classes will be held without any clinical postings.

Learning objectives

- Competent to diagnose all carious lesions.
- Competent to perform Class I and Class II cavities and their restoration with amalgam.
- Restore Class V and Class III cavities with Glass ionomer cement.
- Able to diagnose and appropriately treat pulpally involved teeth (pulp capping procedure).
- Able to perform RCT for anterior teeth.
- Competent to carry out small composite restorations.
- Understand the principles of aesthetic dental procedures.

S. No.	Description	No. of Hrs.
01	**Introduction to Endodontics** ▪ Definition, scope and future of endodontics	01
02	Pulpal pathosis	01
03	Periradicular pathosis	01
04	**Vital pulp therapy** ▪ Pulpotomy	01
05	Apexogenesis, Apexification and problems of open apex	01
06	Rationale of endodontic treatment	01
07	Case selection and treatment planning in endodontics	01
08	Internal anatomy of pulp space and peri-apex	01
09	Diagnosis in endodontics	02
10	Endodontic instruments	03
11	Access cavity preparation	01
12	Endometrics	02
13	Revision	05
	Total number of hours	**21**

Reference Books – *Refer Page No. 74*

Prosthodontics and Crown & Bridge

Introduction

The subject is taught in First, Second, Third and Final year of BDS course. It involves Comprehensive training for undergraduate students which enables them to expertise in dealing with completely edentulous and partially edentulous patients. University exam is held at the end of fourth year.

Learning Objectives

- Apply basic principles in the selection and utilization of appropriate materials, instruments and therapeutic agents in the treatment of removable partial denture and complete denture patients.
- Assess a patient's prosthetic requirements and formulate an appropriate treatment plan.
- Communicate and write prescription of partial dentures to a dental technician.
- Provide efficient service in treating patients requiring complete dentures, partial dentures and other removable and fixed prosthodontic works.
- Diagnose and refer patients with complex prosthodontic needs to the appropriate specialists.

Theory

S. No.	Description	No. of Hrs.
01	**Introduction to Fixed partial denture prosthodontics** ▪ Terminologies, definitions, parts of FPD	01
02	**Classification of FPD** ▪ Various designs of FPD and description of each	01
03	**Indications and contraindications of FPD** ▪ Various indications and contraindications	01
04	**Diagnosis and treatment planning** ▪ Clinical and radiological examination, medical and dental history	01
05	**Abutment evaluation** ▪ Various types of abutments, selection of abutments, Ante's law	01
06	**Biomechanical considerations** ▪ Biological considerations ▪ Finish lines ▪ Mechanical considerations ▪ Aesthetic considerations	04
07	**Jacket crown** ▪ Indications, contraindications, advantages, disadvantages, tooth preparation	01
08	**Anterior ¾ crown** ▪ Indications, contraindications, advantages, disadvantages, Tooth preparation	01
09	**Posterior ¾ crown, $^{4}/_{5}$ crown** ▪ Indications, contraindications, advantages, disadvantages, Tooth preparation	01
10	**Mesial ½ crown, $^{7}/_{8}$ crown** ▪ Indications, contraindications, advantages, disadvantages, Tooth preparation	01
11	**Complete veneer crown** ▪ Indications, contraindications, advantages, disadvantages, Tooth preparation	01

12	**Complete veneer crown with facing** ▪ Indications, contraindications, advantages, disadvantages, Tooth preparation	01
13	**Intracoronal restoration** ▪ Inlay, onlay, indications, Contraindications, advantages, disadvantages, Tooth preparation	01
14	**Retainers** ▪ Introduction, definition, classification, requirements ▪ Selection criteria, various types of retainers	02
15	**Pontics** ▪ Definition, requirements, design of pontic ▪ Classification, ridge lap pontic, modified ridge lap pontic, ovate pontic, conical pontic ▪ Sanitary pontic, modified sanitary pontic, pontic materials, pre-fabricated pontics	03
Total number of hours		**21**

Reference books – *Refer Page No. 79*

Public Health Dentistry

Introduction

The Department of Public Health Dentistry is dedicated to training graduate and undergraduate students in public health dentistry to work within interdisciplinary teams to conduct investigations on the risk factors for oral disease, their relation to systemic disease, and on the use of oral epidemiological methods to study health outcomes of dental services and oral health policy.

Public Health Dentistry is a subject designed to help the student to explore professional ethics as they relate to dentist's relationships to peers, patients and the community. Students attend dental camps and perform initial screening examinations. They are sensitized to specific needs of a variety of patient populations.

Learning Objectives

- Receive the opportunity to examine patients, evaluate oral health status with various oral health disease indices and plan suitable treatments.
- Trained in etiology, diagnosis and management of the prevention and treatment of all the oral conditions at the individual and community level.
- Taught to identify social, economic, environmental and emotional determinants in a given individual patient or a community with the purpose of planning and executing a community oral health program.

Theory

S. No.	Description	No. of Hrs.
01	**Introduction** ▪ Definition and differences between community and clinical oral health	01
02	**Epidemiology of dental diseases** ▪ Epidemiology of dental caries ▪ Periodontal diseases ▪ Malocclusion ▪ Dental Fluorosis ▪ Oral cancer	08
03	**Survey procedures** ▪ Planning ▪ Implementation and evaluation ▪ WHO oral health survey methods 1997 ▪ Indices for dental diseases	09
04	**Delivery of dental care** ▪ Dental auxillaries ▪ Operational and non-operational ▪ Incremental and comprehensive health care ▪ School dental health	05
05	**Payments of dental care** ▪ Methods of payment ▪ Dental insurance ▪ Government plans	02
06	**Preventive dentistry** ▪ Definition ▪ Levels ▪ Role of individuals, community and professionals ▪ Fluorides in dentistry ▪ Plaque control programs	10
07	**Behavioral science** ▪ Definition of sociology, anthropology and psychology ▪ Their use in dental practice and community	01

08	**Nutrition in oral diseases** ▪ Vitamins, Trace elements, and malnutrition and oral health	02
09	**Practice management** ▪ Place and locality ▪ Premesis and layout ▪ Selection of equipment ▪ Maintenance of records/accounts/audits	01
10	▪ Dentist's act 1948 with amendments ▪ Dental council of India and state dental councils - Composition and responsibilities ▪ Indian dental association - Head office, state, local and branches	01
Total number of hours		**40**

Clinicals

S. No.	Description	No. of Hrs.
01	Introduction to Public Health Dentistry	30 x 5
02	Introduction to Indices	
03	Discussion, chair side demonstration and recording of following indices: a. Oral Hygiene Index – Simplified b. DMF-T & DMF-S Index, def index, defs index c. Plaque Index d. Gingival Index e. CPITN Index f. Russel's Periodontal Index g. Dentition status (WHO oral health survey form 1997)	
04	Pit and fissure sealants	
05	Discussion of ART	
06	a. Visit to primary health center to acquaint with activities and primary health care delivery b. Visit to water purification plants/public health laboratory/center for treatment of waste and sewage water c. Visit to schools to assess the oral health status of school children, emergency treatment and health education including possible preventive care and school (tooth brushing technique demonstration and oral rinse programme etc.) d. Visit to institution for the care of handicapped, physically, mentally or medically compromised patients e. To conduct a health related survey and present the data	
07	End posting exam	
Total number of hours		**150**

Reference Books

1. Essentials of community dentistry, Soben Peter, 4th Edition, Arya Publishers
2. Textbook of preventive & community dentistry, SS Hiremath, 2nd Edition, Elsevier Publishers
3. Textbook of community dentistry, CM Marya, Japyee Publications
4. Clinical Manual of oral medicine, Ravikiran Ongole & Praveen, Jaypee publications
5. Nutrition in clinical dentistry, Nissel & Pappas
6. Textbook of Pedodontics - Shobha Tandon 2nd Edition
7. Mosby's comprehensive review of dental hygiene
8. Park's textbook of preventive & social medicine, Park, 21st Edition
9. A textbook of community dentistry, PV Sathe
10. Medical Problems In Dentistry – Cawson & Scully
11. Principles of Dental Public Health – Dunning JM

12. Clinical Periodontology. Newman, Takei and Carranza.
13. Fluorides in Dental Caries – Tiwari A Textbook of Preventive and Social Medicine – Mahajan BK & Gupta
14. Textbook of preventive and social medicine, Mahajan BK & Gupta
15. Dentistry, dental practice and the community, Burt & Eklund
16. Community oral health, Pine CM
17. Fluorine and Fluorides, Report by WHO
18. Oral health survery (Basic methods) WHO 4th Edition
19. Growing up cavity free, Moss
20. Community dental health, Jong AW

Model Question Paper

Subject: Public Health Dentistry

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Explain the steps in conducting a randomized controlled trail. Write a note on clinical trail. (6 + 4 = 10 marks)
2. Explain the mechanism of payment in dental care. (10 marks)
3. Write short notes on: (4 x 10 = 40 marks)
   a. Principles, indications and contraindications of Atraumatic Restorative Treatment
   b. Difference between milder form of fluorosis and non-fluoride enamel opacities
   c. Disposal of health care waste
   d. Pathfinder survey
   e. School dental nurse
   f. Levels of prevention of oral cancer
   g. Cariogram
   h. Ethical principles
   i. Tools of dental public health
   j. Primary health care

CURRICULUM
OF
FINAL B.D.S PART - II

Academic Calendar for Final BDS Part - II

Commencement of the course	04-02-2013
Interclass cultural competition	Third week of March 2013 (tentative)
College annual day	23-03-2013 (tentative)
I sessional theory examination	08, 09, 11, 12-03-2013
II sessional theory examination	03, 04, 06, 07-05-2013
III sessional theory examination	14, 15, 17, 18-06-2013
Last date for submission of internal assessment	29-06-2013
Last working day of the II term	29-06-2013
University theory examination (Part - II)	12, 13, 15, 16-07-2013 18, 19, 20, 22, 23-07-2013
University practical examination (Part - II)	
University theory examination (Part - I)	26, 27, 29, 30--07-2013 31-07-2013, 01, 02, 03-08-2013
University practical examination (Part - I)	
Commencement of the Internship	19-08-2013

Time-table for Final BDS Part - II

Day	**8.00 AM – 1.30 PM**	**2.00 to 3.00 PM**	**3.00 - 4.00 PM**
Monday	Dental Clinics	Prosthodontics lecture	Oral Surgery lecture
Tuesday	-do-	Pedodontics lecture	Conservative Dentistry lecture
Wednesday	-do-	Prosthodontics Practical (2.00 to 4.30 PM)	
Thursday	-do-	Oral Surgery lecture	Pedodontics lecture
Friday	-do-	Conservative Dentistry lecture	Prosthodontics lecture
Saturday	-do-	Prosthodontics lecture	Conservative Dentistry lecture

Note: Final BDS (OR) students are required to attend PHD theory classes in place of Pedodontics i.e. Tuesday 2 to 3 PM and Thursday 3 to 4 and 4 to 5 PM

All lecture classes will be held in L.H.4, Centre for Basic Science building and practical classes in the respective department labs.

Oral and Maxillofacial Surgery

Introduction

Oral and Maxillofacial surgery is the branch of dentistry which deals with diagnosis and surgical management of diseases of oral cavity and perioral structures. This part of dentistry is very important to a dental student as it prepares him to deal with the emergencies arising in the dental office, management of medically compromised patients and place an important role in converting him/her from a dentist to a dental surgeon.

Learning Objectives

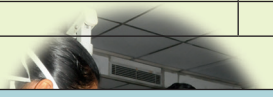
The aim is to make a graduate who

- Is competent in performing extraction of teeth under local anesthesia, prevention and management of related complications.
- Must acquire reasonable knowledge and understanding of the various diseases, injuries, infections occurring in the oral and maxillofacial region and offer solutions to some of those common conditions.
- Also have exposure in to the in-patient management of maxillofacial problems.

Theory

S. No.	Description	No. of Hrs.
	Fracture of the Jaws	
01	Introduction, surgical anatomy and etiology	01
02	Initial assessment and primary management	01
03	General principles of management of fracture	01
04	Closed reduction and indirect fixation techniques	02
05	Open reduction and direct fixation techniques	02
06	Complications	01
	Mandibular Fractures	
07	Dentoalveolar fractures	01
08	Symphysis, parasymphysis and body fractures	01
09	Mandibular angle fractures	01
10	Condylar fractures	01
	Maxillary Fractures	
11	Lefort Fractures	01
12	Zygomatic complex fractures: surgical anatomy, etiology, clinical features, radiology and management	01
13	Orbital fractures	01
	Temporomandibular Joint	
14	Surgical anatomy and classification of disorders of temporomandibular joint	01
15	Internal derangement and degenerative disorders TMJ dislocation and subluxation	01
16	TMJ ankylosis: definition, etiology and classification Clinical features, radiology investigations Management	01
17	MPDS & Arthritis of TMJ	01
	Orthognathic Surgery	
18	Introduction of jaw deformities Classification, types, etiology	01
19	Assessment of the patient and treatment planning	01
20	Maxillary procedures: anterior segmental osteotomy, Lefort I osteotomy	01
21	Mandibular procedures: ramus osteotomies, body osteotomies, genioplasty	01

Preprosthetic Surgery		
22	Introduction, definition, classification Indications and contraindications Vestibuloplasty procedures	01
23	Alveoloplasty procedures and ridge augmentations & reconstruction with bone grafts Other procedures: frenectomy, tori, exostoses etc.	01
Salivary Gland Diseases		
24	Introduction and surgical anatomy Classification and investigations	01
25	Sialadenitis: acute and chronic, sialolithiasis Mucocele, ranula Pleomorphic adenoma and treatment of salivary gland neoplasms	01
Endodontic Surgery		
26	Introduction, indications and apicectomy	01
Facial Pain		
27	Introduction, definition, types of pain	01
28	Classification of orofacial pain, pain pathway from the orofacial region, and theories of pain	01
Neurological Disorders		
29	Trigeminal neuralgia: definition, etiology, clinical features diagnosis and management	01
30	Facial paralysis, nerve injuries	01
General Anesthesia		
31	Definition, stages of anesthesia, anesthesia machine Inhalational anesthetic agents, complication, cardiopulmonary resuscitation Tracheostomy Premedication, conscious sedation with use of Diazepan and Midazolam	01
Oral Implantology		
32	Surgical Applied Anatomy in oral implantology	01
33	Classification of bone & its relevance to Implant treatment	01
34	Maxillary sinus lift procedures – Direct & indirect sinus lift procedures	01
Total number of hours		**36**



Clinicals

S. No.	Description	No. of Hrs.
01	Chair position & operator's position	200
02	Anatomy of maxilla & mandible	
03	Innervations of the teeth – Anatomy of Trigeminal Nerve	
04	Nerve Blocks – Maxilla, Mandible	
05	Instrumentation in Oral surgery	
06	Suturing techniques	
07	Wiring techniques	
08	Emergency drugs	
Total number of hours		**200**

Reference Books

Local anaesthesia

1. Textbook of local anaesthesia (4th Edition). Stanley Malamed. Japee Brothers.
2. Monheim's local anaesthesia and pain control in dental practice. C. Richard Bennet. C. V. Mosby.
3. Local Anaesthesia dentistry. Howe and Whitehead

Medical Emergencies

4. Medical emergencies in dental practice (5th Edition). Stanley Malamed.
5. Medical emergencies in dental practice. Bennett.

Minor oral surgeries

6. Minor Oral Surgery. Geoffrey L.Howe. John wright & sons.
7. Extraction of teeth. Geoffrey L.Howe.
8. Extraction of teeth. Johnson.

Oral and maxillofacial surgeries

9. Contemporary oral and maxillofacial surgery (4th Edition), Peterson.
10. Outline of Oral surgery Vol 1 and 2. Killey and Kay.

Further reading

11. Oral and Maxillofacial Surgery. Laskin - Part I and Part II
12. Oral Surgery. Thoma Vol. 1 and Vol. 2
13. Oral Surgery. Archer Vol. 1 and Vol 2
14. Textbook of Oral and Maxillofacial surgery. Neelima A Malik
15. Textbook of Oral and Maxillofacial surgery. (2nd Edition). Srinivasan

Advanced reading

16. Oral and Maxillofacial infection – Topazian – 4th edition
17. Textbook of Oral and Maxillofacial surgery – Fonseca – 7 volume series
18. Fractures of the facial skeleton – PeterBanks
19. Facial traumatology and esthetic facial surgery – Peter WardBooth
20. Maxillofacial injuries - Rowe and Williams – Part 1 and Part II

Model Question Paper

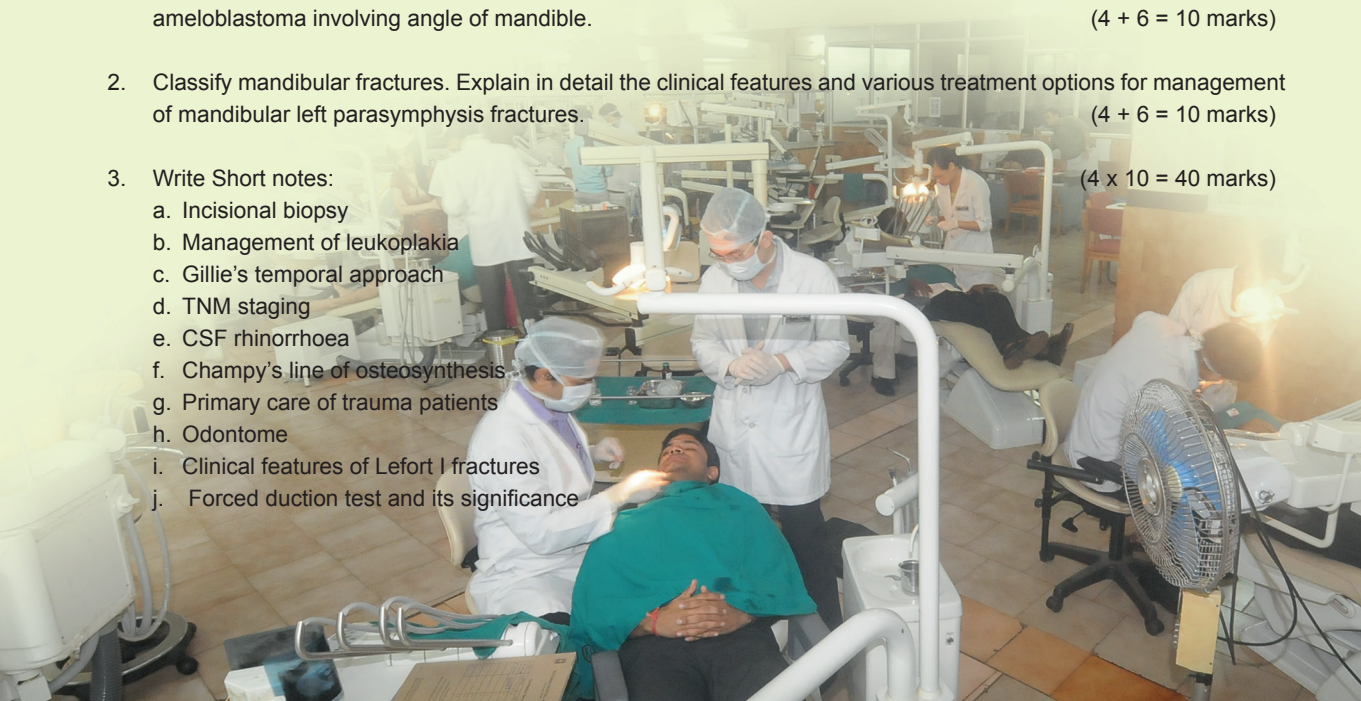
Subject: Oral and Maxillofacial Surgery

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Define and classify ameloblastoma. Explain in detail the clinical features and management options for ameloblastoma involving angle of mandible. (4 + 6 = 10 marks)

2. Classify mandibular fractures. Explain in detail the clinical features and various treatment options for management of mandibular left parasymphysis fractures. (4 + 6 = 10 marks)

3. Write Short notes: (4 x 10 = 40 marks)
   a. Incisional biopsy
   b. Management of leukoplakia
   c. Gillie's temporal approach
   d. TNM staging
   e. CSF rhinorrhoea
   f. Champy's line of osteosynthesis
   g. Primary care of trauma patients
   h. Odontome
   i. Clinical features of Lefort I fractures
   j. Forced duction test and its significance



Conservative Dentistry and Endodontics

Introduction

Conservative dentistry trains dental students with clinical skills and ability to make independent clinical decisions which is essential to become competent dental practitioners. In their third and fourth year of study they are required to perform a wide variety of clinical procedures in the field of Conservative Dentistry & Endodontics. Our integrated approach in teaching Conservative Dentistry & Endodontics encourages students to apply their knowledge in other clinical specialties coupled with basic and behavioral sciences in delivering treatment to patients.

Learning objectives

- Competent to diagnose all carious lesions.
- Competent to perform Class I and Class II cavities and their restoration with amalgam.
- Restore Class V and Class III cavities with Glass ionomer cement.
- Able to diagnose and appropriately treat pulpally involved teeth (pulp capping procedure).
- Able to perform RCT for anterior teeth.
- Competent to carry out small composite restorations.
- Understand the principles of aesthetic dental procedures.

S. No.	Description	No. of Hrs.
01	Shaping and Cleaning	03
02	Intracanal medicaments	01
03	Irrigants	02
04	Microbiology in endodontics	01
05	Bacterial sample and culturing techniques	01
06	Root canal sealers	02
07	Obturation materials and techniques	03
08	Post endodontic restorations	02
09	Endodontic mishaps	03
10	Surgical endodontics	03
11	Single visit endodontics	01
12	Healing after endodontic treatment	01
13	Radiographs in endodontics	01
14	LASER in conservative dentistry and endodontics	02
15	Traumatic injuries and management	03
16	Discoloration of teeth and management	03
17	Tooth resorption and management	02
18	Endo-perio lesions	01
19	Endodontic emergencies and management	02
20	Pharmacology in endodontics	02
21	Endodontic failures	01

22	Re-treatment in endodontics	01
23	Smear layer in endodontics and conservative dentistry	01
24	Patient education, communication and financial management of practice	01
25	Ethics in endodontic practice	01
26	Digital endodontic amramentarium in endodontic practice	01
27	Professional association and Dentist's Act 1948 and its amendment 1993 Duties towards the government like payment of professional and income tax	01
28	**Revision**	14
Total number of hours		**60**

Clinicals

S. No.	Description	No. of Hrs.
1	Instructions and extracted tooth mounting for model work	04
2	Model work	20
3	Short topic-discussions	20
4	Patient care-comprehensive approach for restorative treatment of patients	116
Total number of hours		**160**

Reference Books

1. Operative Dentistry by Summit, Schwartz. 3rd ed.
2. Sturdevant's Art, Science & Practice of Operative Dentistry , 5th edition.
3. Textbook of Operative Dentistry by Baum, Phillip & Lund. 3rd edition.
4. Principles of Operative Dentistry by Charbeneau, 3rd edition.
5. Operative Dentistry- Modern Theory & Practice by Marzouk & Simonton.
6. Cariology by Newbrun.
7. Dental Caries Part 1 & 2 by Gordon Nikiforuk.
8. Endodontic Practise by Grossman.
9. Harty's Endodontics in Clinical Practice, Pitt Ford TR, 6th ed.
10. Endodontics by Ingle & Balkland, 5th ed.
11. Pathways of Pulp by Cohen & Burns. 9th ed.
12. Principles & Practice of Endodontics by Walton & Torabinejad 3rd ed.
13. Endodontic Therapy by Weine 5th ed.
14. Dental Pulp by Seltzer & Bender.
15. Esthetic Dentistry by Ascheim Dale.
16. Endodontic Surgery by James Guttmann.
17. Color Atlas of Endodontics by Messing & Stock.

MODEL QUESTION PAPER

Subject: Conservative Dentistry & Endodontics

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Define an Endodontic Mishap. Classify mishaps. Discuss in detail the causes & management of access related mishaps in endodontics. (1 + 3 + 6 =10 marks)
2. Define dental amalgam. Classify dental amalgam. Discuss the modifications of class II amalgam cavity designs. (1+3+6 = 10 marks)
3. **Write Short Notes on the following:** (10 x 4 = 40 marks)
   a. Mercury toxicity & management in a dental clinic
   b. Classify hand instruments in operative dentistry. Describe GMT.
   c. Management of Symptomatic Apical Abscess
   d. Pins for Amalgam restorations
   e. Crown Down technique
   f. Dowel & Cores
   g. Casting Defects
   h. Self Etch Adhesives
   i. MTA
   j. Fish concept

Prosthodontics and Crown & Bridge

Introduction

The subject is taught in First, Second, Third and Final year of BDS course. It involves Comprehensive training for undergraduate students which enables them to expertise in dealing with completely edentulous and partially edentulous patients. University exam is held at the end of Fourth year.

Learning Objectives

- Apply basic principles in the selection and utilization of appropriate materials, instruments and therapeutic agents in the treatment of removable partial denture and complete denture patients.
- Assess a patient's prosthetic requirements and formulate an appropriate treatment plan.
- Communicate and write prescription of partial dentures to a dental technician.
- Provide efficient service in treating patients requiring complete dentures, partial dentures and other removable and fixed prosthodontic works.
- Diagnose and refer patients with complex prosthodontic needs to the appropriate specialists.

Theory

S. No.	Description	No. of Hrs.
01	**Connectors in FPD** ▪ Rigid connectors - Definition, Classification ▪ Non-rigid connectors - Definition and classification	02
02	**Fluid control and Gingival tissue management - 1** ▪ Methods of fluid control ▪ Classification of retraction cords, methods of retraction	02
03	**Impressions in FPD** ▪ Materials - Alginates, Elastomers ▪ Impression techniques - Classification, advantages and disadvantages of each	02
04	**Provisional restorations - 1** ▪ Various provisional materials used	01
05	**Provisional restorations - 2** ▪ Technique of provisionalization	01
06	**Die materials** ▪ Definitions, classification, ideal requirements, advantages and disadvantage of each ▪ Electroplated die, Flexible die, die separator, die spacer, die hardener	02
07	**Die systems** ▪ Working cast with separate die, advantages, disadvantages, method ▪ Working cast with removable die, pre pour and post pour technique	02
08	**Wax pattern** ▪ Waxes used, Die hardener, die ditching, Techniques of making wax pattern	01
08	**Spruing and Investing** ▪ Types of sprues, Spruing technique ▪ Investment materials, gypsum bonded, phosphate bonded, silica bonded, techniques	02

09	**Casting and Polishing** ▪ Casting alloys and casting machines ▪ Casting procedures, Finishing and polishing of castings	02
10	**Casting defects** ▪ Classification of casting defects, distortion, surface roughness, incomplete casting	01
11	**Casting defects** ▪ Various casting porosities - Classification and their remedy	01
12	**Soldering** ▪ Materials used for soldering, soldering technique	01
13	**Cementation of FPD** ▪ Luting agents - Ideal requirements, classification, passive luting agents ▪ Active luting agents - Advantages and disadvantage, luting technique, provisional luting	02
14	**All ceramic restorations** ▪ Introduction, classification, firing stages, glazing	01
15	**Metal ceramic restorations** ▪ Classification, alloys used, metal preparation, methods for attaching porcelain to metal	01
16	**Post and core preparation** ▪ Indications, contraindications, advantages, disadvantage ▪ Principles of preparation, ferrule, classification of posts, various cores	02
17	**Articulators in FPD** ▪ In brief	01
18	**Occlusion in FPD** ▪ Definition, types, factors affecting occlusion in FPD	01
19	**Color science and shade selection** ▪ Methods of shade selection in FPD	01
20	**Management of extensively damaged tooth** ▪ Classification of remaining tooth structure based on number of existing axial walls	01
21	**Faliures in FPD** ▪ Biologic failures ▪ Mechanical and esthetic failures	02
22	**Laminates and veneers** ▪ Definition, indications, contraindications, advantages and tooth preparation	01
23	**Splints and Stents** ▪ Classification of splints and stents	01
24	**Over dentures** ▪ Advantages and disadvantages ▪ Over denture attachments	02
25	**Immediate denture treatment** ▪ Indications, contraindications, advantages and disadvantages ▪ Technique of fabrication of immediate denture	02
26	**Single complete denture** ▪ Concept behind single complete denture treatment ▪ Combination syndrome	02
27	**Geriatrics** ▪ Treatment options for geriatric patients	01

28	**Maxillofacial prosthesis** ▪ Introduction, terminologies, types, materials used, retention in brief	01
29	**Obturators** ▪ Introduction, definition, classification, design in brief	01
30	**Eye, ear, nose prosthesis** ▪ In brief	01
31	**Implants** ▪ Introduction, classification, components	01
	History of Implants ▪ Evolution of dental implants	01
28	**Implant Biomaterials** ▪ Classification, physical, mechanical and chemical requirements for implant materials	01
29	**Diagnosis and treatment planning - Implant dentistry** ▪ Patient history, medical evaluation, intra-oral examination	01
30	**Osseointegration** ▪ Classification of bone density and morphology of bone, factors	01
31	**Surgical phase** ▪ Stage - I and Stage - II surgery in brief	01
32	**Prosthetic options in Implant dentistry** ▪ Various prosthetic options in brief	01
33	**Implant impression procedures** ▪ Implant level and abutment level impression procedures, close-tray and open-tray methods	01
34	**Revision**	07
Total number of hours		**59**

Clinicals

S. No.	Description	No. of Hrs.
01	Case history for completely and partially edentulous patients	160
02	Diagnosis and treatment planning for completely and partially edentulous patients	
03	Fixed partial denture exercises on phantom heads	
04	Treating patients requiring complete dentures, partial dentures and other removable appliances	
Total number of hours		**160**

Practicals

S. No.	Description	No. of Hrs.
01	Design of cast partial dentures (Class I, II, III and IV)	50
02	Tooth preparation for fixed partial dentures	
Total number of hours		**50**

Reference books

1. Boucher's Prosthetic Treatment for Edentulous patients – Hickey and Zarb; 12th ed. 1975; CV Mosby Co.
2. Heartwell Syllabus of complete denture; Arthur O.Rahn and Charles M. Heart Well; 5th ed. 1993; Lippincott Williams & Wilkins, Philadelphia.
3. Essentials of Complete Denture; Sheldon Winker; 2nd ed. 2000. AITBS Publishers.
4. Essential of Removable Partial Dentures; OC Applegate; 1972; Kothari Books Depot, Bombay.
5. Mc Cracken's Removable Partial Prosthodontics; 11th ed. 2000; Harcourt India N. Delhi.
6. Removable Partial Denture; Ernest L. Miller; 2nd ed. 1989; CBS Publisher, N. Delhi.
7. Fundamental of fixed Prosthodontics; Shillingburg; 3rd ed. 1997; Quintessence Publishing Co. Chicago.
8. Tylman's Theory and Practice of Fixed Prosthodontics; 8th ed. 1989; Ishiyake Euro Americal Inc. St. Louis.
9. Contemporary Implant dentistry. Carl E. Misch. Mosby; 2009; 3rd ed.
10. Clinical Removable Partial Prosthodontics.2nd ed.Stewart, Rudd. Kuebker.
11. Contemporary fixed Prosthodontics .4th ed.Rosenstiel, Land, Fujimoto.

Model Question Paper

Subject: Prosthodontics Including Crown and Bridge

PART I: 20 MCQ	15 MINUTES	10 MARKS
PART II: DESCRIPTIVE PAPER	2 HOURS 45 MINUTES	60 MARKS

1. Define centric relation; write about the significance and various methods to record the same. (2+4+4 = 10 marks)

2. Define abutments in fixed partial denture. Write about the abutment evaluation (ideal requirements of abutment teeth) in fixed partial denture (2+8 = 10 marks)

3. Write short notes on: (4X10 = 40 Marks)

   a. Overdenture attachments
   b. Laws of articulation in Balanced occlusion
   c. Denture induced stomatitis
   d. Anterior Teeth selection in complete dentures
   e. Applegate rules in RPD
   f. Mandibular linguoplate Major Connector
   g. Porcelain firing cycle for metal ceramic restoration
   h. Indirect retainers
   i. RPI system
   j. Selection criteria for Pontics

Paediatric and Preventive Dentistry

Introduction

In final year of BDS the subject includes didactic lectures and clinical postings. At the ends of year students have to appear for a university theory and clinical examination.

Learning objectives

- The student will be able to understand child psychology and apply behavioral management techniques.
- Understand rationale of pediatric endodontics and apply the same.
- Understand the use of preventive techniques and application for prevention of caries.
- Identify space loss and apply suitable measures.
- Handle pediatric dental emergencies.

Theory

S. No.	Description	No. of Hrs.
	Case History, Diagnosis and Treatment Planning	
01	**Case history, diagnosis and treatment planning** ▪ Method of recording vital statistics, chief complaint, medical history, parent history, prenatal, natal and postnatal history, examination of head and neck ▪ Intra oral hard and soft tissue examination, recording relevant indices, arriving at a diagnosis, selection of relevant investigations and treatment planning	01
	Pediatric Endodontics	
02	**Introduction** ▪ Importance of Endodontics in pediatric patients, factors influencing the treatment, goals of pulp therapy	01
03	**Diseases of pulp and diagnosis** ▪ Pulp physiology, path physiology of various pulpal diseases correlating signs and symptoms, diagnostic procedures	01
04	**Pulp capping** ▪ Definition, justification, indications, limitations, procedure of indirect and direct pulp capping, pulp capping agents	01
05	**Pulpotomy** ▪ Definition, classification, indications, contraindications, procedure, agents used for pulpotomy	01
06	**Pulpectomy** ▪ Definition, objectives, techniques of pulpectomy, obturating materials in primary teeth	01
07	**Endodontic management of young permanent teeth** ▪ Apexogenesis and apexification	01
	Traumatic injuries to teeth	
08	**Introduction** ▪ Terminologies, classifications, mechanism and predisposing factors	01
09	**Treatment planning and Crown fractures** ▪ History, clinical examination, investigations, diagnosis and treatment planning ▪ Clinical features and management of Ellis class 1, 2 and 3 fractures	01
10	**Periodontal ligament injuries and management** ▪ Clinical features and management of Concussion, subluxation, intrusion, extrusion, lateral luxation and Avulsion	01

11	**Root fractures and sequelae and Prevention of trauma** ▪ Different levels of root fractures, Investigations, management, sequelae of traumatic injuries ▪ Prevention of sports injuries with use of mouth guards.	01
	Management of patient with cleft lip and palate	
12	**Management of patient with cleft lip and palate** ▪ Introduction, embryology, classifications, etiology, clinical features, multidisciplinary management	01
	Preventive dentistry including Fluorides	
13	**Infant oral health care** ▪ Introduction, goals, objectives, first dental visit, role of dentist, anticipatory guidance, oral hygiene guidelines, Concept of dental home	01
14	**Parent counseling** ▪ Definition, objectives, parent counseling for dental diseases from infancy through adolescence	01
15	**Modern trends in preventive dentistry** ▪ Various recent methods of caries prevention	01
16	**Fluorides – history and Cariostatic mechanism of fluorides** ▪ Milestone studies in the discovery of fluoride ▪ Topical, systemic action of fluoride on dental hard tissue	01
17	**Topical fluorides** ▪ Professional and self applied topical fluorides, mechanism of action, method of preparation and application of different topically applied fluorides	02
18	**Systemic fluorides and Fluoride Toxicity** ▪ Different methods of systemic fluoridation, their advantages and limitations ▪ Acute and chronic toxicity of fluorides, its management	01
	Ephebodontics	
19	**Ephebodontics** ▪ Definition, common dental problems, special consideration for treatment of adolescent	01
	Preventive Orthodontics	
20	**Introduction to preventive Orthodontics** ▪ Introduction, importance of preventive orthodontics and various measures employed	01
21	**Variables influencing space control** ▪ Variables influencing space control programmes, clinical assessment for space management, space analysis	01
22	**Introduction to space maintainers** ▪ Definition, classification, types of space maintainers, indication, limitations of various space maintainers	01
23	**Various space maintainers** ▪ Indications, contraindications, fabrication of various space maintainers, their advantages and disadvantages	03
	Interceptive orthodontics	
24	**Introduction to interceptive Orthodontics** ▪ Introduction, need for early interception, benefits, considerations for early interception and various measures undertaken	01

25	**Space regainers** ▪ Different types of space regainers, their indications, limitations and fabrication	01
26	**Introduction to oral habits** ▪ Definition, classification, development of habit and its effect on orofacial region	01
27	**Digit sucking** ▪ Definition, classification, theories for development of habit, clinical features and management of thumb sucking	01
28	**Tongue thrusting and mouth breathing** ▪ Definition, classification, theories for development of habit, clinical features and management of tongue thrusting and mouth breathing	01
29	**Bruxism, Lip habits and masochistic habits** ▪ Definition, classification, theories for development of habit, clinical features and management of bruxism, lip sucking and sado masochistic habits	01
30	**Management of cross bite and crowding** ▪ Definition, types, etiology, clinical features and management of cross bite and crowding	02
	Special care dentistry	
31	**Introduction** ▪ Introduction, objectives and goals of special care dentistry for children, preventive dentistry for special child	01
32	**Cerebral Palsy & Mental retardation** ▪ Introduction, etiology, classification, clinical features, dental features, management of cerebral palsy and mental retardation	01
33	**Autism, Deafness blindness** ▪ Introduction, etiology, classification, clinical features, dental features, management of autism, deafness, blindness	01
34	**Medically compromised children** ▪ Introduction, etiology, classification, clinical features, dental features, management of leukemia, bleeding disorders, heart diseases in children	02
	Total number of hours	**39**

Clinicals

Students must maintain a log book as proof of their clinical work. It must be duly signed by faculty.

S. No.	Description	No. of Hrs.
01	Short case histroy with diagnosis, treatment planning (10)	**128**
02	Long case history with diagnosis, treatment planning and preventive protocol (04)	
03	Student should perform a. Oral prophylaxis (15) b. Topical fluoride application (10) c. Restorative procedures 35 (class1 and 2) d. Pit and fissure sealants (3) e. Preventive Resin Restorations (3) f. Extractions (20) Patient education and motivation will be done as an integral part of treatment for all patients.	

04	Orthodontic case (Indicated for preventive or interceptive orthodontics): a. Diagnosis with records b. Preparation of study model c. Treatment planning d. Case presentation e. Delivery of space maintainer/habit breaking appliance (as per the requirement of the patient and subject to availability of case)	
05	Discussion of management of medically compromised patient with complete history, diagnosis, treatment plan with preventive protocol.	
06	Model exercise of paediatric endodontics on extracted primary teeth	
07	Demonstration of stainless steel crown	
08	Clinical examination will be conducted at the end of the posting in which the student is expected to record a long case history, give a diagnosis, propose a treatment plan and perform the allotted clinical procedure	
09	One seminar presentation of twenty minutes duration will be done by each student on the allotted topic. A write up of the same will also be submitted to the department on the last day of the posting which after correction by the designated faculty will be returned to the student for submission during the university clinical examination	
10	OSCE (Objective Structured Clinical Evaluation) will also be carried out	
Total number of hours		**128**

Reference Books

Basic Pediatric dentistry

1. Text book of Pedodontics, 2nd edition, - Shobha Tandon, Paras Publishing.
2. Dentistry for Child and Adolescent – Mc Donald – 8th edition- Elsevier Publication.
3. Pediatric Dentistry infancy through adolescence – Pinkham,4th ed.
4. Clinical Pedodontics - Sidney B. Finn.
5. Text book of Pediatric Dentistry – Braham Morris.
6. Hand book of clinical Pedodontics – Kenneth D.
7. Dentistry for the Child and Adolescent – Mc.Donald, Avery and Dean 8th ed.
8. Pediatric Dentistry- Damle S.G.
9. Fundamentals of Pediatric Dentistry – Mathewson.

Child Psychology and behavioral management

1. Managing Children's Behavior in Dental Clinic – Gerald Z. Wright- C.V. Mosby Co. 1983.
2. Management of dental behavior in children – Ripa and Bareine, PSG Publishing.

Suggested readings

1. Pediatric Drug Therapy – Tomare.
2. Preventive Dentistry – Depaola.
3. Pediatric Medical emergencies - P. S. Whatt.
4. Pediatric Dentistry Oral Medicine and Pathology – Roger Halt, Chapman and Hall Medical 1994.
5. Pediatric Dentistry – Welbury.
6. Pediatric dentistry – Koch and Polsen.

Orthodontics

1. Occlusal guidance in Pediatrc Dentistry – Stephen H. Wei.
2. Occlusal guidance in Pediatric Dentistry – Nakata.
3. Contemporary Orthodontics – Profitt.
4. Orthodontics – The Art and Science – Bhalajhi.
5. Minor Tooth Movement in Children – Joseph M. Sim.
6. Handbook of Orthodontics – Robert E. Moyers.
7. Orthodontic Principles and Practice – Graber.

Cariology

1. Understanding dental caries I & II – Gorden Nikiforuk.
2. Cariology today – Guggenheim.

Traumatology

1. Traumatic injuries – Andreason.
2. Management of Traumatized Anterior Teeth – Hargreaves.
3. Text book and colour atlas of Traumatic injuries to the teeth – Andreasen.

Fluorides

1. The metabolism and toxicity of fluoride – Garry M. Whitford.
2. Fluorides in Dentistry – Fejerskov.

Preventive Dentistry

1. Primary Preventive Dentistry – Norman O. Harris.
2. Preventive Dentistry – Forrester.
3. Essentials of Pediatric and Community Dentistry – Soben Peter.

Endodontics

1. Endodontics Practice – Grossman.
2. Principles of Endodontics – Munford.
3. Endodontics – Ingle.
4. Pathways of Pulp – Cohen.
5. Endodontic Therapy – Weine.

Pediatric Oral and Maxillo-facial Surgery

1. Kaban's Pediatric oral and maxillofacial surgery – Lconard B. Kaban-Saunders.

Pediatric Operative Dentistry

1. Kennedy's Pediatric Operative Dentistry – Kennedy and Curzon.
2. An Atlas of Glass Ionomer cements – G.J. Mount.
3. Glass Ionomer Cement – Alan D. Wilson.

Model Question Paper

Subject: Paediatric and Preventive Dentistry

PART I: 20 MCQ 15 MINUTES 10 MARKS

PART II: DESCRIPTIVE PAPER 2 HOURS 45 MINUTES 60 MARKS

1. Define early childhood caries. Discuss in detail the following:
   a. Etiology
   b. Clinical features
   c. Management and
   d. Prevention of early childhood caries (1+1+2+4+2 = 10 marks)

2. Define special child. Discuss in detail the following:
   a. Definition and classification of cerebral palsy
   b. Etiology of cerebral palsy
   c. Clinical features
   d. Dental management of cerebral palsy (1+2+2+2+3 = 10 marks)

3. Write short notes on: (4×10 = 40 marks)
   a. Blue Grass appliance
   b. Tell-show-do
   c. Turner's hypoplasia
   d. Distalization of molars
   e. Dean's fluorosis index
   f. Juvenile periodontitis
   g. Aphthous ulcers
   h. Streptococcus mutans
   i. Child as a patient
   j. Practice management