SRM KATTANKULATHUR DENTAL COLLEGE & HOSPITAL
SRM NAGAR, POTHERI - 603203

CURRICULAM AND SYLLABUSFOR THE BACHELOR OF DENTAL SURGERY DEGREE COURSE

REGULATIONS

Eligibility for admission to B.D.S degree course

1. Candidates belonging to all categories except scheduled caste/ scheduled tribe for admission to the Dental course should have obtained not less than 50% marks on aggregate in physics, chemistry and biology (Botony/ Zoology) at the qualifying examinations (academic stream) after a period of 12 years study
2. For candidates belonging to scheduled caste/ scheduled tribes, the minimum marks for admission
   Shall be 40% in lieu of 50% for general category
3. Graduates candidate should have qualified for the Bsc degree of an Indian university recognized by the
   Association of Indian university and accepted as equivalent but the standing academic council board of management of this university. Those graduates should have taken one of the following subjects as major subject of study an ancillary. The candidate shall have passed the earlier qualifying examination (Higher Secondary examination or an equivalent examination) with the subjects physics, Chemistry, Botony, Zoology.
4. Where the course content is not as prescribed for 10+2 education structure of the national committee, the
   Candidates will have to undergo a period of one year, pre professional training before admission to the
   Dental college
5. Wherever the state board /body of appreciate authority have taken into account only the +2 level marks to
   Determine the class of the candidate and issue the statement of marks accordingly, that alone would be taken into consideration
6. Candidates who have studied abroad the equivalency of qualification ad determined by the have passed
   In the subject of physics, chemistry, biology,(Botony, Zoology) and English up to the 12th standard with 50% marks in aggregate.
7. The candidate should be medically fit
8. Any Criteria not covered under the above provisions, the ruling of the ELIGIBILITY COMMITTEE shall be adopted.

Age Limit for admission

Candidate should have completed the age of 17yrs as on 31st December of the year of admission

Selection of Students

The selection of students to dental college of this university is solely on the basis of merit.

Eligibility certificate
Candidates who have passed any qualifying examination other than the higher secondary examinations conducted by the government of Tamil Nadu shall obtain an eligibility certificate from the university the remitting the prescribed fees along with the application form before admission.

Registration

A candidate admitted to the course in S.R.M Dental College the University, shall register his/her by remitting by the prescribed fees along with the application form before registration, duty filled through then head of the Institute within the stipulate date.

Duration of Course

The Period of certified study for the course of degree of bachelor of Dental Surgery shall extent over a minimum period of four Academic years plus one year compulsory rotating Internship in college.

Academic Terms

I BDS – August 1st to 31st July II BDS – August 1st to 31st July
III BDS – August 1st to 31st July
IV BDS – Semester I – August 1st to 31st January
IV BDS – Semester II – February 1st to 31st July

Curriculum

The Curriculum and the syllabi for the course shall be as prescribed from time to time by academic council and approved by the board of Management of University.

Working Days in an Academic year

Each Academic year shall consist of not less than 240 working days

Attendance required for admission to University Examinations

a. No candidate shall be permitted to any one of the parts of BDS examinations unless he/she attended the course in the subject for the prescribed period and procedures the necessary her of study, attendance and satisfactory conduct from the head of the Institution.
b. A candidate is required to put in a minimum 80% in both theory and practical/ Clinical separately in each subjects to appear in the University examination
c. In case of the subjects in which there is no examination at the end of the academic year percentage of attendance shall be not less that 70%. However at the time of appearing for professional examination in the subject the aggregate percentage of attendance in the subject should be 80%.
d. In case of students who have failed in more that one subject and not permitted to go to the higher class, the attendance in the subject in which the student have failed should not be less than 75%
e. In case of students who have failed in one subject and is permitted to go to next higher class, they should attend the internal assessment test (Theory and Practical) in the subject in which the student have failed and should attend the additional classes conducted by the department.
f. A Candidate lacking in the prescribed attendance in theory and Practical / Clinical in any one subject in the first appearance shall not be appear for university examinations.

Condonation of Lack of Attendance

Condonation of shortage of attendance up to a maximum of 10% in the prescribed eligible attendance for admission to an examination rest with the discretionary power of the Vice Chancellor. A Candidates lacking in attendance shall submit an application in the prescribed form and remit the stipulated fee for Rs 300/- 15 days prior to the commencement of the theory examination. The head of the department and the head of the Institution should satisfy themselves regarding the genuineness of the candidate's request while forwarding the application with their endorsement to the controller of the examination who would obtain the vice chancellor's approval for the candidates admission to the examination. No application would be considered, if it is not forwarded through the proper channel.

Condonation of lack of attendance shall be taken up for the consideration under the following circumstances:-

a. Any illness affecting the candidate(the candidate should submit to the head of the institute a medical certificate from a registered a medical practitioner soon after he/she returns to the institute after treatment)
b. Any unforeseen tragedy in the family(the parent guardian should give in writing the reason for the wards absence to the head of the Institution)
c. Participation in NCC/NSS and other coordinated activities representation the Institution or University(the Head of the Institution of endorse the leave)
d. Any other leave (which doesn't fall under the category of A,B&C mentioned above) the Head of the Institution deems reasonable for recommendation for approval by the Vice chancellor for condonation**.**

Internal assessment marks required for admission to University examination

A minimum of 35% of internal assessment marks is required for a student to be permitted to appear for the University examination. A candidate should secure a minimum of 7 mark out of the 20 Marks allotted for the internal assessment exam (Theory 10 marks & Practical 10 marks)

Readmission after break of study

a. Candidates having a break of study of 5 years and above or more than two spells of break will be considered for re-admission
b. The calculation of the break of break of study of the candidate for re-admission shall be calculated from the date of first discontinuance of the course
c. Candidate having break of study shall be considered for re-admission provided that they are not subjected to any disciplinary action and no charges are pending or contemplated against them.
d. All re-admission of candidates are subject to the approval of Vice chancellor

Migration /Transfer of candidates

a. Migration of transfer of candidates from one recognized dental college to another recognized dental college shall be granted as per the recommendations and regulations of the dental of India
b. The provision of combination of attendance shall be granted to a transferee for admission university examinations with the approval of the vice chancellor
c. All migration/transfers are subject to the approval of the vice chancellor

SUBJECTS OF STUDY FOR BDS COURSE

I YEAR

BDS 0101 Human Anatomy, Embryology and Histology
BDS 0102 Human Physiology
BDS 0103 Medical Biochemistry
BDS 0104 Oral Anatomy, physiology,histology & Tooth morphology

II YEAR

BDS 0201 Materials used in Dentistry
BDS 0202 General Pathology
BDS 0203 Medical Microbiology
BDS 0204 General and Dental Pharmacology and Therapeutics
BDS 0205 Pre clinical Prosthodontics
BDS 0206 Pre clinical Conservative

III YEAR

BDS 0301 Oral Pathology and Oral Microbiology
BDS 0302 General Medicine
BDS 0303 General Surgery

IV YEAR – SEMESTER I

BDS 0401 – Public Health Dentistry
BDS 0402 – Periodontology
BDS 0403 – Orthodontia and Dento facial orthopedics
BDS 0404 – Oral Medicine and Radiology

IV YEAR – SEMESTER II
BDS 0405 – Oral and Maxillofacial surgery
BDS 0406 – Conservative and esthetic dentistry
BDS 0407 – Prosthetics – Crown and bridge, esthetic dentistry
BDS 0408 – Pediatric and preventive Dentistry

EXAMINATIONS

SCOPE: These regulations shall be applicable for the BDS degree examinations conducted by various universities in the country

Preface:

- Evaluation is a continuous process which is based upon criteria developed by the concern authorities with certain objectives to asses the performance of the learner. This also indirectly helps in the measurement of effectiveness and quality of the concerned BDS programme.

Evaluation is achieved by two processes

- Formative or internal assessment
- Summative or University examinations

Formative evaluation is done through a series of test and examination conducted periodically by the Institution

Summative evaluation is done by the university through examination conducted at the end of the specified course

Methods of evaluation:

Evaluation may be achieved by the following tested methods

- **Written test**
- **Practical**
- **Clinical Examination**
- **Viva voce**

Any student, who does not clear the first BDS University Examination in all subjects within 3 years from the date of admission, shall be discharged from the course

For I BDS to II BDS : Any candidate who fails in one subject in an examination is permitted to got to the next higher class and appear for the subject and complete it successfully before he is permitted to appear for the next higher examination.

For III BDS: Any candidate who fails in one **subject in the** III BDS examination is permitted to go to the 1st Semester of the Final year BDS. However he/she has to complete all the third year subjects successfully before entering the 2nd semester of the final year BDS.

For IV BDS: Any candidate who fails in one subject in final year first semester examination is permitted to go to the next semester class and appear for the subject and complete it successfully before entering the internship programme.

Internal assessment examination and Model Practical Examination

The continuing theory assessment examinations may be held frequently at least 6 test times in a particular year/3 times in a semester and practical assessment examination may be held at least 2 times in a particular year/one time in a semester and the average marks of these examinations should be considered. At least 10% out of the total marks in each subject for both theory and practical and clinical examinations should be set aside for the internal assessment examination

Internal assessment marks (Theory) = 10
Internal assessment marks (Practical/Clinical) = 10

Total Marks for Internal assessment = 20

In case of students who have failed in one or more than one subject, the internal marks that they have obtained in the first appearance will not be valid and the students should appear for the internal assessment test (Theory and Practical) and obtain new internal assessment marks, however the mark obtained by these students for the record in their first appearance can be carried over to the subjects appearance.

Scheme on University examination:

Written examination

1. The written examination in each subject shall consists of one paper 3 hours duration and have a maximum of 70 marks
2. Each paper will be divided into three parts A,B,C as follows
3. Marks distribution

Section A	2 Long essays, 10 Marks each	2 X 10 = 20
Section B	8 Short essays, 5 marks each	8 X 5 = 40
Section C	5 Short answers, 2 marks each	5 X 2 = 10
		70

4. The nature of question set, should be aimed to evaluate students of different standards ranging from average to excellent.

5. The question should cover a broad an area of the content of the course. The essay question should be properly
   Structured and the marks specifically allotted
6. The university may set up a question bank

Each subject shall have a maximum of 200 marks

Theory	100
Practical/Clinical	100

Theory	100
University written examination	70
Viva Voce	20
Internal assessment (Theory)	10

	100

Practical / Clinical	100
University examination	90
Internal assessment 9Practical / Clinical)	10

	100

II BDS Pre – Clinical Prosthodontics and Conservative dentistry

University Practical examination	90
Viva Voce	20
Internal assessment	20

	100

Criteria for Pass:

Fifty percent of the total marks in any subject computed as aggregate for theory i.e written, viva voce and internal assessment and practical including internal assessment separately is essential for a pass in all years of study

- For the declaration of pass in a subject, a candidate shall secure 50% marks in the university examination both in theory and Practical/ clinical examination separately as stipulated below
- A candidate shall secure 50% marks in aggregate in theory including university written examination, viva voce and internal assessment (Theory) combined together

- A candidate shall secure 50% marks in aggregate in practical / Clinical including university practical / clinical examination and internal assessment (Practical / Clinical) combined together
- In case of pre clinical prosthetic dentistry and pre clinical conservative dentistry in II BDS, where there is no written examination, minimum for is 50% of marks including university practical examination, viva voce and internal assessment combined together
- A successful candidate who secured 65% or above, of the marks in the aggregate in the first appearance will be declared to have passed in the first class in that particular subject and a successful candidate securing 75% or above, of the marks in the aggregate, in the first appearance will be declared to have passed in the fist class with distinction in that particular subject.
- Candidates who have passed all the subjects, at the first appearance and obtained 75% of marks and above, in all subject he/she had appeared shall be awarded with first class with distinction
- Candidates who have passes all the subjects at the first appearance and obtained 65% of marks and above, in all subjects he/she appeared shall be awarded with first class.
- All other successful candidates shall be declared to have passed in second class

Recommendations

For all University examinations the question papers will be set by the external examiners. They answer books will be valued by the two examiners. One of the two examiners will be from this university the other will be from any other university. Out of these two valuations, the highest marks secured the candidate will be taken into account. There is no provision for revaluation of answer books for re totaling since the valuation is done by two examiners.

CURRICULUM FOR INTERNSHIP

- The duration of internship shall be one year
- The internship shall be compulsory and rotating as per the regulations prescribed by the DCI
- The degree – BDS shall be granted after completion of internship
- The compulsory rotating internship training shall be in public health dentistry, Periodontics, orthodontics, Oral Medicine and radiology, Oral pathology, Oral surgery, Conservative dentistry, prosthetics, pedodontics.
- Period of postings

Oral Medicine and radiology	1 Month
Oral and Maxillofacial Surgery	1½ Month
Prosthetics	1½ Month
Periodontics	1 Month
Conservative Dentistry	1 Month
Pedodontics	1 Month
Oral pathology	15 days

Orthodontics	1 Month
Public Health Dentsitry	3 Months
Elective	15 days

I BDS SYLLABUS

Human Anatomy, Embryology and Histology

Theory (135 Hours)
Section A. Human Anatomy

1. <u>Introduction to Anatomy: (Lectures = 10 Hours)*</u>

*(These 10 Lectures are not included for Examinations)

1. Origin of Universe, Origin or earth, Origin of Life, Introduction to Living organism and vital activities
2. Evolution of Animal kingdom, Evolution of primates and Man
3. Introduction of Human Anatomy, Tissue of the body, Organs and Outline of systems of the Human body, Anatomical position, terms used in Anatomy
4. Introduction to Osteology, classification of the Human skeleton
5. Introduction to Joints – Classification of the joints and anatomy of each type of joint
6. Introduction to Muscular system – Classification of muscles, types of skeletal muscles, types of movements
7. Introduction to the Nervous system and Special sense organs
8. Respiratory system, Cardio vascular system and Lymphatic system
9. Digestive system and Endocrine system.
10. Reproductive system, Excretory system, and Integumentary system.

2. <u>Gross Anatomy – Theory (Lectures = 45 Hours)</u>

1. Typical spinal nerve
2. Innervations of skeletal muscles, Muscle tone and tendon reflex
3. Scalp and Temple region – structure, arteries, Veins and nerves
4. Superficial structures in Face, Muscles and face and Facial palsy
5. Side of the Neck, Posterior triangle of the Neck – Boundaries and contents
6. Muscles, blood vessels and nerves of the back of neck, and sub occipital triangle
7. Anterior triangle of the Neck – Boundaries and contents
8. Cranial Cavity and Meninges of the brain
9. Dural venous sinuses and veins of the brain
10. The pituitary gland

11. The thyroid gland and parathyroid glands
12. The Brachoicephalic trunk and Common carotid arteries
13. The External carotid artery and Internal carotid artery
14. Sub clavian artery and Vertebral artery
15. Veins of the Head and neck
16. The symphathetic nervous system
17. The Cervical plexus
18. Deep cervical fascia and Carotid sheath
19. The lymphatic drainage of the Head and Neck
20. The Lacrimal gland and lacrimal apparatus
21. The orbit and extra ocular muscles
22. The parotid gland
23. The Muscles and Mastication, The maxillary artery
24. The Temperomandibular joint, Clinical Anatomy
25. The submandibular region – submandibular and sublingual salivary glands
26. The Oral cavity and palatine tonsil, Tongue – extrinsic and intrinsic muscles of the tongue
27. The Nasal cavity, para nasal sinuses
28. The pharynx
29. The Larynx
30. The Joints of the Neck

3. <u>Neuro Anatomy – Theory (Lectures = 15 Hours)</u>

1. Introduction to the Central Nervous system
2. The Gross features of the spinal cord and spinal nerves
3. The sectional anatomy of spinal cord, grey and White matter
4. Sensory tracts of the spinal cord
5. Descending tracts of the spinal cord
6. Brain stem
7. The cerebellum
8. The cerebral hemispheres and functional areas
9. Ventricles of the brain and circulation of CSF
10. Blood supply to the brain and Circle of Willis
11. The Diencephalon
12. Autonomic Nervous system.

4. Anatomy of the Cranial Nerves – Theory (Lectures = 15 Hours)

SECTION B. HUMAN EMBRYOLOGY
Theory (Lectures = 30 Hours)

General Embryology

1. Male and female Reproductive system
2. Gamatogenesis – Spermatogenesis and Oogenesis
3. Ovulation, Corpus Luteum, Fertilization, Effects of fertilization , Zygote
4. Mendel's law
5. Chromosome and karyo typing
6. gene structure and modes of inheritance
7. Clinical correlates and Chromosomal abnormalities, Contraceptive methods, In vitro fertilization
8. Cleavage, Morulla
9. Blastula and embryonic potencies
10. Implantation and Ectopic Pregnancy
11. Formation of Bi laminar germ disc
12. Amniotic cavity and chorionic cavity
13. Formation of primitive streak Notochord, Neural plate and Neural tube
14. Formation of Tri laminar germ disc, Intra embryonic mesoderm, Somites
15. Folding of the embryo and derivatives of germ layers
16. fetal membranes and placenta
17. Twinning and Congenital malformations

Systemic Embryology

18. Development of skull, mandible and vertebral column
19. Development of Aortic arches
20. Development of pharynx and larynx
21. Development of pharyngeal Arches, pouches, Clefts and their derivatives
22. Development of Tongue, Thyroid gland
23. Development of face, Lip, Jaw, Oral cavity and palate
24. Development of Nasal cavity and para nasal sinuses
25. Development of tonsil and parathyroid gland
26. Development of eye and lacrimal gland
27. Development of mandible and teeth
28. Development of Salivary glands
29. Formation of neural tube, Spinal cord and neural tube defects
30. Development of Brain and Spinal cord and pituitary gland

SECTION C: HUMAN HISTOLOGY
Theory Lectures = (20 Hours)

General Histology (5 Hours)

1. Classification of Epithelial tissue & glandular tissue
2. Classification of connective tissue
3. Classification of Muscular tissue
4. Classification of Nervous tissue

Systemic Histology (15 Hours)

1. Cardiovascular system

5. Aorta – T.S., Large Artery – T.S, Medium sized artery – T.S. large Vein – T.S medium sized vein – T.S

2. Lymphatic system

6. Lymph node and Tonsil, Thymus and Spleen

3 .Integumentary system

7. Thick skin, Thin skin

4. Digestive system

8. Salivary glands – Parotid gland, Sublingual gland and Sub mandibular gland
9. Tooth, Lip, hard palate, Tongue and Esophagus
10. Jejunum, ileum, appendix, large intestine
11. Stomach & Duodenum
12. Liver,gallbladder & pancreas

5. Respiratory system

13. Trachea, epiglottis and Lung

6. Endocrine system

14. Hypophysis cerebri and Thyroid gland
15. Para thyroid gland and Supra renal gland

7. Excretory system

16. Kidney
17. Ureter & urinary bladder

8. Reproductive system

18. Ovary & testes

9. Nervous system

19. Peripheral nerve, optic nerve
20. Ganglion – sensory, Motor, Sympathetic ganglion and parasymphathetic ganglion

PRACTICALS (150Hours)

1. Gross Anatomy Practicals (40 Hours)
   Demonstration of Dissected specimens

2. Clinical Anatomy : (10 hours)
   Surface anatomy of bony land marks & Blood vessels of upper limb
   Surface anatomy of Deltoid region

Surface anatomy of Gluteal region
Surface anatomy of bony land marks & Blood vessels of Head & neck

3. Neuro Anatomy Practicals (10 Hours)
   Demonstration of the Brain and Spinal cord specimens
4. Histology Practicals (40 Hours)
   Demonstration of Histology slides

5. Osteology – Practical Demonstration (50 Hours) (2Hours for each topic)

    1. Vertebral column, Typical Cervical vertebra
    2. Atlas, Axis and C7 Vertebra
    3. General architecture of the skull
    4. External features of the skull
    5. Normal Frontalis
    6. Norma Lateralis
    7. Norma Verticalis and Norma Occipitalis
    8. Norma Basalis
    9. The cranial cavity and base of the skull
    10. Temporal fossa, infra temporal fossa
    11. Spheno paltine fossa
    12. Mandible
    13. Frontal bone and parietal bone
    14. Occipital bone
    15. Temporal bone
    16. Sphenoid bone
    17. Maxilla
    18. Zygomatic bone, lacrimal bone and Nasal bone
    19. Ethmoid bone, Vomer and Inferior nasal choncha
    20. Fetal skull and skull of a child
    21. Age changes in Skull
    22. Age changes in Maxilla
    23. Age changes in Mandible
    24. Craniometry and Cranial indices
    25. Cranio Facial Growth and development

Theory	135 Hours
Practical	150 Hours

TOTAL TEACHING HOURS	285 Hours

BDS 102 – HUMAN PHYSIOLOGY
UNIT – 1
INTRODUCTION TO PHYSIOLOGY
General and cellular basis of medical physiology
TISSUES

Histophysiology of epithelium, connective tissue, cartilage, bone tissue
Excitable tissue – nerve
Ionic basis of excitation and conduction
Neurotropins
Excitable tissue – muscle
Skeletal muscle
Electrical phenomena and ionic fluxes
Cardiac muscle properties – electrical, mechanical
Smooth muscle

PULMPNARY PHYSIOLOGY
Anatomy and histology
Mechanics of respiration
Lung volumes and capacities
Chronic obstructive pulmonary disease and Restrictive lung disease
Diffusion of gases and their transport
Lung surfactant – Infant respiratory distress syndrome and adult respiratory disease syndrome
Control of respiration – Nervous and chemical
Non-respiratory functions of the lung
Disturbances in respiratory function – Cheyne Strokes breathing, Kassmaul breathing, Sleep apnea
High altitude physiology
Space and aviation physiology
Hypoxia
Physiology of deep sea diving and other hyperbaric conditions
Asphyxia – Drowning
Artificial respiration
Hypercapnia
Cyanosis

UNIT – II
BLOOD
Circulating body fluids
Blood volume
Composition of blood, bone marrow
Plasma-plasma proteins
Red blood cells, erythropoiesis, erythropoietin
Hemoglobin – Fetal hemoglobin
Hemorrhage – causes and management in maintaining homeostasis
Blood groups – Rh incompatibility, blood transfusion'
White blood cells – Immunity
Platelets – Coagulation and bleeding disorders
Mononuclear macrophageal system – Reticulo endothelial system
Hemostasis
Spleen and Lymph

CARDIOVASCULAR PHYSIOLOGY
Cardiac hemodynamics
Origin and spread of cardiac excitation
Cardiac cycle
Electrocardiogram
Cardiac Efficiency Test – Treadmill, Two step test, Halter monitor test
Arterial Blood Pressure
Radial Pulse
Heart rate and its regulation
Nervous regulation of the heart
Microcirculation – Cerebral and coronary
Physiology of shock
Stress Physiology and cardiac failure

RENAL PHYSIOLOGY
Introduction
Physiological anatomy of kidney
Multiple functions of the kidney in homeostasis
Formation of urine – Counter current mechanism
Non excretory function of the kidney
Endocrine function of the kidney
Micturition – physiological anatomy and nervous connection of the bladder
Effects of disordered renal function
Regulation of extracellular fluid, composition and volume
Renal function tests
Dialysis and kidney transplant
Acid Base balance

EXERCISE PHYSIOLOGY
Energy transfer and physical activity
Nutrition for physical activity
Physiologic support system
Cardiovascular and respiratory changes during exercise
Pulmonary function tests
Health related aspects of exercise

UNIT – III
NERVOUS SYSTEM
Synaptic and junctional transmission
Communication between neurons
Inhibition and facilitation at synaptic junctions EPPS,IPPS
Principal neurotransmitter system
Neuromuscular transmission
Sensory organs and receptors
Sensations – cutaneous, deep and visceral; Electrical and chemical events
Reflexes

Cerebellum
Cerebral cortex
Basal ganglia, Thalamus, Hypothalamus
Control of posture and movement
Neural basis of instinctual behaviour and emotion
Higher function of brain
E.E.G. – Brain death
Alert behaviour, sleep and electrical activity of brain
Brain stem, spinal cord
Limbic system
Reticular formation
CSF and blood-brain barrier

AUTONOMIC NERVOUS SYSTEM
SPECIAL SENSES
Physiology of Olfaction and Taste
Hearing
Vision

DIGESTION
Anatomy of Digestive system
Food Intake and Control
Mouth, Esophagus – deglutition and lower esophageal sphincter
Stomach
Vomiting
Liver – liver function tests
Gall bladder – Bile, Enterohepatic circulation
Duodenum
Small intestines – Microvasculature of villus
Large intestines – Absorption of electrolytes and water, dehydration
Dietary fiber, Intestinal microflora, its pathophysiological implications – eg.,
Cholera, salmonella, regional ileitis, colitis
Motor functions of colon, defecation

UNIT – IV
ENDOCRINOLOGY
Introduction to endocrinology – chemistry of hormone, storage and secretion of hormone, mechanism of hormonal action
Thyroid gland– formation, regulation of secretion and clinical correlates Anti-thyroid drugs
Endocrine function of pancreas – regulation of carbohydrate metabolism, structure, biosynthesis and secretion of Insulin
Non-insulin dependent diabetes mellitus and insulin dependent diabetes mellitus Glucose tolerance test
Glucagon- function and regulation
Other islet cell hormones – somatostatin – their action in exercise and carbohydrate metabolism
Hypoglycemia in diabetes mellitus in humans

Adrenal glands
Adrenal medulla and cortex-morphology
Structure of medulla and function of medullary hormones
Regulation of medullary hormones
Adrenal cortex-structure, biosynthesis of adrenal cortical hormones
Enzyme deficiencies
Transport, metabolism and excretion of adrenocortical hormones
Physiology of stress and its management
Glucocorticoids
Mineralocorticocoids
Circadian rhythm
Effects of adrenal cortical hyperplasia and hypofunctions in humans
Parathyroid glands – anatomy, synthesis and metabolism of parathyroid hormone
Mechanism of action, regulation, secretion of parathyroid hormone
Hormonal control of calcium metabolism
Effects of parathyroidectomy
Calcitonin-structure, secretion, metabolism and action
Clinical correlates
Effects of other hormones and other humeral agents on calcium metabolism
Pituitary gland and its relation to hypothalamus
Cell types in anterior pituitary gland
Control of pituitary secretion by hypothalamus
Hypothalamic – hypophyseal portal system
Growth hormone – functions, regulation, clinical correlates and abnormalities
Physiology of growth
Pituitary insufficiency and hyperfunction in humans
Chemical nature of Anti-Diuretic Hormone and Oxytocin
Physiological function of ADH and Oxytocin hormone
Pineal gland, melatonin, thymus
Local hormones – Prostagladin, Kinins, EDRF, Atrial Natriuretic Polypeptide

REPRODUCTIVE SYSTEM

Male reproductive system
Female reproductive system
Menstrual cycle
Ovarian cycle
Physiology of pregnancy
Pregnancy test
Determination of sex
Family planning methods in male and female
Fetal circulation
Fetal respiration
Feto-placental barrier
Lactation

PHYSIOLOGY OF AGING

ACID-BASE REGULATION

Blood

Kidney
Respiration

CLINICAL PHYSIOLOGY

PHYSIOLOGY PRACTICALS

1. Enumeration of Red Blood Cells
2. Enumeration of White Blood Cells
3. Differential Leukocyte Count
4. Determination of Haemoglobin and indices
5. Determination of Blood Groups
6. Determination of bleeding time and clotting time
7. Clinical examination of Chest
8. Determination of pulse and blood Pressure
9. 40mm endurance test

DEMONSTRATIONS

1. Properties of excitable tissues
• Skeletal muscle
• Cardiac muscle
2. Activity of Frog's heart effects of vagal stimulation and of atropine and adrenaline
3. Perfusion of Frog's heart effects of sodium calcium and potassium ions
4. Examination of CNS
5. Frog experiments – not done as law doesn't permit

BDS 103 – MEDICAL BIOCHEMISTRY

INTRODUCTION TO CLINICAL BIOCHEMISTRY – METABOLIC & HORMONAL CHANGES

1. CARBOHYDRATE (CHEMISTRY)

Classification and nomenclature – Aldoses and ketoses – Trioses, Tetroses, Pentoses, Hexoses and Heptose, Examples of biologically important compounds
Stereo isomerism – Epimes – D & L Forms – optical activity – ring form of sugars Mutarotation -
 & ß configuration – Reducing property of sugars – oxidation and reduction reaction – formation of uronic acid aldonic acids
Deoxy sugar – Polyols like sorbitol and mannitol – Biologically important disaccharides, Sucrose, Lactose and Maltose, Polysaccharides, Starch and Glycogen. Glycosidic linkage – Mucopolysaccharides or Glycosaminoglycans – Hyaluronic acid, Heparin, Chondoitin sulfate their chemical nature and biological importance

CARBOHYDRAE METABOLISM:

Chemical process involved in the digestion of dietary carbohydrates and their absorption Glucose as the major sugar in the body – Utilization of Glucose – Oxidation – Glycolysis and Aerobic Oxidation in Citric Acid Cycle – Glycogenesis – Lipogenesis – their cellular and hormonal control – cyclic AMP Ckycogenolysis and Neoglucogenesis. Role of Liver in carbohydrate metabolism. Regulation of blood sugar level Glycosuria. Glucose tolerance test and its importance.

ENZYMES:

Definition, classification, specificity of enzyme catalysed reactions, coenzymes – mode of action of enzymes – Fischer's Lock and Key theory and Koshlands Induced – Michaelis – Menten equation – Enzyme inhibition – Competitive and allosteric – Isoenzymes – Enzymes of clinical importance. Immobilized enzymes and its significance. Antioxidant enzymes – SOD, GPX and Catalase.

BIOLOGICAL OXIDATION OR TISSUE RESPIRATION:

The structural organization of Mitochondria – Powerhouse of the cell – Hydrogen corner or Electron transport system. Redox potential concept of free energy – High and low energy compounds – oxidative phosohorylation and substrate level phosphorylation. ATP as the common currency of bioenergetics. Inhibitors of oxidation and uncoupling of oxidative phosphorylation. Oxygenases and the microsomal cytochrome P-450 monooxygenase systems.

2. PROTEINS:

Functional diversity – composition of proteins – the size of protein molecules – their building blocks – Proteins. Amino acids. Classification of amino acids – R – groups of Amino acids –

Non polar. Unchanged polar side chains. Acidic R – groups and basic R – Groups – optical properties of Amino Acide – Acid Base properties of Amino Acids.
Zwitter ion and isoelectric pH. D & L forms of Amino acids – optical activity - □ Keto Acids of common Amino acids – Primary amines derived from Amino acids
Protein structure – the peptide bond Primary structure – amino – terminal & C terminal Amino acids the effect of amino acid substitution in the primary structure. Rudimentary knowledge of secondary, tertiary and quaternary structure – Protein confirmation Globular proteins and fibrous protein denaturation Simple proteins and conjugated protein.
Plasma proteins Immunoglobulins

PROTEIN METABOLISM

Digestion of proteins and the absorption of Amino acids. Amino acid pool – protein turn over. Removal of Nitrogen from Amino Acids. Transamination – Role of Glutamate – oxidative deamination by Glutamate dehydrogenase. Disposal of ammonia – urea cycle – importance of Glutamine – Catabolism of the carbon skeleton of amino Acids, Glucogenic and ketogenic amino acids. Catabolism of phenylalanine and Tyrosine to illustrate inborn error of metabolism. Formation of the following specialized products. 1. Thyroxine 2.Catecholamines 3.Creatinine 4.Histamine 5.Serotonin 6.GABA 7.Melanin Transmethylation and its biological importance

ACID BASE REGULATION:
Acid and Bases, weak acid and strong acid, Dissociation constant of acids, --- Actual acidity and Total acidity - Dissociation of water and the concept of pH – the pH scale – pKa of acids. Buffers and their mode of action. The Henderson – Hassel balch equation – the buffer system in blood – Regulation of pH by respiratory and renal systems. Acidosis – Alkalosis. Metabolic and Repiratory .

3. LIPIDS (CHEMISTRY)
Criteria for Lipid – classification – fatty acids Short and long chain fatty acids. Saturated fatty acids – Palmitic acid and stearic acid – Monounsaturated fatty and Polyunsaturated fatty acid – Essential fatty acid. Fat or Triglycerides or Triacglycerol – simple and mixed. Melting points Phospholipids Glycerophosphatides – emphipathic properties Sphingomyelins – Cerebrosides their nature. Sterols – Cholesterol and related compounds – Bile acids. Androgens – Estrogens, Progesterone. Cortisol Aldosterone and Vitamin D

LIPID METABOLISM
Digestics and absorption of dietary Lipids. Transport of lipids in serum. Lipoproteins Metabolism
of adipose tissue – ß oxidation of fatty acids formation and metabolism of ketone bodies - ketosts, Outline of fatty acids synthesis – Cholesterol metabolism. Absorption, transport, general outline of cholesterol synthesis, its regulation. Excretion of cholesterol – Bile Acids - compounds of biological importance that are formed from cholesterol – Vitamin D and steroid hormones. Serum Cholesterol and its relation to Atheroselerosis.

NUCLEIC ACIDS:

Elementary, knowledge of DNA & RNA – Base composition. Nucleosides & Nucleotides – Basic
structure of DNA – Different types of RNA. Introduction to the biological tiad, DNA RNA Protein.
Genetic Code – Basic reaction leading to protein biosynthesis – Replication – Transcription Translation – Antimetabolites and Antibiotic that inhibit protein biosynthesis.

METABOLISM OF NUCLEIC ACID:
General outline of the synthesis and catabolism of Purines and Pyrimidines in man.

HAEMOGLOBIN
Structure, Properties, Haemoglobin derivatives, abnormal hemoglobin and porphyrins.
Synthesis and breakdown of haemoglobin - metabolism of bile pigments jaundice

4.NUCLEIC ACIDS:
Elementary knowledge of DNA & RNA. Base composition Nucleosides & Nucleotides. Basic structure of DNA different type of RNA. Introduction to the biological triad. DNA – RNA. Protein genetic code – Basic reaction leading to protein biosynthesis – replication – Transcription – Translation –Antimetabolites and Antibiotics that inhibit protein biosynthesis.

METABOLISM OF NUCLEIC ACID
General outline of the synthesis and catabolism of Purines and Pyrimidines in man

5. ENZYMES:
Definition, classification specificity of enzyme catalysed reaction, coenzymes – mode of action of enzymes – Fischer's lock and key theory and koshlands Induced – Michaelis – Menten equation – Enzyme inhibition – Competitive and allosteric – Isoenzyme – Enzyme of clinical importance. Immobilized enzymes and its significance. Antioxidant enzymes – SOD, GPX and Catalase.

BIOLOGICAL OXIDATION OR TISSUE RESPIRATION
The structural organization of Mitochondria – Power house of the cell – Hudrogen corner or Electron transport system. Redox potential concept of free energy – High and low energy compounds – oxidative phosphorylation and substrae level phosphorylation. ATP as the common currency of bioenergetics. Inhibitors of oxidation and uncoupling of oxidative phosphorylation. Oxygenases and the microsomal cytochrome P-450 and the Mitochondrial P-450 monooxygenase systems.

VITAMINS
The vitamin concept. Chemical nature, dietary sources, Requirements (R.D.A.), functions and deficiency manifestations of fat-soluble and water soluble vitamins, Hypervitaminosis, Antivitamins.

ACID BASE REGULATIONS
Acids and Bases, weak acid and strong acid, Dissociation constant of acids, --- Actual acidity and Total acidity – Dissociation of water and the concept of pH – the pH scale pKa of acids.

Buffers and their mode of action. The Henderson – Hassel balch equation – the buffer system in blood – Regulation of pH by respiratory and renal systems. Acidosis – Alkalosis. Metabolic and Respiratory.

MINERALS
Bulk minerals and trace minerals sources functions requirements absorption with reference to calcium. Phosphoras and Iron Biological function of minerals with sodium, Pottasium, Magnisium, Iodine, copper, zinc and fluoride

NUTRITION
BMR – specific dynamic action caloric value of foods. Computing caloric requirements balanced diet – carbohydrate factor – fat in the diet. Protein nutrition. Essential Amino Acids. Nitrogen Balance – Quality of protein – Biological value of protein – Protein Malnutrition – Obesity – Vitamins & Minerals requirements

PRACTICALS
Reactions of Carbohydrates, proteins and Lipids
Properties of haemoglobin, bile salts and bile pigments
Starch; hydrolysis by acids
Estimation – Blood sugar and urea, serum creatinine and total proteins – Serum calcium – Serum inorganic phosphrous – Serum cholesterol
Milk analysis – Biochemical Analysis of Milk
Normal and abnormal urine: analysis
Lecture demonstration (to be recorded in the record note Book)
BMR, electrophoresis of plasma proteins
Chromatography amino acids and sugars
Photometry
Gastric, liver and renal function tests
GTT
Gastric analysis – total acids and free acids – clinical importance

Books Recommended
1. Text book of Biochemistry Chatterjea.M (Dental, Nursing & Pharmacy)
2. Concepts of Biochemistry (Theory & Practical) – A.C. Deb (for Dental Science) Homeopathy, Nursing etc.,)

Reference Books:
1. Text book of Biochemistry for medical students – D.M. Vasudevan
2. Essentials of Biochemistry – U.Sathyanarayana
3. Text book of Biochemistry - Agarwal

I YEAR BDS SYLLABUS – NEW REGULATIONS
Oral Histology, Oral Anatomy, Oral physiology, Tooth Morphology
THEORY
TOPICS
Oral Histology

1. Development of teeth
2. Enamel
3. Dentine
4. Pulp
5. Cementum
6. Periodontal Ligament
7. Alveolar Bone
8. Oral Mucous Membrane
9. Salivary Gland
10. Theories of eruption and shedding
11. Histochemistry of Oral tissues

EMBRYOLOGY

1. Development of Face

ORAL ANATOMY

1. Maxillary sinus
2. Tempromandibular ligament

TOOTH MORPHOLOGY

1. Introduction
2. Parts of a teeth
3. Definitions
4. Nomenculture
5. Deciduous & permanent dentition. Its Differences
6. Perm. & Deci. Max. central Incisor
7. Perm. & Deci. Mandi. Central Incisor
8. Perm. & Deci. Max. lateral Incisor
9. Perm. & deci. Mandi. Lateral incisor
10. Differences between Max. & Mandi. Incisor
11. Perm. & Dec. Max. canine
12. perm. &Dec. Mandi. Canine
13. Max. 1st Premolar
14. Mandi. 1st Premolar
15. Maxi. 2 Premolar
16. Mandi. 2nd premolar
17. Dec 7 perm maxi. 1st Molar
18. Perm Maxi 2nd Molar
19. Dec & Perm Mandi. 1st Molar
20. mand.perm 2nd Molar
21. Third Molars

PRACTICAL SYLLABUS

Histology Slides

1. Development of Teeth

a) Bud Stage

b) Bell Stage
2. Enamel
a) Incremental lines of Retzius
b)Enamel Spindles, Tufts & lamellae
3. Dentine
a) D.E Junction
b) Interglobular Dentine
c) Tomes granular layer
d) Dead Tracts
4. Cementum
a) Cellular Cementum
b) Acellular Cementum
5. Pulp
6. Periodontal Ligament
7. Salivary Gland
a) Mucous
b) Serous
8. Oral Mucous Membrane
a) Ortho Keratinized epithelium
b) Para Keratinized Epithelium
c) Fungiform papillae
d) Filiform Papillae
e) Non – Keratinized Epithelium

TOOTH MORPHOLOGY

WAX CARVING
3 times natural size
Max. Central incisor, canine, 1st premolar, 1st Molar
Mandi. 1st premolar, 1st Molar

NATURAL SIZE
Right upper maxillary teeth from Central incisor to 2nd Molar
Left lower Mandibular teeth from Central incisor to 2nd Molar

GROUND SECTION OF TEETH
Longitudinal section – preparation & Mounting of section
Cross Section – Preparation & Mounting of section

SPOTTERS
1. Identification of teeth
2. Age determination of the cast provided

SUGGESTED TEXT BOOKS FOR REFERENCE

Wheelers – Dental Anatomy, physiology, & Occlusion – 8th Edition

Orbans – Textbook of Oral Histology & Embryology – 12th Edition
Tencate's Textbook of Oral Histology – 7th Edition
Jenkins – Textbook of Oral physiology

SRM KATTANKULATHUR DENTAL COLLEGE (Deemed University) **II YEAR BDS SYLLABUS**

DENTAL MATERIALS SYLLABUS
(Conservative Dentistry)

1. Performance standards for dental materials

To gain an understanding of dental materials, a basic knowledge of their atomic or molecule structure , their behavior during handling and use in the oral environment

2. Structure of matter and principals of Adhesion

This chapter presents a short review of matter as a foundation for basic understanding of dental materials

3. Properties of Dental Materials

Physical and Mechanical properties of materials are based in the laws of mechanics, acoustics, optics, thermodynamics, electricity, magnetism, radiation, atomic structure or nuclear phenomena. These properties have been discussed in relation to the dental environment

4. Biocompatibility of Dental Materials

Biocompatibility is a fundamental requirement for any restorative material. This chapter presents an overview of the types of biological responses that materials may cause, and the anatomical aspects of the oral cavity that influence or modify biological responses to materials.

5. Hydrocolloid Impression Materials

Hydrocolloid refers to a colloid that contains water as a dispersion phase. Agar and alginate are referred to as reversible and irreversible hydrocolloids respectively. This chapter deals with their extensive usage in dentistry along with their compositions, properties and method of manipulation.

6. Nonaqueous Elastomeric Impression Materials

Plastomers are a group of rubbery polymers, which are either chemically or physically cross . They can be easily stretched and rapidly recover their original dimension when the applied stress is released.

7. Inelastic Impression Materials

Inplastic impression materials exhibit an insignificant amount of elastic deformation when objected to bending or tensile stresses. These materials include impression plaster, impression compound and ZOE impression paste.

8. Gypsum Products
Gypsum products are used in dentistry for the preparation of study models for oral and maxillofacial structures and as important auxiliary materials for dental laboratory operations that are involved in the production of dental prostheses. Various types of gypsum products their working and setting times and their roles in different clinical situations have been discussed

9. Chemistry of synthetic Resins
This chapter deals with the chemistry involved in polymerization of different synthetic resins, their formation pf byproduct and also the various advantages of various resins.

10. Rstorative Resins
Restorative resins or dental composites are highly crosslimked polymeric materials reinforced by dispersion of glass, crystalline or resin filler particles and/or short bound to the matrix silence coupling agents. Vrious aspects related to dental composites have been discussed in strength

11. Bonding
The importance of bonding, various techniques involved in bonding of dental materials in different situations has been elaborated in this chapter. A brief outline of evoluation of dental shesives has also been discussed.

12. Solidification and Microstructure of Metals
Microstructure refers to the structural appearance of a metal revealed by microscopic imaging of the chemically or electrolytically etched surface of a flat, polished specimen. This chapter discusses the microstructure and solidification of various metals used in dentistry.

13. Constitution of Alloys
This chapter deals with the various equilibrium phases present in an alloy

14. Corrosion
Basic understanding of corrosive process will help the clinical to formulate a restoration which can withstand corrosion for a longer period of time. This chapter deals with the types, causes and the various methods employed to prevent corrosion.

15. Dental Amalgam
    i. Structure of Properties
    ii. Techinical Consideration

Dental amalgam constitutes the track record of longest serving restoration in the history of mankind. This chapters provides a lucid presentation of different composition of dental amalgams with their properties and manipulation technics

16. Direct Filling Gold and Its Manipulation
This chapter provides an insight into the various types of direct filling gold available for restorative purpose in dentistry. Also the various technical factors involved in manipulation have also been discussed.

17. Denatl Casting Alloys

Dental casting alloys represent the noble and base metal alloys. These alloys have been dealt extensively in this chapter

18. Inlay Casting Wax
Inlay wax is a specialized dental wax that can be applied to dies to form direct or indirect patterns for the lost-wax technique used for casting metals or hot pressing of ceramics.. Various properties of inlay wax along with their methods of application for direct and indirect techniques for taking wax pattern have been discussed.

19. Investments for small Casting
This chapter discusses the different types of investments used for different types of alloy their properties and various techniques employed to compensate for the alloy shrinkage.

20. Casting procedure for Dental Alloys
Basic knowledge and understanding of the casting procedures is a guiding force for the long term success of the metal restorations. This chapter deals extensively with the casting procedures, casting failures and their probable cause and method to overcome various casting failures.

21. Dental Cements for Restorations and pulp protection
Dental cements forms the mainstay in dental applications and therefore a detailed understanding the proprtties and their uses in various clinical situations have been extensively covered in this chapter.

22. Dental cements for Bonding Application
Dental cements that can bond to the tooth structure includes, Glass Ionomer cement, Zinc corboxylate and silicate cements. This chapter discusses the evolution of cements used for bonding with their properties and uses alongwith their advantages and disadvantages

23. Dental Ceramics
Dental ceramic is an inorganic compound with nonmetallic properties typically consisting of oxygen and one or more metallic or semi – metallic elements that is formulated to produce the home or part of a ceramic based dental prosthesis. This chapter presents an overview of the solution of dental ceramics, advances in the ceramic technology and their various processing methods.

24. Finishing and polishing Materials
Finishing and polished restorations provides good oral care, optimum function and enhanced prosthetics. This chapter provides an insight into the various finishing and polishing materials available in the field of dentistry and also their method of application for longevity of the restoration.

COMMENDED TEXT BOOK : DENTAL MATERIALS BY PHILLIPS (ANUSAVICE)

REFERENCE BOOK: DENTAL MATERIALS BY CRAIG

MATERIALS USED IN DENTISTRY
(PROSTHETICS)

INTRODUCTION TO THE SCIENCE OF DENTISTRY

Describe the structure of the teeth according to their function

PROPERTIES USED TO CHARACTERIZE MATERIALS

About: Chemical, physics, mechanical, Thermal & Biological properties of Material

GYPSUM & INVESTMENT PLASTER

Write composition gypsum
Know manufacturing of gypsum
Classify gypsum
Describe the handing & manipulation of gypsum
Discuss the characteristics & properties of gypsum Understand and uses of gypsum
Know advantages & disadvantages

IMPRESSION MATERIALS

Classify & write the composition of impression material
Describe the clinical handling of materials
Understand the use of impression materials
Know advantage & disadvantage of impression material

WAXES

Classify Waxes & ideal properties
Write the composition of Waxes
Describe the properties & handling of waxes Enumerate and know advantage & disadvantage inlay casting
Wax

METALS & ALLOYS

Describe structure of Metals & Alloys Solidification, Microstructure of Metals
Write the properties of Metals & Alloys Constitution of alloys
Classify the Metals & Alloys
Wrought alloys and casting Alleys
Understand the uses of Metals & Alloys
Knowledge about advantage & disadvantage
Do a cross comparison

DENTAL PROSTHETICS
Write about clasp design & different between cost & wrought write & fixed partial denture

PPLYMERS
Have knowledge about chemistry of polymers
Write the polymerization reaction
The Composition of different polymerization
Methods & stages of polymerization Understand uses, advantage & disadvantages

PROCEDURE FOR DENTAL PROSTHETICS

Everything & clasp designing
About denture base, separating media

CERAMICS

The composition of different Ceramics
Their physical & Chemical properties
Stand the uses of Ceramic
Instrument and equipment
Baking process
Advantages of Ceramics and compasision with acrylic resin
Cements

RESTORATIVE MATERIALS

Discuss Amalgam Unfilled resin
Know Composite
Write about glass ionomer
Describe ceramics
Know the metals used for Inlays
Write about veneers
Know about full coverage crown
Demonstrate knowledge of ceramic crown

ACID ETCHING AND ITS APPLICATION
Describe etching of enamel and dentine
Write about glass ionomer cements
Direct filling gold
Discuss porcelain
Know about fissure sealant
Discuss uses of acid etching
Enumerate advantages and disadvantages and the uses of material

DENTAL CEMENTS

Classify cements
Write the composition of dental cements
Discuss their handling and properties
Pulp protective agents
Enumerate their advantages and disadvantages
Discuss uses(Lining, Sub-lining, luting and filling

PRACTICALS
To do manipulation and slab exercise of soft and hard plaster
To take impression e alginate
To take impression e elastomer impression
To take, model base
To handle the wax do was carving
To do wire bet clasp designing
To make alph-bet clasp designing
To perform the surveying procedure in order to design clasp for partial dentures
To perform wax up and set up for acrylic furnishing and polishing
To know the casting and acrylic furnishing and polishing
To know the uses of ceramic and fabrication of crown and bridges

BOOK

Science of Dental materials: - Anusavice 10^{th} Edition
Avtive Dental Materials – Robert G.Graig

REFERENCE BOOK

Clinical aspect of Dental materials – Gladwin, Bagby
Materials in dentistry) Principles & Application) Jack L.Ferrancane
Applied Dental materials John F. Macabe
Dental Materials (properties & Manipulation) Craig, powersm, Wataha
Notes of Dental Materials E.C. Combe
Clinical handling of Dental materials Bernard G.N. Smith, Paul S. Wright, David Brown

II YEAR BDS SYLLABUS

0202 – GENERAL PATHOLOGY & HAEMATOLOGY

I. Introduction of Pathology (1 hour)
II. Cell response to Injury (8 hours)
1. Degeneration (Disorder of metabolism)
2. Necrosis
3. Gangrene
4. Pathological Calcification (Disorders of Calcium metabolism)

5. Pigment Degeneration Exogenous and Endogenous (melanin, Bile pigment)
6. Amyloidosis

III. INFLAMMABLE AND HEALING REPAIR (12 hours)
1. Vascular changes – functions of Inflammatory exudates
2. Chemical mediators
3. Phagocytosis
4. Chemotoxix
5. Granuloma (leprosy, T.B., Syphilis,Actinomycosis, maduramycosis, fungal disease)

REPAIR
1. Primary union
2. Secondary union
3. Granulation tissue
4. Complication of wound healing
5. Bone fracture healing

IV. CIRCULATORY DISTURBANCES (HAEMO DYNAMIC CHANGES) (8 hours)

1. Oedema
2. Shock
3. Thrombosis
4. Embolism
5. Infarction

V. NEOPLASIA (8 hours)
1. Cell cycle
2. Hyperplasia
3. Metaplasia
4. Hypertrophy
5. Atrophy
6. Nomen cloture (classification of tumours)
7. Differences between begin and malignant tumous
8. Aetiopathogenesis of neoplasia (cancer)
9. Signs of malignancy
10. Chemical and physical carcinogens
11. Biological carcinogens (RNA & DNA viruses)
12. Spread of tumours (Metastasis)
13. Dysplasia (Carcinoma in-situ)
14. Lab diagnosis of cancer

VI HAEMATOLOGY
(Anemia, Leukaemia, Lymphomas)
1. Normal Haematopoiesis
2. Bone marrow examination

3. RBC series (Erythorid series)

VII DISORDERS (10 hours)
1. Anemia (Classification of anemia)
2. Iron deficiency anemia
3. Vitamin B12 deficiency anemia (megalo blastic anemia)
4. Pevicious anemia
5. Haemolytic anemia (inherited disorders & acquired)
A) Hereditary Spherocytosis
B) Hereditary Elliptocytosis
C) Immuno Haemolytic anemia
D) Thalassemia, Sickle cell anemia, Aplastic anemia
E) Polycytghemia

VIII WBC DISSORDERS (6 hours)
1. Agranulocytosis
2. Leucocytosis – Leucopenia, Leukemoid, Reaction
3. Leukaemias – ALL,AML, CML, CLL, (FAB Classification)
4. Lymphomas (Hodgkins & non-type Hodgkins

IX HAEMORRHAGIC DISORDERS (BLEEDING DISORDERS) (6 hours)
1. Normal Coagulation mechanism
2. Thrombo Cytopenia (ITP)
3. Haemophilia
4. Christmas Disease – Haemophilia B
5. Von-willebrnads disease
6. DIC (Disseminated Intravascular Regulation)

X. a. PRINCIPLES OF BLOOD GROUPING AND BLOOD TRANSFUSION REACTIONS (6 hours)
b. Rh Incompatibility

LIST OF SLIDES
1. Cloudy Swelling Kidney
2. Fatty Liver
3. Acute Appendicitis
4. Chronic Appendicitis
5. Granulation Tissue
6. Actino Mycosis
7. Madura Mycosis
8. T.B.Lymphnode
9. T.B.Lung
10. Squamous Cacinoma
11. Adeno Carcinoma
12. Squamous Papilloma

13. Plemomorphic Adenoma
14. Teratoma
15. Osteo Sarcoma
16. Osteo Clastoma
17. Chondroma
18. Melanoma
19. C.M.L
20. C.L.L
21. Iron Deficiency Anemia
22. Filarial Lymph Adenitis
23. Red-Hepatisation – Lung
24. Gray – Hepatisation – Lung
25. C.V.C. Lung
26. Ameloblastoma (Adamantinoma)
27. Fibro Adenoma
28. Rhinosporidiosis
29. Capillary Angioma – Skin
30. Cavernous Angioma
31. Colloid Goitre
32. Secondary Deposits L.N
33. Lipoma
34. Toxic Goitre
35. Thrombus

2. **SPECIMENS:**

1. Fatty Liver
2. Fibroid Uterus
3. Pyelo Neophritis
4. Squamous cell Carcinoma (Maxilla)
5. Ductal Carcinoma Breast
6. Chondroma (Hand)
7. Lymphoma (Lymphnode)
8. Carcinoma Thyroid
9. Ovarian Cyst

I. CLINICAL PATHOLOGY INSTRUMENTS:
1. RBC, WBC, Hemoglobin Pipette
2. Wintrobe Tube (PVC and ESR tube)
3. Westergren tube (E.S.R. Tube)
4. Urinometer
5. New Baur Chamber

II. URINE EXAMINATION:
1. Test for Protein (Heat coagulation Test)
2. Test for Sugar (Benedicts Test)

III BLOOD EXAMINATION:

1. Estimation of Haemoglobin
2. RBC count
3. WBC count

TEACHING MODALITIES – PRINCIPLE & OBJECTIVES
I COURSE DESCRIPTION
This follows the basic Courses is Anatomy, Physiology, Bio-chemistry of I B.D.S. course.
Basic General Pathology and Haematology Compliments
The Course in General medicine and surgery
Particular efforts made to instill the basics of Diseases – regarding Aetio phathogenesis and symptoms morphological and Histological changes of organs, complications and sequelae and Lab diagnosis of individual diseases.

II COURSE OBJECTIVE (II B.D.S. PATHOLOGY)
THE OBJECTS OF THE COURSE IS DCI NORMS SRM UNIVERSITY
1. Lectures 45 hrs 62 hrs
2. Practical Demonstration viva voce 65 hrs 96 hrs
Total 110 hrs 158 hrs
In additional the students will imbibe the knowledge, skill and confidence to fill 80% accuracy in theory, practical and oral and M.C.Q objective type of questions to prosecute the competitive exams in higher specialities.

DESCRIBED BOOKS (Texts)
1. Text book of Pathology - Harsh Mohan - Jaypee Brothers
2. Basic Pathology for Dental
Students - Harsh Mohan - Jaypee Brothers

I.REFERENCE BOOKS
1. Pathologic Basic of Disease- Kumar, Cotran - Saunders
Collins
2. Basic Pathology - Kumar, Cotran - Saunders
3. Test Book of Pathology - Andersons - C.V.Mosby
Volume I & II Company
4. General Pathology - Walter & Israel -
5. Clinical Laboratory
Methods - Ramniksood - Jaypee
6. G.C.DeGruchy Clinical - David Penington - CBS Publishers &
Haematology in medical Bryan Rush
Distributors Peter Castaldi
7. Illustrated Pathology - Govans - ELBS Edition

II YEAR BDS SYLLABUS

0203 – MEDICAL MICROBIOLOGY

OBJECTIVE
A course of lectures, lecture demonstrations, and practicals in general and systematic bacteriology, Basic Immunology, Virology, Mycology and parasitology with special reference to medical and dental microbiology including public health and preventive aspect of infections and infections diseases.

UNIT 1 – GENERAL BACTERIOLOGY 9 hrs
Brief History of Microbiology with special reference to the contributions of Antony van Leeuwen hoek, Louis Pasteur, Robert Koch, Jeseph Lister, Edward Jenner, and Alexander fleming.
Classification, morphology, and physiology, of bacteria
Culture media and cultivation methods
Sterilization and disinfection
Antimicrobial therapy and drug resistance, Antibiotic sensitivity testing

UNIT 2 – IMMUNOLOGY 10 hrs
Infection
Introduction to immunology, structure and functions of immune system
Immune response and immunity
Antigen, Antibody, Complement
Antigen-Antibody reactions – emphasis on agglutination reaction and ELISA Hypersensitivity
Immunising agents – vaccines and sera, immunization schedule

UNIT 3 – SYSTEMATIC BACTERIOLOGY 20 hrs
- Staphylococcus
- Streptococcus
- Corne bacterium diphtheriae
- Clostridium (with special emphasis on Tetanus, gas gangner and food poisoning
- clostridia)
- Bacillus (Anthrax and Food poisioning Bacillus)
- Mycobacterium tiberculosis
- Mycobacterium leprae
- Non-sporing anaerobes and actinomucetes
- Neisseria
- Enterobaceriacea – Escherichia coli, shigella and salmonella
- Vibrio and pseudomonas
- Treponema, Lepto spira, Borelia

UNIT 4 – VIROLOGY 10 hrs
- General properties and classification of viruses
- Herps viruses

- Polio viruses
- Mumps virus and Measles virus
- Rabies virus
- Hepatitis viruses
- H.I.V.

UNIT 5 – MYCOLOGY 6 hrs

- Morphological classification of Fungi, Laboratory diagnostic methods for Fungal
- infections
- Classification of Fungal infections with examples
- Dermatophytes
- Candida
- Cryptococcus
- Rhinosporidium
- Aspergillus

UNIT 6 – PARASITOLOGY 6 hrs

Brief outline on - Amoebiasis
Malaria
Trichomonas
Filariasis
Infectins with Round worm, Hook worm, pin worm
and Echinococcus

UNIT 7 – APPLIED MICROBIOLOGY 6 hrs

- Oral microbial flora in health and disease
- Microbiology of Dental caries
- Hospital acquired infection
- Blood transfusion associated infections and precautionary screening fests

PRACTICAL (60 hrs)

- Microscopy
- Acid fast staining
- Gram's staining
- Demonstration fo relevant slides, specimens and instruments in accordance with syllabus.

TEXT BOOKS

1. Text book of Microbiology – C.K.Jayaram Panikar
2. The Short text book of Medical Microbiology * 8th edition) – Satish Gupte
3. Text book of Medical Parasitology – Subash C.Parija

REFERENCE BOOKS

1. Immunology – Rcit, Brostoff, Male
2. Mechanisms of Microbial Disease – Moselio schaechetes

3. Notes on Medical Bacteriology – J.Douglas sleigh, Monag C.Timbury
4. Colour Guide – Microbiology – Tijjinglis
5. Bailey of Scotts diagnostic microbiology – Sydney, Finegold and Ellen Jc Baron
6. Mackie and Mc Cartney – Practical medical microbiology – J.Gerald colle, Andrew G.Fraser

II YEAR BDS THEORY SYLLABUS
0204 – DEPARTMENT OF PHARMACOLOGY

I. BASIC PRINCIPLES OF PHARMACOLOGY
1. Introduction
2. Routes of Administration of drugs
3. Pharmacokinetics
4. Pharmacodynamics
5. Factors modifying drug action
6. Adverse drug effects

II. AUTONOMIC DRUGS
1. Cholinergic drugs
2. Drugs blocking cholinergic receptors
3. Skeletal muscle relaxants
4. Adrenergic drugs
5. Drugs blocking adrenergic receptors

III DRUGS AFFECTING RENAL FUNCTIONS
1. Diuretics
2. Drugs used in Myocardial Ischaemia
3. Antihypertensive Drugs
4. Drugs used in Congestive Heart Failure
5. Drug therapy of Shock

IV. DRUGS ACTING ON CENTRAL NERVOUS SYSTEM
1. Sedative – Hyponotics
2. General Anaesthetics
3. Local Anaesthetics
4. Antiseizure Drugs
5. Opiod Analgesics and Antagonists
6. Non Steroidal Anti Inflammatory Drugs and Non Opioid Alalgesics

V. DRUGS ACTING ON BLOOD AND THE BLOOD FORMING ORGANS
1. Hematopoietic agents
a. Iron
b. Vitamins B12 and Folic Acid
2. Drugs used in disorders of coagulation
a.Coauglants, styptics and anti coagulants

b.Thrombolytics and antithrombolytics
c.Antiplatelet drugs

VI. HORMONES AND HORMONE ANTAGONISTS
01. Antidiabetic Drugs
02. Adrenocorticosteroids
03. Thyroid and anti thyroid drugs
04. Agents Affecting calcium Homeostasis
a. Calcium
b. Vitamin D
c. Calcitonin
d. Bisphosphonates
e. Fluoride

VII.CHEMOTHERAPY OF MICROBIAL DISEASES
01. General considerations
02. Beta lactum antibiotics
03. Tetracyclines and chloramphenicol
04. Aminoglycosides
05. Fluoroquinolones
06. Sulfonamides, Cotrimoxazole
07. Macrolide Antibiotics
08. Nitroimidazoles
09. Miscellaneous anti microbial drugs
a.Probiotics
b.Clindamycin
c.Vancomycin
d.Linezolid
e.Spectinomycin
f.Teicoplanin
10. Chemotherapy of Malaria
11. Chemotherapy of tuberculosis
12. Chemotherapy of leprosy
13. Antifungal agents
14. Antiviral agents

VII. CHEMOTHERAPY OF NEOPLASTIC DISEASES

IX. IMMUNOMODULATORS

X. DRUGS ACTING ON THE RESPIRATORY SYSTEM
01. Drugs used in the treatment of bronchial asthma
02. Drugs used in cough

XI. DRUGS ACTING GASTROINTESTINAL FUNCTIONS
01. Drugs used in the treatment of peptic ulcer disease

02. Antiemetics

XII. AUTOCOIDS
01. Antihistamines
02. Drugs used in migraine

XIII. MISCELLANEOUS AGENTS
01. Antiseptics and Disinfectants
02. Enzymes in Dentistry
03. Vitamins
04. Drugs in pregnancy and lactation
05. Paediatric Pharmacology

II BDS – PRACTICAL SYLLABUS

A) EXPERIMENTS
1. NORMAL SALINE MOUTHWASH
2. HYPERTONIC SALINE MOUTH GARGLE
3. PROPHYLACTIC SOLUTION FOR DENTAL CARIES
4. CHILORHEXIDINE MOUTH WASH
5. DENTIFRICE CONTAINING ABRASIVE
6. STYPTIC DUSTING POWDER
7. POWDER FOR CLEANING DENTURE
8. POWDER FOR VINCENTS STOMATITIS
9. PASTE FOR DENTAL CARIES OR HYPERSENSITIVE DENTINE
10. PASTE FOR PULP CAPPING

B) PRESCRIPTIONS
1. ORAL CANDIDIASIS
2. DENTAL CARIES
3. APTHOUS STOMATITIS
4. ALLERGIC STOMATITIS
5. HERPES STOMATITIS
6. ANGULAR STOMATITTIS OR CHEILITIS
7. GLOSSITIS
8. PERICORONITIS
9. ACUTE NECROTISING ULCERATIVE GINGIVITIS
10. CELLULITIS DUE TO DENTAL ORIGIN
11. PULPITIS
12. PREGANAT WOMAN WITH PULPITIS
13. ORAL ULCERATION DUE TO ILL FITTING DENTURE
14. ACUTE AMOEBIC DYSENTRY
15. SEVERE GASTROENTERITIS DUE TO E.COLI
16. HELICOBACTER PYLORI INFECTION
17. ENTERIC FEVER
18. ACUTE ATTACK OF CHOLERA

19. INSOMNIA DUE TO TOOTHACHE
20. STATUS EPILEPTICUS
21. TRIGEMINAL NEURALGIA
22. POSTOPERATIVE PAIN AFTER REDUCTION OF FRACTURE OF MANDIBLE
23. ANAPHYLACTIC SHOCK
24. ANGINA PECTORIS
25. MODERATE HYPERTENSION
26. STATUS ASTHEMATICUS
27. TYPE II DIABETES MELLITUS
28. PEPTIC ULCER DISEASE
29. SEVERE ATTACK OF MIGRAINE
30. SEVERE CONTINOUS BLEEDING AFTER TOOTH EXTRACTION

C) SPOTTERS

I. DRUGS

1. TABLET PARACETAMOL
2. INJECTION PARACETAMOL
3. TABLET DICLOFENAC
4. INJECTION DICLOFENAC
5. SUPPOSITORY DICLOFENAC
6. OINTMENT DICLOFENAC
7. TABLET IBUPROFEN
8. TABLET ASPIRIN
9. TABLET NIMESULIDE
10. BENZYDAMINE MOUTHWASH
11. CAPSULE TRAMADOL
12. INJECTION TRAMADOL
13. TABLET DIAZEPAM
14. INJECTION DIAZEPAN
15. TABLET ALPRAZOLAM
16. INJECTION KETAMINE
17. TABLET PHENYTON
18. JELLY LINGNOCAINE
19. INJECTION LIGNOCAINE + ADRENALINE
20. CHLORHEXIDINE MOUTHWASH
21. CAPSULE AMOXICILLIN
22. TABLET AMOXICILLIN + CLAVULANIC ACID
23. INJECTION BENZYL PENICILLIN
24. CAPSULE CEPHALEXIN
25. TABLET LACTOBACILLUS
26. CAPSULE DOXYCYCLINE
27. TABLET CIPROFLOXACIN
28. EYEDROPS NORFLOXACIN
29. TABLET COTRIMOXAZOLE
30. INJECTION GENTAMICIN
31. TABLET ERYTHROMYCIN

32. TABLET METRONIDAZOLE
33. INJECTION METRONIDAZOLE
34. TABLET TINIDAZOLE
35. TABLET ACYCLOVIR
36. OINTMENT ACYCLOVIR
37. TABLET DAPSONE
38. TABLET AKT4
39. TABLET METHOTREXATE
40. TABLET FRUSEMIDE
41. INJECTION ATROPINE
42. TABLET HYOSCINE BUTYL BROMIDE
43. INJECTION DOPAMINE
44. INJECTION ADRENALINE
45. TABLET PROPRANOLOL
46. TABLET ATENOLOL
47. TABLET BACLOFEN
48. TABLET DIGOXIN
49. TABLET NITROGLYCERINE
50. TABLET NIFEDIPINE
51. TABLET ENALAPRIL
52. INJECTION PHYTOMENADIONE
53. INJECTION ADRENOCHROME MONOSEMICARBAZONE
54. TABLET ADRENOCHROME MONOSEMICARBAZONE + ASCORBIC ACID + MENADIONE + DIBASIC CALCIUM PHOSPHATE + RUTIN
55. TABLET PHENIRAMINE MALEATE
56. INJECTIN HENIRAMINE MALEATE
57. TABLET LEVOCETIRIZINE
58. TABLET VITAMIN C
59. TABLET RIBOFLAVIN
60. TABLET ERGOTAMINE TARTRATE +CAFFEINE+BELLADONA+PARACETAMOL
61. TABLET SALBUTAMOL
62. TABLET RAINITIDINE
63. CAPSULE LANSOPRAZOLE
64. TABLET METOCLOPRAMIDE
65. TABLET DOMPERIDONE
66. INJECTION INSULIN
67. TABLET GLIBENCLAMIDE
68. TABLET METFORMIN
69. TABLET PREDNISOLONE
70. TABLET CALCIUM
71. TABLET ALFACALCIDOL
72. TABLET ALFACALCIDOL

II INSTRUMENTS
73. INSTRAMUSCULAR SYRINGE – 2ML
74. INTRA VENOUS SYRINGE – 10ML

75. INTRAVENOUS INFUSION SET
76. INSULIN SYRINGE – 1ML
77. MANTEAUX SYRINGE
78. INHALER

III PHOTOGRAPHS
79. GINGIVAL HYPERPLASIA
80. CLEFT LIP & CLEFT PALATE
81. ORAL CANDIDIASIS
82. HERPES SIMPLEX
83. TOOTH DISCOLOURATION
84. ORAL PIGMENTATION
85. XEROSTOMIA
86. ANGIOEDEMA
87. STEVENS JOHNSON SYNDROME
88. ORAL ULCERATION
89. BRUXISM

DEPARTMENT OF PHARMACOLOGY SRM DENTAL COLLEGE II BDS

RECOMMENDED TEXTBOOKS – LATEST EDITION
1. ESSENTIALS OF MEDICAL PHARMACOLOGY BY K.D.TRIPATHI
2. PHARMACOLOGY AND PHARMACOTHERAPEUTICS BY R.S. SATOSKAR
3. BASIC AND CLINICAL PHARMACOLOGY BY BERTRAM.G.KATZUNG

II YEAR BDS SYLLABUS
0205 – PRE – CLINICAL PROSTHETICS PRACTICALS

1. Introduction to partial denture designs
2. Components of partial dentures
3. Direct retainers and their designs
4. Classification of partial dentures
5. Diagnostic and master casts
6. Surveying practical demonstration
7. Acrylic partial dentures
8. Polymethyl meth acrylate – laboratory defects
9. Introduction to casting technique
10. Wax-up for cast partial denture
11. Introduction to complete dentures
12. Types of alveolar ridges
13. Factors available for retention of complete dentures
14. Initial impressions of complete dentures
15. Master impression of complete dentures
16. Introduction to jaw relation records
17. Vertical dimension of occlusion

18. Vertical dimension of physiologic rest position
19. Introduction to Articulators
20. Record bases and record rims
21. Concepts of occlusion
22. Types of faces
23. Selection of artificial teeth for complete dentures
24. Types of arrangement of teeth
25. Arrangement of upper anterior teeth
26. Arrangement of posterior teeth
27. Carving of wax-up
28. Relining and Rebasing
29. Group Discussions
30. Taking Impression with alginate
31. Putty wash impression with silicon rubber on (Phantum Head)
32. Making of clasps
33. Wax-up of clasps
34. Wax-up of partial denture
35. Dewaxing, packing curing and finishing
36. Study of applied anatomy of complete dentures on models
37. Preparation of class from master moulds
38. Wax-up, flasking, curing and finishing of Acrylic Denture
39. Bases
40. Adapting and contouring occlusal wax rims
41. Articiulation
42. Arrangement of Anterior teeth (Maxillary)
43. Arrangement ofanterior Teeth (Mandibular)
44. Carving and finishing
45. Relining and rebasing of dentures
46. Denture repair

Recommended books for Pre-Clinical Prosthodontics:-

Text Book on Complete Denture

01.Boucher
02.Heart well
03.Sheldon Winkler
04.Lab Procedures in Complete Denture – Rudd and Marrow
05.Feww

Removal Partial Denture:-

01.Stewarts
02.Mc Craken's Removal Partial Denture
03.Lab Procedures in RPD
Rudd and Marrow

II YEAR BDS SYLLABUS

0206 – PRE – CLINICAL CONSERVATIVE DENTISTRY & ENDODONTICS

Teaching of pre-clinical conservative dentistry and endodontics commences for the beginning of II BDS Course.
Theory:
1. Weekly One Session: 1 hour duration on the subject
Mentioned in the list enclosed.
Practical:
Weekly two Sessions: 1½-hour duration & one session
½ hour after hour lecture
Training on Plaster Blocks and Plaster models decided by teaching staff.
Training to be imparter to the students of II year BDS on phantom head fitted with one upper and lower jaw – teeth either natural (extracted teeth) or teeth acrylic.
Phantom heads are provided to simulated the head and jaws of the living patients.
The teeth treated by the students in the same way as it is done for the clinical patient by making use of various hand instruments for retraction of the jaw, for reflection of the light, and airotor handpiece with high speed cutting efficiency mounted with friction grip burs of standard recommended sizes.
They are also trained to use three in one syringe for washing & drying the prepared tooth cavity.
The students are trained to arrange and use the hand – cutting instruments as done by a clinical conservative dentistry.
Total number of theory classes - 30 hours
Number of Practical Classes - 90 hours

LECTURE CLASSES:
01. Introduction to operative dentistry
02. Glossary & its significance
03. Tooth designation & system followed
04. Classification of caries
05. Basic principles in cavity preparation
06. Instrument & Equipment for preparation
07. Cavity preparation for amalgam
08. Cavity preparation for Inlay
09. Tooth preparation for tooth coloured materials
10. Matrics and Retainers
11. Deep Caries Management
12. Introduction to Root Canal Treatment and Pulpotomy
13. Operators position, and chair position for the patient
14. Basic aspects of sterilization of instruments and equipments
15. Basic aspects for management of various restorative materials
(Amalgam, Cement, Glassionomer, Composites)

EXERCISE FOR PRECLINICAL TRAINING
Exercise I : Excavation of Deep Caries & : One Molar
Indirect Pulpcapping Tooth - 1
Exercise II : Excavation of Deep Caries & : One Molar

Direct Pulpcapping Tooth - 1
Exercise III : Pulpotonic on one molar teeth : -1
Exercise IV : Class I preparation to receive : one lower
Silver amalgam Molar - 1
One lower molar with buccal
Extension - 1
One lower premolar - 1
One upper premolar - 1
Exercise V : Class II preparation for silver amalgam
One lower molar (Mesio Occlusal) - 1
One lower premolar (Disto Occlusal) - 1
One upper molar (Disto Occlusal) - 1
Exercise VI : Class III preparation for tooth coloured Material
One upper central Incisor (Palatal approach) - 1
One lower central Incisor (Labial approach) -1
Exercise VII : Class V preparation
One upper canine – (tooth coloured material) - 1
One lower molar (amalgam) - 1
Exercise VIII : Inlay preparation
One lower molar (Mesio Occluso Distal) - 1
One upper molar (Occlusal)- 1
Exercise IX : Access Cavity Preparation
One upper lateral Incisor - 1
Exercise X : Demonstration of fracture teeth
One natural central Incisor :
Restoration by light cure material – 1
(Two session of 1 and ½ hours duration each & one session of ½ hour followed by lecture)

PRACTICAL CONSERVATIVE DENTISTRY & ENDODONTICS EXAMINATION
All II year BDS students will complete their training at the end of one academic year and will appear for University Examination for completing of II year BDS course.

THERE WILL NOT BE ANY THEORY EXAMINATION
Internal Assessment - 30 marks
Practical Examination - 50 marks
(minimum of 25 marks for a pass)
Viva Voce - 20 marks
Total - 100 marks
(minimum of 50 marks for a pass)
Duration of the Examination – 3 Hours
Candidates fail on the conservative dentistry & Endodontics, practical and Viva Voce and having passed other examination Dental Anatomy, Pathology and Pharmacology will be permitted to join the III year BDS Course. Unless, he passes this subject, he will not be permitted to appear for the III BDS Examination.

TEXT BOOKS:-
01. Art and Science of Operative Dentistry - Sturdevant 4th Edition
02. Anusavice Science of Dental Materials - 11th Edition
03. Grossman – Endodontics Practice - 11th Edition
REFERENCE BOOKS:-
01. Operative Dentistry - Marzuck
02. Dental Restorative Materials - Craig
03. Pathways of Pulp Cohen - 8th Edition

III YEAR BDS SYLLABUS
0301 – ORAL PATHOLOGY AND MICROBIOLOGY

1. Developmental disturbances of dental, oral and para – oral structure hereditary disorders.
2. Dental Caries
3. Pulpal and periapical pathosis and spread of infection
4. Diseases of periodontium
5. Benign and Malignant tumors of the oral cavity
6. Cysts and jumours of odonotogenic origin
7. Regressive Alterations of the teeth
8. Bacterial, viral and Mycotic injections
9. Physical and chemical injurers of the oral cavity
10. Healing of oral wounds – defence Mechanisms of oral tissues
11. Oral aspects of metabolic diseases
12. Diseases of Bones and tempero Mandibular joints
13. Diseases of skin
14. Diseases of blood and blood forming organs
15. Diseases of Nerves and Musceles
16. Diseases of salivary glands
17. Syndromes
18. Oral Manifestation of systemic diseases
19. Disease of Maxillary Sinus
20. Oral Ulcers and stomatitis
21. Oral Manifestations of AIDS
22. Auto immune disease
23. White lesions and Bullous lesions Pre cancerous lesion – Etiology and Pathology
24. Oral Virology
Environmental lesions of the Oral and paral – Oral structions
Effect of Radiation on Oral and Para Oral tissues

PRACTICALS:
1. Identification of hard and soft tissue specimen
2. Identification of Histopathology and slieds
3. DEMO – Biopsy and Exfoliative cytology technique

III YEAR BDS SYLLABUS
0302 GENERAL MEDICINE

Objectives:
A reasonable knowledge of general medicine is essential for the safe practice of Dentistry. A dental surgeon should recognize the general medical Again, the dental surgeon should recognize the general medical emergencies, which may arise at the dental chair and give first aid treatment before summoning general medical assistance. The modern dental student should be equipped to practice efficiently not only in the rural setting in the villages, but also in the highly specialized urban setting. With these objectives in view, the following syllabus in general medicine is framed.

I. Introduction
1. Aims of Medicine
2. History taking and physical examination of a medical case, Past and present history, General and systemic examination
3. Diagnosis, differential diagnosis and prognosis of diseases
4. Medical emergencies in dental practice
Unconsciousness (Faiting)
Vasovagal Syncope
Seizures or Convulsions
Diabetic emergencies – Ketoacidosis, hypoglycemia
Acute severe asthma
Cardiac arrest
Allergic reactions (Drug related emergencies)

II. Gastro intestinal Disorders
Investigations of gastro intestinal tract
Radiology, CT, MRI, Ultrasound & Endoscopy
Stomatitis – Types and Management
Glossitis – Types and Management
Gastritis – Acute gastritis, chronic gastritis
Congestive cardiac failure, Left ventricular failure
Hypertension – Primary and secondary hypertension
Benign and malignant Hypertension
Ischemic heart disease
Angina pectoris, myocardial infarction
Cardiac arrhythmias – Ectopic beats, Atrial fibrillation

V. Respiratory System
1. Investigations for respiratory disease
Non-Invasive – Chest X-ray, Fluoroscopy, CT Scan, Sputum Examinations, Skin tests, Serological tests, & Pulmonary Function tests
Invasive procedures – Bronchoscopy, Mediastinoscopy
- Pleural aspiration, pulmonary angiography, pleural & lung biopsy

2. Pneumonias – Classification – Primary and Secondary
3. Bronchitis – Acute and chronic
4. Emphysema – types
5. Bronchial Asthma – Intrinsic and Extrinsic status asthmaticus
6. Pulmonary eosinophilia
7. Lung abscess
8. Bronchiectasis
9. Pulmonary embolism – Types
10. Pulmonary tuberculosis – Primary pulmonary tuberculosis
Progressive Pulmonary tuberculosis
Post Primary tuberculosis
11. Respiratory Failure – Type I, Type II,
12. Lung Cancer – Types and Preventions

VI. Central nervous system
1. Meningitis – Pyogenic, Tyberculous & Viral meningitis
2. Facial palsy – Lower motor neuron & Upper motor neuron facial palsy, Bells Palsy, Hemiplegia
3. Facial Pain – Trigeminal Neuralgia, Migrainous neurolgia
4. Epilepsy – Classification and management
5. Head ache – Migraine
6. Syncope

VII. Renal Diseases
1. Investigations in Renal diseases
2. Acute glomerulonephritis (Acute nephritic Syndrome)
3. Nephrotic syndrome
4. Renal Failure

VIII. Hematology
1. Anemias. Iron deficiency anemia
Megaloblastic anemias
Hamolytic anemias
2. Leukemias. Classificatin
Acute leukermias
Chronic leukemias
3. Agranulo cytosis
4. Bleeding disorders. Primary & Secondary hemostasis. Screening tests for a bleeding disorder
5. Coagulation disorders – components of the coagulation system. Hemophilia A, Hemophilia B
6. Oral manifestations of Haematological disorders
7. Lymphadenopathy and splenomegaly

IX. Nutritional and Metabolic Disorders
Normal daily requirements of nutrients
Balance Diet

Protein Calorie Malnutrition
Kwashiorkor, Marasmus
Vitamins – Fat soluble vitamins (A,D,E & K)
Water soluble vitamins (B Complex, C)
A Vitaminosis & Hypervitaminosis.
Diabetes mellitus – Classification
Type I & Type II Diabets
Diet, Insulin & Oral drugs in the management
Calcium metabolism and calcium homeostasis

X. Endocrine Disorders
1. Pituitary gland Hypothalamic and Pituitary hormones
Hyper and hypopituitarism
2. Thyroid Gland Hyperthyroidism
Hypothyroidism – Myxedema, Cretinism
3. Parathyroid gland Hyper and hypoparathyroidism
4. Adrenal glands Hypo and hyperfunction
Cushings Syndrome
Hyper aldosteronism
Adenocortical insufficienscy

XI. Infections:
1. Enteric fever (Typhoid and Paratyphoid fevers)
2. Diphtheria
3. Viral Exanthemata – Measles, German measles. Small pox, chicken pox, herpes
Zoster, Herpes simplex
4. Mumps
5. Fulgal – Oral Candidiasis
6. Sexually transmitted diseases
Syphilis, Gonorrhoea, Chancroid, Granuloma inguinale
Lymphogranuloma Venereum. Acquired immuno deficiency Syndrome
7. Malaria, Filariasis
8. Leptospirosis

XII. Miscellaneous
Allergy
Adverse drug reactions
Drug interactions
Oral manifestations of Systemic Diseases
Evaluation of a case for general anesthesia & Surgery

III YEAR BDS SYLLABUS
0303 GENERAL SURGERY

1. Introduction to Surgery & Basic Principles – Surgical Process – Surgical History – clinical examination & Investigation
2. Inflammation – Soft tissues
3. Inflammation – Hard tissues (Osteo myelitis) Acute/Chronic/Specific – TB
4. Fractures – General Principles Pathology – Clinical features & diagnosis, Treatment – Complications
5. Infections – General Consideration
6. Abscess – (Acute and chronic) Cold Abscess
7. Cellulitis; Erysipelas
8. Ulcers – DD., investigation Trt., Non-Specific / Specific / malignant ulcers
9. Carbuncle
10. Septicaemia, Toxaemia, Pyemia
11. Sinus, Fistula
12. Gangrene – Varieties of gangrene & management
13. Gasgangrene
14. Cancrum oris
15. Tetanus
16. Tuberculosis of Lymphnodes / Bone & Joint
17. Leprosy
18. Actinomycosis, Madura mycosis
19. Anthrax
20. Syphilis, gonorrhoea, AIDS (other V.D.'s) / Nosocomial Infection
21. Asepsis and Antispetic measures – Sterilization
22. Wounds – Tissue repair, Classification – Acute & Chronic, Management
23. Shock, Syncope, Collapse – Varieties of Shock & Management
24. Wound healing, Complications
25. Haemorrhage Types of haemorrhage & Management
26. Blood Transfusion Indications – Precautions – Complications
27. Grafts Principles Types of Grafting procedures
28. Tumours &Cysts – Benign & malignant
29. Burns
30. Sutures & Suturing
31. Head injury (Introduction)
32. CT Scan, Ultra sonogram, MRI
33. First AID
34. Diseases of Lymph Nodes – (cervical) Specific / non specific lymphadenitis / Lymphomas
35. Swellings neck – Midline & Lateral
36. Diseases of mouth – Stomatitis – Ulcers – cysts – Tumours
37. Diseases of Lips – Lesions of lips including tumours
38. Diseases of Tongue - Leukoplakia – Neoplasms
39. Diseases of Tonsils, Palate – Lesions of hard & soft Palate Tonsil – Enlargement/Quinsy/Retropharyngeal abscess/Tumours
40. Diseases of Salivary glands – Applied anatomy – Inflammation – Obstruction – Neo plasms
41. Diseases of Larynx – FB – Oedema glottis – Laryngeal Paralysis – Tumours
42. Tracheostomy

43. Facial Nerve injuries, Bell's palsy
44. Trigeminal neuralgia
45. Diathermy
46. Radium Treatment – Principles
47. Facio – Maxillary injuries – Soft Tissues injuries / Fracture – facial bones & Jaws
48. Development of face – Cleft Lip and cleft palate
49. Diseases of Thyroid – Anatomy – Physiology – Classification – Goistre – Hyper & Hypothyroidism – Neoplasm
50. Parathyroids – Hyper parathyroidism & Hypoparathyroidism
51. Swellings of Jaw and Tumours Jaw
52. Accidental Injuries
53. Anaesthesia – General & regional
54. Basic Principles of Operative Surgery

IV BDS SEMESTER - I SYLLABUS

PREVENTIVE AND COMMUNITY DENTISTRY

BIO STATISTICS
Inroduction and General Principal of Bio – statistics procedures

PSYCHOLOGY
Introduction of psychological development from birth to adolescence Management of child in the dental office. Parent councelling in respect of dental health and hygiene of the child

PUBLIC HEALTH
Prevention, level of prevention, various measures in the prevention of dental and oral deseases at individual and mass level

PUBLIC HEALTH DENTISTRY
Introduction, definition, objectives, functions of public health dentistry, procedural steps in dental public health, indices for dental disease, surveying and evaluation epidemiology of dental caries, periodontal diseases, oral cancer, Utilisation of dental man-power, payment for dental care, public health programme, school dental health programme dental health services for state and centre. Private practice administration. Ethics Dental council and association. Epidemiology of periodontal diseases and parameters used in clinical and population studies. Foreensic odontology, computers in Dentistry. Cultural Anthropology objective different aspects of folk medicine and popular medicine, cultural pattern and complexes, taboos, as related to health.

IV BDS SEMESTER - I SYLLABUS

PERIODONTICS

THEORY

1. INTRODUCTION
   Definitions of periodontium, periodontology, Brief historical background scope of periodontics

2. DEVELOPMENT ANATOMY, MICRO STRUCTURE & BIOLOGY OF PERIODONTICS
   2.1 Gingiva 2hrs
   2.2 Periodontal ligament 1 hr
   2.3 Cementum 1 hr
   2.4 Alveolar bone 1 hr

3. AGE CHANGES IN PERIODONTIUM
   3.1 Age changes in teeth and periodontal structures
   3.2 Gingival disease in childhood and adolescents

4. CLASSIFICATION OF DISEASES & CONDITIONS AFFECTING PERIODONTIUM
   Need of classification, scientific base of classification, Classification of gingival and periodontal diseases as described in world workshop 1999 other classification of periodontal diseases

5. EPIDEMIOLOGY OF PERIODONTAL DISEASES
   Definition of Index, Incidence, prevalence, Endemic, Epidemic, pandemic, Epidemiology, Classification, of indices (Irreversible, Reversible) Deficiencies earlier indices used in periodontics, detailed Understanding of silness & Loe plaque index, Loe & Silness gingival index CPITN, CPI, PSR, OHI, SBI prevalence of periodontal diseases in India and other countries public health significance

6. ETIOLOGY OF PERIODONTAL DISEASES
   6.1 Dental plaque (Bio – Flim)
   Definition of plaque, material, alba, food debris, structure, classification,Composition, Formation, bacterial, colonization, Growth Maturation periodontal pathogens, bacterial, Virulence, Microbial specificity, Role in periodontal diseases, microbial interactions with the host in brief.
   6.2 The role of Dental Calculus & other predisposing factors
   6.3 Calculus Definition, Classification, Composition, Theories of formation, Role in periodontal disease plaque retentive factors
   6.4 Food impaction, Definition, Types, Etiology, Hirschelds classification signs and symptoms, Management
   6.5 Habits: Bruxism, Tongue thrusting, Mouth breathing, Lip Biting, other occupational habits(Periodontal significance of the above)
   6.6 Iatrogenic factors: Over hanging restorations, Improperly contoured marginal ridges, Contact points, Roughness of crowns and dentures, III fitting Dentures, plaque

Retention on removable and fixed appliances improperly designed Bridges and prosthesis, improper orthodontic treatment

6.7 Host Response in periodontal Disease: Mechanism of initiation and progression, periodontal disease activity, Continuous disease activity, Multiple burst hypothesis

6.8 Immunity, Inflammation: basic concepts, cellular elements involved immunoglobulins, complement, iimune mechanism & cytokines in brief

6.9 Risk factors

6.10 Definitions of risk factors, risk determinants, risk indicators, risk markers examples of each, clinical risk assessment, significant

6.11 Smoking and periodontal disease: classification of smokers, Effect, on disease prevalence, etio pathogenesis, therapy

6.12 Genetic factors associated with periodontal disease in brief.

6.13 Host modulation: Host response, Host modulation factors, host modulation therapy

RELATIONSHIP BETWEEN PERIODONTAL DISEASE AND SYSTEMIC HEALTH

7.1 Influence of systemic disorders and stress on periodontium: endocrine disorders. Hormonal changes, hematologic disorders immune deficiencies, stress & psychosomatic disorders, nutritional influences, other systemic conditions

7.2 Periodontal medicine: Impact of periodontal infection on systemic health Cardio vascular diseases, Stroke Diabetes mellitus, pregnancy outcome CORD, etc.

7.3 Oral malodor: Etiology, diagnosis, treatment

GINGIVAL DISEASES

8.1 Defense Mechanisms of Gingival & other oral structures: Epithelium, Gingival crevicular fluid, saliva

8.2 Gingival inflammation: stages of gingivitis

8.3 Plaque associated gingivitis: Etiology, pathogenersis, Clinical signs and symptoms, Management

8.4 Gingivitis due to systemic factors, sex hormones, Drugs and systemic conditions

8.5 Necrotizing ulcerative gingivitis

8.6 Desquamative gingivitis; Lichen planus, pemphigoid, phemphigus other vesicullo bullous lesions, Allergic gingivitis

8.7 Infective gingivitis: Herpetic, Bacterial, candidal, Pericoronitis

8.8 Gingival enlargement: Definition, classification, Differential diagnoasis

PERIODONTAL DISEASES

9.1 Extension of inflammation from gingival: Mechanism of spread of inflammation from gingival to deeper structures, factors that modify the spread

9.2 Periodontal pocket: Definition Classification, signs and symptoms pathogenesis, Histopathology, Rrot changes, contents of the pocket

9.3 Periodontal abscess: Etiology clinical features, differential diagnosis treatment

9.4 Bone loss and patterns of bone destruction

9.5 Periodontal response to external forces

9.5.1 Trauma from occlusion: Definition, Classification, Radiological changes Histological changes role in periodontal disease
9.5.2 Traumatic occlusion: Definition, Identification, changes in periodontium, Correction of pre maturities (Coronoplasty in brief) Bruxizm-clinical signs, symptoms, treatment

9.6 Chronic periodontitis: Definition, classification, etiology, risk factors clinical features, prognosis and treatment
9.7 Aggressive periodontitis: Historical perspective, classification, etiology, risk factors, clinical features, prognosis and treatment

10.**TREATMENT OF PERIODONTAL DISEASE**

10.1 Clinical Diagnosis: definition, significance of taking history, first visit second visit, clinical examination of soft tissues, hard tissues, periodontal examination in detail
10.2 Radiographic aids in the diagnosis of periodontal disease
10.3 Advanced diagnostic aids
10.4 Prognosis : Definition, Classification, Individual Tooth, Overall prognosis, determination of prognosis
10.5 The treatment plan: rationale for periodontal treatment, phase I,II,III,IV
10.6 Periodontal treatment of medically compromised patients
10.7 Periodontal therapy in female patient

11.**NONSURGICAL THERAPY**

11.1 Phase I periodontal therapy
11.2 Plaque Control : Patient education, motivation, plaque identification (Disclosing agents) mechanical plaque control, chemical plaque control Supra & Sub gingival irrigation etc.
11.3 Scaling and rootte planning
11.4 Splinting
11.5 Dentinal hypersensitivity
11.6 Chemotherapeutic Agents for periodontal Therapy: Antibiotics, anti inflammatory drugs, Analgesics, Local drugs delivery, Host modulation agents
11.7 Supportive periodontal therapy

12. **SURGICAL THERAPY**

12.1 Surgical anatomy, General principles of periodontal surgery
12.2 Gingival Surgical techniques
Gingival Curettage, Gingivectomy, treatment of various gingival enlargements, crown lenghthening in brief
12.3 Periodontal flap & flap techniques
12.4 Resective osseous surgery
12.5 Reconstructive periodontal surgery
12.6 Furcation: Involvement and treatment
12.7 Periodontal plastic and esthetic surgery
12.8 Advances in surgical technology
12.9 Implants

13. INTER DISCIPLINARY PROCEDURES

13.1 Periodontal restorative interrelationships
13.2 Adjunctive role of orthodontic therapy
13.3 periodontic – Endodontic continuum

14. ETHICS AND PERIODONTOLOGY
15. CLINICALS
    Infection control, periodontal instruments identification, Chair position and principles of instrumentation sharpening of instruments, case sheets discussion examination of periodontium in detail, Diagnosis of periodontal disease and determination of prognosis, Radiographic interpretation and lab investigation motivation of patients, plaque control instruction to patients
16. No. OF Hours (III & IV YR BDS)
    Lectures : 80 hrs
    Clinicals : 170 hrs
    Total: 250 hrs

17. RECOMMENDED TEXT BOOKS

17.1 Clinical Periodontology by Newmwn, Carranza and Takei
17.2 text book of periodontics, by Eley and Manson
17.3 periodontics: Medicine, surgery and Implants by l.F Rose, B.L Mealey, Cohen and genco

18. REFERENCE TEXT BOOK

18.1 Clinical periodontology and implant dentistry by lindhe
18.2 Funamentals of periodontics by kornman & Wilson
18.3 Fundamentals of periodontal instrumentation and advanced root instrumentation jill S. Nield- Gehrig
18.4 scaling and root planning by kornman
18.5 Oral microbiology and immunology by newman and Nissesgard
18.6 Text book of immunology by Ivan and riott
18.7 Clinical practice of the dental hygienist by wilkins

ORTHODONTIA AND DENTOFACIAL ORTHOPEDICS

THEROY

1. Definition, aims, objectives and scope of orthodontics
2. Growth and development of jaws,teeth, face, and skull, establishment of normal occlusion

3. Normal occlusion and its characteristics, factors responsible for its establishment and maintenance
4. Genetics and applied to orthodontics
5. malocclusion and its classification
6. Etiology of malocclusion
7. case history taking, clinical, examination and case analysis
8. Diagnostic aids including cephalometrics
9. Treatment planning of various malocclusions
10. Preventive and interceptive orthodontics
    (a) habit breaking appliance
    (b) Space maintainers
    (c) Serial Extraction
11. Methods of gaining space
12. Corrective Orthodontics
    (a) Removable appliances
    (b) Mechanical and functional
    (c) Outline of fixed appliances
13. Tissue reaction to orthodontic treatment
14. Materials in orthodontics
15. Retension and relapse
16. Computers in orthodontics
17. Surgical orthodontics

PRECLINICAL EXERCISES

1. BASIC WIRE BENDING EXERCISES

1. STRAIGHTENING OF WIRE 3'-3 NOS
2. Square 1'" – 1 no
3. Rectangle 1" X 2" – 1 no
4. Triangle 1" – 1 no.
5. 1 U-V Loop
6. ¾ clasps –R & L 2 sets
7. Jackson's crib – R & L 2 sets
8. Triangular clasp – R & L2 sets
9. Adams clasp –R & L – 3 sets
10. Short labial bow – 3 nos
11. Long labial bow – 1 no
12. Split labial bow – 1 no
13. Robert's retractor – 1 no
14. Finger's spring - 1 set
15. Single cantilever spring – with/without guide
16. Double cantilever spring – with / without guide
17. U loop canine retractor 2 sets
18. Helical canine retractor 2 sets

19. Buccal canine retractor 1 set
20. Palatal canine retractor 1 set
21. Coffin spring 1 no
22. Reverse loop canine retractor
23. Hawley's appliance
24. Hawley's appliance with ABP
25. Appliance with single cantilever spring and PBP
26. Appliance with buccal canine retractor
27. Appliance for diastema closure
28. Twin block Appliance

II. Case sheets – presentation and submission
III. Appliances in dummy models
IV. Clinical cases – Fabrication and delivery
V. Cephalometric tracting – basic tracing and landmark identification

Student activities

1. Preparation of study models and basics of model analysis
2. Seminar's – presentation and submission
3. Posters – presentation and submission

Textbooks
Suggested textbook

T.M Graber principles and techniques of orthodontics
Profitt: Comtemporary Orthodontics

References

White & Gardiner: Orthodontics for dental students
C.P Adams : Removable Orthodontics Appliances
Rakosi : orthodontic Diagnosis

ORAL MEDICNE AND RADIOLOGY

RADIOLOGY

1. Radiation physics
2. Radiation biology
3. Health physics
4. X –ray film intensifying screen, Grid
5. Projection geometry
6. Test and Discussion
7. Processing of X – ray film
8. Normal radiographic anatomy

9. Radiographic quality assurance and infection control
10. Extra oral radiographic examination
11. Panaromic imaging
12. Digital imaging
13. Specialised radiographic techniques
14. Inflammatory lesion of jaws
15. Cyst and tumours of jaws
16. Salivary gland radiology
17. Trauma to teeth and facial structure
18. Oral implants
19. Imaging of TMJ disorders

ORAL MEDICINE

1. Introduction to oral medicine and oral diagnosis
2. Pharmacology
3. Ulcerative and vesiculo bullous lesions
4. Read and white lesion of oral mucosa
5. Pigmentation lesion of oral cavity
6. Benign lesion of oral cavity
7. Salivary disorders
8. test and discussions
9. Orofacial pain
10. tempo mandibular disorders
11. Diseases of Respiratory system
12. Diseases of cardiovascular system
13. Diseases of GIT system
14. Diseases of rental system
15. Hematologic disorders
16. Bleeding and clotting disorders
17. Immunologic diseases
18. Transplantation medicine
19. Infectious diseases
20. Diabetes mellitus
21. Neuro muscular diseases
22. Genetics
23. Differencial diagnosis and laboratory investigation – 6hrs
24. tests and discussion -6hrs
25. Forensic odontology – 2 hrs

RECOMMENDED BOOKS

A) ORAL MEDICINE

1. Burkit oral medicine
2. Coleman – principles pf oral diagnosis mosby year book

3. Jones – oral manifestation of systemic diseases – W.B saunders company
4. Mitchell Oral diagnosis & Oral medicine
5. Kerr – Oral diagnosis
6. Miller Oral diagnosis and treatment
7. Hutchinson – clinical methods
8. Oral pathology – shafers
9. Sonic S.T Fazio R.C and Fang L.Principles and practice or oral medicine

B) ORAL RADIOLOGY

1. White and Goaz –Oral radiology-Mosby year book
2. Weahrman- Dental radiology C.V. Mosby company
3. Stafne Oral roentgenographic diagnosis – W.B saunders co

C) FORENSIC ODONTOLOGY

1. Derek H Clark- Practical Forensic Odontology- Butterworth-hienemenn(1992)
2. C. Mechanical Bowrs, Gary bell- Manual of forensic odontology – Forensic(1995)
3.

ORAL AND MAXILLOFACIAL SURGERY

Basic principles of Oral Surgery

a) Developing a surgical diagnosis
b) Basic necessities for surgery
c) Aseptic technique
d) Incisions
e) Flap design
f) Tissue handling
g) Hemostasis
h) Decomtamination and debridement
i) Edema control
j) Patient general health and nutrition

EXODONTIA

a) Indications, contraindications of extraction
b) Principles of extraction'
c) Types of extraction
d) Instrument used for extraction
e) Steps in extraction
f) Complications of extraction

Complicated exodontias

a) Principles of flap design, development and management
b) Principles and techniques for surgical extraction
c) Multiple extraction

IMPACTED TEETH

a) Indications for removal of impacted teeth
b) Contraindication for removal of impacted teeth
c) Classification systems of impacted teeth
d) Root morphology
e) Modification of classification systems for maxillary impacted teeth
f) Difficulty of removal of other impacted teeth
g) Surgical procedure
h) Peri operative patient management

PREPROSTHETIC SURGERY

i) Objectives of preprothetic surgery
j) Principles of patient evaluation and treatment planning
k) Recontouring of the alveolar ridges
l) Tori removal
m) Immediate dentures
n) Soft tissue abnormalities
o) Overdenture surgery
p) Mandibular augmentation
q) Maxillary augmentation
r) Soft tissue surgery for ridge extension of manible
s) Soft tissue surgery for ridge extension of maxilla
t) Correction of abnormal ridge relationships

CYSTS OF THE ORAL CAVITY

u) General consideration
v) Classification'
w) Diagnosis
x) Management
y) Operative procedure
z) Clinical variations

OSTEOMYELITIS
ODONTOGENIC INFECTIONS OF HEAD AND NECK

- Microbiology of odontogenic infection
- Principles of therapy of odontogenic infections
- Principles of prevention of infection
- Principles of prophylaxis of wound infection
    - Principles of prophylaxis against metestatic infection

DIEASES OF MAXILLARY SINUS

- Embryology and anatomy
- Clinical examination of maxillary sinus
- Radiographic examination of maxillary sinus
- Odontogenic infections of maxillary sinus

- Treatment of maxillary sinusitis
- Complications of surgery involving maxillary sinus
- Oroantral communications

General anaesthesia

Hemorrhage and shock
Essentials of lab investigations
Analgesics and antibiotics

- Evaluation
- Classifications of temporomandibular disorders
- Reversible treatment
- Permanent occlusion modification
- Temporomandibular joint surgery

INJURIES OF MAXILLOFACIAL REGION

- basic principles for the management of maxillofacial injuries
- Management of mandible fractures, middle third fractures, zygoma fractures and its complications

SALIVARY GLAND DISORDERS

- Embryology anatomy and physiology
- Diagnostic modalities
- Obstructive salivary gland diseases
- Mucous retention and extravasation phenomena
- Salivary gland infections
- Necrotising sialometaplasia
- Sjogren's syndrome
- Traumatic salivary gland injuries
- Neoplastic salivary gland disorders

TUMORS OF ORAL CAVITY

- Principles of surgical management of jaw tumors
- malignant tumor of the oral cavity
- Surgical management of benign lesions in oral soft tissues
- Reconstruction of jaws after removal of oral tumors

CLEFT LIP AND PALATE

- Embryology
- Causative factors
- Problems of the cleft afflicted individual
- Treatment of cleft lip and palate
- dental needs of cleft afflicted individual

IMPLANTS IN DENTISTRY

- Biologic consideration for osseintegration
- Clinical implant components
- Implant prosthetic options
- preoperative medical evaluation if implant patient
- basic surgical techniques
- Complications

Emergencies in dental practice

Distraction osteogenesis

Transplantation of tissues

Orthognathic surgery

- Inroduction, diagnosis and treatment planning
- Presurgical orthodontic phase
- Osteotomy procedures
-

Neurological disorders of maxillofacial region

- Basics of pain neurophysiology
- Classifications of orofacial pain
- Neuropathic facial pains
- Chronic headache
- trigeminal neuralgia and its management
- Evaluation of the orofacial pain patient

Cryosurgery
Lasers
Premalignant lesions

I . **LOCAL ANESTHESIA**

A. Introduction to L.A and history of L.A
B. Neurophysiology
1. Definition of L.A
2. Ideal properties of L.A
3. basics of neuron of L.A
4. Theories of L.A
5. Mechanism of action of L.A
6. Dissociation of L.A

7. Reason for L.A not working in infected areas
8. Factors affecting L.A

C. Pharmacology of L.A

1. Pharmacokinetics of L.A
   (Uptake, distribution, metabolism, excretion)
2. Pharmacodynamics of L.A
   (Effect of L.A on CVS and CNS)
3. Classification of L.A
4. Composition of L.A
5. Contraindications for L.A
6. Maximum recommended does for L.A
7. Topical anesthetic agents

D. Pharmacology of vasoconstrictor

1. reasons for adding vasoconstrictor with L.A
2. Classification of vasoconstrictor
3. various vasoconstrictors used
4. systemic action adrenaline
5. Clinical uses of adrenalin
6. MRD for adrenaline
7. Overdose of adrenaline
8. Dilution of adrenalin
9. Factors affecting the selection of vasoconstrictors

E. The Armamentarium

1. The syringe
2. The needle
   (Parts of needle, diameter and length of needle, care and handling of needle, problems with needle useage)

F. Maxillary anesthetic techniques

1. Anatomy of maxillary nerve and maxilla
2. Definition of local infiltration field block, nerve block
3. Supraperiosteal infiltration
4. posterior superior alveolar nerve block
5. Middle superior alveolar nerve block
6. Anterior superior alveolar nerve block
7. Greater palatine nerve block
8. Nasopalatine nerve block
9. maxillary nerve block

G. Mandibular anesthetic techniques

1. Anatomy of maxillary nerve and maxilla
2. Fischer 1,2,3 nerve block
3. Direct inferior alveolar nerve block
4. Akinosi technique

5. Gow – gates techniques

H. Supplemental injection techniques
1. Periodontal ligament injection
2. Intraseptal injection
3. Intraosseous injection
4. Intrapulpal injection

I. Local complications
1. Needle breakage
2. Trismus
3. Hematoma
4. Facial nerve paralysis
5. Pain on injection
6. Burning on injection
7. Edema
8. Soft tissue injury

H. Systemic complications
1. Overdose
(Definition causes, predisposing factors, clinical features, management)
2. Allergy
(Etiology, clinical features, management)

II MISCELLANEOUS
A. suturing materials and techniques
B. sterilization
C. Antibiotics and analgesics
D. Instrument in minor oral surgery
E. Surgical anatomy (TMJ salivary, maxillary sinus, V and VII nerves) and Osteology(maxilla, mandible)
F. Wiring techniques

PROPOSED TEXT BOOKFOR LOCAL ANESTHESIA

1. Local anesthesia by Stanley F. malamed
2. General anesthesia by Monheims
3. Contemporary oral and Maxillofacial surgery by L.J Peterson

PRESCRIBED TEXT BOOK

TO BE FOLLOWED
1. Local anesthesia – Malamed
2. Oral and maxillofacial Surgery – Kruger
   - Contemporary Peterson
3. Surgical anatomy & Osteotology – Dubrul & Sicher last

REFERENCES

1. Local anesthesia – Monheims
   Sowray
2. Oral and Maxillofacial surgery-
   Laskin vol 1 and 2
   Jeffrey Howe
   Neelima malik
   Killey & kay (all volumes)
4. Pharmacology – Tripathi

CONSERVATIVE DENTISTRY & ENDOCONTICS THEORY

Conservative Dentistry

1. Definition and scope
2. clinical significance of dental anatomy, Histology, physiology and occlusion
3. Examination, Diagnosis and treatment planning
4. cariology and prevention of caries
5. Infection control
6. Fundamentals in cavity preparation
7. Biomechanics in Operative Dentistry
8. Operative instrument and equipement
9. Isolation
10. Amalgam and mercury Hygiene Management
11. Class I and Class II cavity preparations for amalgam restorations
12. Contacts & Contours
13. Matrics & Wedges
14. Gingival Tissue management
15. Pin – Retained amalgam
16. Cast gold alloys
17. casting procedures
18. Inlay and onlay
19. Inlay wax
20. Direct Gold Restorations
21. Management of Hypersensitivity
22. Non – carious lesions and their management
23. Dental cements
24. Esthetic Dentistry

a. Composites
b. Ceramics
c. Bleaching
d. Veneers

e. Cavity preparation for tooth colored materials
25. fundamentals concept of Adhesion and Dentin Bonding agents

Endodontics

1. Introduction and scope
2. Dental pulp & its pathology
3. Periradicular tissues & its pathology
4. Diagnostic aids in Endodontics
5. Rationale of endodontic treatment
6. Anatomy of pulp cavity and access cavity preparation
7. Working length determination
8. Cleaning and shaping of root canal
9. Endodontic instruments
10. Sterilization and Disinfection
11. Irrigants
12. Intra-canal medicaments
13. Microbiology
14. Root canal Sealers
15. Obturation materials and techniques
16. Discoloration and its management
17. Traumatic injuries
18. Endodontic Surgery
19. Procedural errors in Endodontics and retreatment
20. Endo-Perio lesions
21. Replantation, Transplantaion and Endodontic implants
22. Single Visit Endodontics
23. Post – Endodontic Restorations
24. Pulpotomy & Apexification

Recommended Text Books

Conservative Dentistry

1. Art and Sciences of Conservative Dentistry – Sturdevant

Endodontics

1. Endodontic Practice – Grossman
2. Endodontics – Ingle

Reference Text Book

Conservative Dentistry

1. Text book of Operative Dentistry – Vimal K Sikri
2. Operative Dentistry – Ramya Raghu
3. Operative Dentistry – marzouk

Endodontics

1. Pathways of the Pulp – Cohen

PROSTHODONTICS AND CROWN AND BRIDGE

THEORY
COMPLETE DENTURE

1. Introduction and scope
2. Applied anatomy
3. Biomechanics of edentulous state
4. Effects of aging on the edentulous state
5. TMJ Disorders in edentulous patients
6. Examination diagnosis, treatment planning and prognosis
7. Pre- prosthetic surgery
8. Principles of retention and stability and support
9. Principles and techniques of impression making
10. Preparation of casts, trays and temporary denture bases occlusal rims
11. Jaw relations and methods of registration Mandibular movements
12. Artificial teeth, their selection and arrangements and esthetics
13. Articulators and face bow
14. Occlusion and articulation in complete dentures
15. Processing and finishing of denture
16. Correction of occlusal discrepancies
17. Insertion and adjustments and complaints and aftercare of complete denture
18. Nutrition care for the denture – wearing pt.
19. Sequelae of ill fitting dentures
20. Repair, rebasing and relining
21. Immediate denture
22. Implant prosthodontia
23. Over denture
24. Single complete denture
25. Geriatric dentistry

Removable partial denture

1. Introduction and scope
2. Classification
3. Examination, diagnosis and treatment planning
4. Mouth preparation for partial denture
5. Components parts of removable partial dentures and their function
6. Impression procedure
7. Surveyors
8. Designs of removable partial dentures and its associated problems
9. Fabrications of cast metal frame work
10. Jaw relation record

11. Selection and arrangement teeth
12. Acrylic partial denture and other types of partial denture
13. Trying in of partial denture
14. Processing, finishing, insertion and maintenance of partial denture
15. immediate partial denture
16. precision attachments

CROWN AND BRIDGE PROSTHODONTICS

1. Introduction and Definition
2. Indication and contra-indication for FPD
3. Examination, diagnosis and treatment planning, difference between RPD & FPD
4. Mouth preparation for FPD
5. Selection and choice of abutment teeth
6. Principles of tooth preparation
7. Procedures of preparation of abutment teeth abutment teeth for receiving various types of retainers
8. Gingival retractions and impression procedure
9. Temporary protection of prepared tooth
10. Contraction of dies and working casts
11. Technique of fabrication of retainers
12. Selection and fabrication of pontics
13. Connectors, stress breakers and assembly of Fixed bridges
14. Finishing
15. Cementation
16. Maintenance of crown and bridges
17. Bridge failure management
18. Materials in FPD and recent of advancements in ceramics

MAXILLO FACIAL PROSTHETICS

1. Splints
2. Obturator
3. Carriers
4. Extra oral and Intra oral Prosthetics
5. Implants in maxillofacial prosthesis
6. Materials for Maxillo facial prosthesis
7. Etiology and type

Implant prosthodontics

1. Introduction to implantology
2. History and evolution
3. Diagnosis and treatment planning
4. Fundamental science and osseointegration
5. Implant prosthodontics and maintenance

Esthetic Dentistry

1. Principles of esthetics
2. Dentin bonding agents
3. Color modifiers and opaquers
4. Composite resins
5. Porcelain fused to metal restorations
6. All ceramic restorations
7. laminates
8. Bleaching
9. Dynesthetic concept of

Students' activities

1. Monthly class cycle tests
2. Internal exam
3. Clinical and pre clinical tests
4. Viva voce
5. Seminars
6. Group discussions
7. Scientific paper presentations in National
8. CDE programs
9. Project works
10. Hands on course and work shops

RECOMMENDED TEXT BOOKS

1. Contemporary fixed prosthodontics/Stephen F. Rosentiel, Mortein F. land Junjei Fujimoto Ed. 3rd
2. Fundamentals of tooth preparations for cast metal and porcelain restorations/ Hebert T. shillngburg, Richard jacabi, Susan E. bracket Ed
3. Tylmon theory and practice of fixed prosthodontics F.P Malone David I. koth Ed.8th
4. essential of Complete denture prosthodontics/ Sheldon winkler Ed 2nd
5. Clinical removable partial prosthodontics, stewart
6. Complete denture and implant supported prosthodontics; bouchers's Zarb.

REFERENCE TEXT BOOKS

1. Fundamentals of fixed prosthodontics / Herbert T. Shillingburg (et al) ed 3rd
2. Syllabus of complete denture / Charles M Heartwell Ed5
3. Planning and making crowns and bridges /B.G.n smith 4ed
4. Removable partial prosthodontics – McGregor
5. Science of dental material – Anusavice
6. Removable partial prosthodontic – Osborne and Lammie
7. Problem and solutions in complete denture prosthodontics / david lamp

PEDODONTICS
THEORY

1. Introduction, Definition, Scope & Importance of pedodontics
2. General notes on primary teeth
3. Examination, Diagnosis & Treatment planning
4. Morphology of Dentition & its Application

a) Applied morphology of primary & Secondary teeth
b) Eruption & teething Disorders
c) Eruption & teething disorders

5. Radiographic techniques
6. Child physiology & Management
7. Management of Disaled / Handicapped child
8. Child Abuse & Neglect
9. Fundamentals of Dental health – Oral Hygiene
10. Gingival Diseases
11. Peirodontal diseases
12. Space maintainers & Regainers
13. Orthodontic management of mixed dentition

a) Habits
b) Habits & Minor regularities
c) Serial Extraction

14. Development of normal occlusion
15. Cleft lip & Cleft palate
16. Dental caries
17. Prevention of Dental caries

a) Diet
b) Fluorides

18. Isolation techniques
19. Restorative dentistry in children
20. Pit & Fissure sealants
21. Management of fractures in anterior teeth & Endodontics treatments
22. Semi permanent Restorations
23. Prosthodontic management
24. Principles of Extraction
25. Local Anaesthesia
26. Fluorides.

STUDENTS ACTIVITES

Seminars, Viva & clinical case discussion

RECOMMENDED TEXT BOOK

Mcdonald, Finn, Shoba tendon (new edition), Pediatric dentistry – Muthu, Arathirao (new ed) Damle

REFERENCE TEXT BOOK

Braham of Morris, Satish Chandra, mathewson, Stewart

IV YEAR BDS SYLLABUS
401 – CONSERVATIVE DENTISTRY & ENDODONTICS
Conservative Dentistry

01. Definition & scope
02. Clinical Significance of Dental Anatomy, Histology, Physiology and Occlusion
03. Examination, Diagnosis and Treatment planning
04. Charting and recording of cases
05. Oral Hygiene in relation to Operative Dentistry
06. Cariology
07. Infection Control
08. Fundamentals in Cavity preparation
a.Classification of cavities classification and nomenclature
b.Principles of cavity preparation
09. Biomechanics in Operative Dentistry
10. Instruments and equipments
11. Pain Control
12. Isolation
13. Restorative materials
14. Cavity preparation for different types of restorative materials, including inlay and onlay
15. Restorative procedure
16. Matrices, Wedges and Separators
17. Pulp and Soft tissue protection
18. Soft tissue management in Conservative Dentistry
19. Esthetic Dentistry
a.Ceramics
b.Bleaching
c.Veneers
d.Other procedure
20. Management of Fractured teeth
21. Management of Hypersensitivity

Endodontics
01. Introduction and Scope
02. Clinical diagnostic methods
03. Role and Radiograph in Endodontics
04. Histology of Pulp and Periradicular tissues
05. Diseases of the pulp and periradicular tissues
06. Case selection
07. Principles and Rational of Endodontic treatment
08. Anatomy of pulp cavity and Root canals
09. Medicaments in Endodontics
10. Endodontic instruments and sterilization
11. Pulpotomy and Apexification
12. Preparation of root canal
13. Sterilization of root canal, with special emphasis on Microbiology
14. Methods of Obturation of root canal
15. Management of discolored and tranumatized teeth

16. Surgical Endodontics
17. Endo-Perio relationship
18. Management of Endodontic emergencies
19. Post Endodontic restorations

Recommended Textbooks
Conservative Dentistry
1. The Art and Science of operative dentistry
-Sturdevant C.M.
2. Text Book of Operative Dentistry
-Vimal K.Sikri
3. Philip's Science of Dental Materials
-Anu Savice K.J.
Endodontics
1. Endodontic Practice
-Grossman L.I.

IV YEAR BDS SYLLABUS
402 – DEPARTMENT OF ORTHDONTICS
1. Definition, aims, objectives and scope or orthodontics
2. Growth and development of jaws, teeth, face and skull, establishment of normal occlusion.
3. Normal occlusion and its characteristics, factors responsible for its establishment and maintenance
4. Genetics as applied to orthodontics
5. Malocclusion and its classification
6. Etiology of malocclusion
7. Case history taking, clinical examination and case analysis and differential diagnosis
8. Diagnostic aids including cephalometrics
9. Treatment planning for various malocclusion
10. Preventive and interceptive orthodontics;
a. Habit breaking appliances
b. Space maintainers
c. Serial extraction
11. Methods of gaining space
12. Corrective orthodontics;
a. Removable appliance,
b. Mechanical and functional
c. Outline of fixed appliances
13. Tissue reaction to orthodontic treatment
14. Materials used in orthodontics
15. Retension and relapse
16. Computers in orthodontics
17. Sterilization in orthodontics
18. Surgical orthodontics
19. Failures in orthodontic therapy

20. Limitation of dental graduates in orthodontic treatment with emphasis on Diagnosis, treatment planning and management.
The teaching of Orthodontics clinic and practicals should be arranged during III year and IV year B.D.S.

Clinical Work:
1. Basic Wire bending exercises
S.No Exercise Remarks Signature

BASIC WIRE BENDING EXERCISES
1 Straightening of Wire 3" – 3 Nos
2 Square 1" – 1 no
3 Rectangle 1"x2" – 1no
4 Triangle 1" – 1 no
5 1 U-V Loop

CLASS
1 ¾ Clasp – R & L 2 sets
2 Jackson's Crib – R & L 2 sets
3 Triangular clasp – R & L 2 sets
4 Adam's clasp – R & L – 3 sets
LABIAL BOWS
1 Short labial bow – 3 nos
2 Long labial bow – 1 no
3 Split labial bow – 1 no
4 Robert's retractor – 1 no
SPRINGS
1 Finger spring – 1 set
2 Single cantilever spring – with/with out guide
3 Double cantilever spring – with/with out guide
4 U loop canine retractor 2 sets
5 Helical canine retractor 2 sets
6 Buccal canine retractor 1 set
7 Palatal canine retractor 1 set
8 Reverse loop canine retractor
9 Coffin spring 1 no
APPLIANCES
1 Hawley's appliance
2 Hawley's appliance with ABP
3 Appliance with single cantilever spring and PBP
4 Appliance with buccal canine retractor
5 Appliance for diastema closure
6 Twin Block Appliance
2. Case sheets – presentation and submission
3. Appliances in Dummy models
4. Clinical Cases – Fabrication and delivery

5. Cephalometric tracing – Basic tracing and landmark identification

Student Activities

1. Preparation of study models and basics of model analysis
2. Seminars – Presentation and submission
3. Posters – Presentation and submission

Textbooks:

Suggested Textbooks:

T.M.Graber. Principles and Techniques of Orthodontics
Profit: Contemporary Orthodontics

References:

White & Gardiner: Orthodontics for dental students
C.P.Adams: Removable Orthodontic Appliances
Rakosi: Orthodontic Diagnosis

IV YEAR BDS SYLLABUS

403- ORAL MEDICINE, ORAL DIAGNOSIS AND RADIOLOGY

Oral Medicine

1. Method of diagnosis indlucing special investigations
2. Acute infections of oral and para oral structures
3. Blood dyscrasias and their management
4. Management of cardiac patients in dentistry
5. Metabolic and endocrine disturbances, oral manifestations
6. Nutritional deficiencies and their significance in dentistry
7. Oral Sepsis and its effects on the general system
8. Disfunctions of TMJ
9. Cervico facial lymphadenopahy
10. Diseases of salivary glands
11. Facial pain
12. Cysts and tumours of the oral cavity
13. Oral manifestation of dermatological and other systemic disturbances
14. Special investigations
15. Immune concepts of oral lesions
16. Forensic Odontology
17. Infection diseases, their oral manifestations and significance to dental practice
18. Radiotherapy – pre-operative evaluation and management of post operative complication
19. Red and white lesions of oral cavity

Oral Radiology

1. Physics of Radiation – Production and properties of X-rays
2. Principles of X-ray technique
3. Factors of Radiography and fluoroscopy
4. Techniques of Intra Oral and extra oral radiography
5. Normal anatomical landmarks
6. Radiological interpretations of dental and jaw conditions
7. Elements of Radiation treatment is oro-facial conditions and sequelae
8. Contrast radiography

9. Recent advances in dental radiography
10. Biologic effects of radiation
11. Radiation safety and protection

Recommended Text Books – Oral Medicine

1. Burket's Oral Medicine – Diagnosis and Treatment
2. Oral and Maxillofacial Pathology – Neville
3. Differential Diagnosis of Oral and Maxillofacial Lesions – Norman K.Wood

References:

01. Oral Diagnosis, Oral Medicine and Treatment planning – Bricher, Steven
Recommended Text Books for Oral Radiology
02. Oral Radiology – Principles and Interpretation – Whte and Pharoah
03. Essentials of Dental Radiography and Radiology – Eric / Whaites

Seminars:

A student has to record 10 long cases of different lesions and diseases of the Oral Cavity with clinical photographs and necessary radiographs and laboratory investigations. The students are also required to take 10 short cases.
Each student has to take 20 intra oral radiographs projected and processed by themselves. A demonstration of various extra oral projections and techniques are also given.
At the beginning of the academic year, each student is assigned a individual seminar topic on the various lesions of the oral cavity, oral manifestations of the systemic disease, statistical dates and epidemiological study of the oral disease and radiology which is to be submitted prior to the final internal assessment examination for evaluation.
The students are guided and supported to present papers on the various lesions reported at the out patient department, the recent treatment modalities and diagnostic aids in the CDE programmes, State and National Conferences.

IV YEAR BDS SYLLABUS

404 – PERIODONTICS

1. Introduction Definition of Periodontology
-Periodontics – Brief historical background
Scope of Periodontics
2. Development Anatomy Gingiva:Junctional epithelium in Detail
- Epithelial – Mesenchymal interaction
- Periodontal ligament
- Cementum
- Alveolar bone
- Clinical significance
3. Defence mechanisms in the oral cavity - Role of –
- Epithelium
- Gingival fluid
- Saliva and other defensive mechanisms in the oral environment
4. Age change in - Age changes in teeth and Periodontal

periodontium structures Gingival disease in childhood
& adolescents
5. Classification of periodontal - Need of classification, Scientific basis of diseases classification.
- Classification of gingival and periodontal diseases as described in world workshop
1999. Also other recent classifications to be discussed
6. Gingival diseases - Localized and generalized gingivitis papillary, marginal and diffused gingivitis, Etiology, pathogenesis, clinical signs, symptoms and management of
1. Plaque – associated gingivitis
2. Systemically aggravated (sex hormones,
Drugs and systemic diseases)
3. Necrotizing ulcerative gingivitis
4. Desquamative gingivitis – gingivitis Associated with Lichen planus, pemphigoid, pemphigus and other Vesiculobullous lesions)
5. Allergic gingivitis
6. Infective gingivitis – Herpetic, bacterial And candidial, periocoronitis
7. Gingival enlargement (classification and Differential Diagnosis)
7. Epidemiology of Periodontal - Definition of index, incidence, diseases prevalence, epidemiology, endemic, pandemic.
- Classification of indices. (irreversible & reversible)
- Deficiencies of earlier indices used in periodontics.
Detailed understanding of Silness & loe
Plaque index, Loe and Silness gingival index, CPITN and CPI
- Prevalence of periodontal diseases in India and other countries
- Public health significance (all these topics are covered at length under community may be discussed briefly.
However, questions may be asked from the topics in examination)
8. Extension of inflammation from gingival - Mechanism of spread of inflammation from gingival are to deeper periodontal structures.
- Factors that modify the spread
9. Pocket - Definition, signs and symptoms, classification, Pathogenesis and histopathology, Root surface changes and contents of the pocket
10. Etiology - Dental plaque (Bio-film)
- Definition
- types, composition, formation; bacterial colonization, growth and maturation, disclosing agents
- Role of dental plaque in periodontal diseases.
- Plaque micro-organisms in detail
- Bacteria associated with periodontal disease
- Plaque retentive factors
- Meteria alba
- Food debris
- **Calculus**
- Definition, types, composition, attachment, theories of formation. Role of dental calculus in diseases
- **Food impaction**
- Definition, types, etiology hirschfelds classification, signs, symptoms and sequelae treatment

- **Trauma from occlusion**
- Definition
- Types
Histopathological changes role of trauma from occlusion in Periodontal diseases. Management, in brief.

- **Habits**
their periodontal significance
- Bruxism and parafunctional habits, tongue thrusting mouth breathing, lip biting, occupational habits.
- **Iatrogenic factors**
conservative dentistry restorations –contact point, marginal ridge, surface roughness overhanging restorations, interface between restoration and teeth

Prosthodontics
Interrelationship
- Bridges and other prosthesis pontics (Types), surface contour, relationship of margins to the periodontium. (theories) gingival muscle action theory, theory of access to oral hygiene

- **Orthodontics**
- Interrelation-removable appliance, fixed appliances
- Retention of plaque, bacterial changes
- **Systemic disease:**
- Diabetes, sex hormones, Nutrition (Vit.C & Proteins)
- AIDS and Periodontium Hemorrhagic disease
- Leukemia, Clotting factors disorder
- Platelet disorder
- PMN disorders
11. Risk Factors- Definition, risk factors for periodontal disease
12. Host Response-Mechanism of intiation and progression of
Periodontal
Disease -Basic concepts – cells – mast cells, neutrophils, Macrophages,
Lymphocytes. Immunoglobuilns, complement, immune
Mechanism and Ctokines in brief.
- Stages in gingivitis – initial, early established, advanced
- Periodontal diseases activity continous diseases activity
- Continuous paradigm,random burse and asynchronous
- multiple burst hypothesis
14. Diagnosis - Routine procedures, methods of probing – types of probes
(according to case history)
- Halitosis, Etiology and treatment. Mention advanced Diagnostic aids and their role in brief.
15. Prognosis - Definition, types purpose and factors to be taken into consideration
16. Treatment plan - Factors to be considered
17. Periodontal therapy - A)General principles of periodontal therapy phase I, II III,IV therapy.

Definition of periodontal regeneration, repair New attachment reattachment.

B) Plaque control
1. Mechanism – tooth brushes, inter – dental
Cleansing aids, dentifrices
2. Chemical – Classification and mechanism of
Action of each, pocket irrigation
18. Pocket eradication
Procedures - Scaling and Root Planning
- Indications
- Aims and Objectives
- Procedure
- Healing following root planning hand instruments for scaling and sonic & piezoelectric &

Ultra-sonic scalers
- Currettage and present concepts
- Definition
- Indication
- Aims and objectives
- Procedure and healing
- Gingivectomy / gingivoplasty
- Including crown lengthening procedure
- Definition
- Indication and contraindication
- Armammentarium, procedure and healing
- Flap - surgery
- Definition of flap
- Types of flap (design of flap – pallillae preservation)
- Pocket eradication, indications, armamentarium, surgical procedure and
healing
19.Osseous Surgery- Osseous defects in periodontal disease
- definition
- classification of osseous defect and surgery
- resective, additive osseous surgery (osseous grafts, classification of grafts)
- healing
- other regenerative procedures-root conditioning
- guided tissue regeneration
20.Mucogingival - Definition
Sur gery Mucogingival problems, Etiology & classification of
(Periodontal plastic gingival recession (P.D.Miller jr.ans Sullivan
and surgery) Atkins) indications, Objectives
- Gingival extension procedure – lateral pedicle graft
- Frenectomies and frenotomy
- Crown lengthening procedures
- Periodontal Microsurgery in brief
21. Splints - Periodontal splinting
- Purpose, classification
- Principles of splinting

22.Hypersensitivity - Causes, theories and management
23.Implants - Definition, Types, Scope, biomaterial used
- Periodontal considerations such as implant - gingiva
and implant bone interface. Implant failure periimplantitis
and management
24.Maintenance
Phase (SPT) - Aims and objectives, Principles, importance, procedure,
- Maintenance of implants
25. Pharmaco therapy - Periodontal dressings
- Antibiotics and anti-inflammatory drugs, local drug
- Delivery systems
26. Periodontal management of medically compromised patients
27. Inter disciplinary - Perio-restorative relations perio-ortho relations pulpo-periodontal involvement route of spread of infection. Simon's classification and management
28. Systemic effects of - Cardiovascular disease, low birth weight babies etc. periodontal disease in brief

CLINICALS
1. Infection control
2. Periodontal instruments
3. Chair position and principles of instrumentation
4. Maintenance of instruments (Sharpening)
5. Ultrasonic, piezoelectric and sonic scaling demonstration of procedure
6. Diagnosis of periodontal disease and determination of prognosis
7. Radiographic interpretation and lab investigations]
8. Motivation of patients – oral hygiene instructions. Student should be able to
9. Record a detailed periodontal case history, determine diagnosis, prognosis and plan treatment. Shall perform scaling, root planning, local drug delivery and SPT. Shall be given demonstration of all periodontal surgical procedures.
10. Scaling and root planning – hundred cases
11. Occlusal equilibration – demonstration
Flap surgery demonstration
Lectures – 40 hours
Clinicals – 240 hours
12. Text Books to be followed
1. Clinical periodontology by Newman, Karanza & Takei
2. Text Book of Periodontics, Medicine, Surgery, Implants by L.F. Rose,
B. L.Mealey, Cohen and Genco
3. Fundamentals of Periodontics by Wilson
4. Text Book of Periodontics by Dr.B.R.R.Varma and Dr.Nayak
Reference Books
1. Text Book of Periodontology and Implant Dentistry by Lindhe
2.Scaling and Root planning by Korn mann
3.Oral Microbiology and Immunology by Newman and Nissengard
4.Text book of Immunology by Ivan and Riott
5.Periodontial therapy by Nevins

13. University Exam (Practicals)
a. Case Sheet writing
b. Scaling
c. Orals
14. Individuals seminar topics by the students to be prepared and presented to the teachers to the Department of Periodontics. Each student should present one topic.
15. Presenting Scientific Paper in State level Conferences. Attending workshops, Seminars and Conventions Conducted by other Dental Institutions.

IV YEAR BDS SYLLABUS
405 – ORAL AND MAXILLOFACIAL SURGERY
Local Anaesthesia
1. Introduction
2. Properties of an ideal local anaesthetics drug
3. Properties of common local anaesthetic drugs in use
4. Choice of anaesthesia – local or general
5. Indicatiosn and contra indications, advantages and disadvantages of local anaesthesia
6. Components of a standard local anaesthesia solution and the part played by each component
7. How does local anaesthetics act
8. Preanaesthetic-medication
9. Technique of infiltration anaesthesia, Nerve block anaesthesia. Symptoms and signs of anaesthesia
10. Complications associated with local anaesthesia and their management

General Anaesthesia
1. Properties of general anaesthetic drugs commonly used
2. Pre-anaesthetic preparation of patient and premedication
3. Evaluation of a patient for general anaesthesia
4. Short anaesthesia in a Dental Chair Endotracheal anaesthesia, Intravenous anaesthesia
5. Symptoms and signs of general anaesthesia
6. Complications arising during the administration of general anaeshesia and their management
7. Hypotensive anaesthesia

Exodontia
1. Objectives
2. Indication for tooth extraction
3. Pre-operative assessment
4. Forceps extraction
5. Surgical extraction (Trans-Alveolar extraction)
6. Extraction technique under general anaesthesia in the Dental Chair
7. Complications of tooth extraction and their management

Oral Surgery
1. Definition and scope
2. Diagnosis in oral surgery

(a) History taking
(b) Clinical examination
(c) Special investigation
3. Importance of general condition of the patient in relation to oral surgey
4. Treatment planning
5. Sterilisation
6. Use of antibiotics in oral surgery
7. Diagnosis, pre-operative assessment and treatment of impacted teeth
8. Pre-prosthetics surgery
9. Surgical aid to orthodontics
10. Oro-facial infections, their diagnosis and treatment
11. Inflammatory diseases of jaw bone and their management
12. Diagnosis and management of cysts of oral cavity
13. Diagnosis and treatment of the fracture of the mandible
14. General outline of the fracture of the middle third of the facial skeleton
15. Diagnosis and treatment of benign neoplastic lesions of the oral cavity (odontogenic and non-odontogenic)
16. Surgical procedure in relation to endotontic therapy (Apiecectomy)
17. Surgical treatment of tumour like lesions of the oral cavity including odontomes
18. Diseases of maxillary sinus, with special reference to oro-antral fistula
19. Management of haemorrhage in oral surgery
20. Diseases of the salivary glands – Diagnosis and treatment
21. Surgical aspects of histopathological diagnosis
22. Diagnosis of malignant condition of oral cavity, a broad outline about the different methods of treatment
23. Disease of tempero-mandibular joint such as arthritis, hypoplasia, subluxation
24. Afflication of trigeminal and facial nerves
25. Implant surgery
26. Maxillofacial imaging
27. Cryosurgery
28. Lasers
29. General and Local Anaesthesia – recent development
30. Grafts (soft and hard tissue)
31. Basic principles of flaps and suturing technique
32. Electro cautery
33. Management of syncope, shock
34. Clinical manifestation and prevention of HIV, Hep A,B etc.,
35. Orthognathic surgery
36. Principles of incineration and disposal of medical disposables

LECTURES
Anaesthesia (Local and general) - 10
Exodontia - 10
Oral Surgery - 40
Clinical - 320 hours]
To do 60 extractions both upper and lower

Text Book
1. Kruger
2. Killy and Kay
3. Danial M Laskin
4. Stanly Melamed
- LA
- Medical Emergencies
5. Minor Oral Surgery
Jeffrey. How
- Minor Oral Surgery
- Exodontia

Reference Book
1. Kruger
2. Row and Williams
3. Killy and Kay Vol.I & II
4. Ward Broth
5. Contemporary.Peterson

Seminars
Seminars are given to individuals and sometimes to a batch of 6 to 8 students in various aspect of the topic The subjects taken for Seminars and from the basic Oral Surgery are related fields.

Students Activities
Students are trained in chairside management of extraction patients. They are given full training in Local Anaesthesia, Exodontia and emergencies. They are instructed to do minimum 60 cases of both maxillary and mandibular extractions.

IV YEAR BDS SYLLABUS
406 – PROSTHODONTICS AND CROWN AND BRIDGE
Complete Dentures
1. Introduction and scope
2. Applied Anatomy
3. Biomechanics of edentulous state
4. Effects of aging on the edentulous state
5. TMJ disorders in edentulous patients
6. Examination diagnosis, treatment planning and prognosis
7. Pre-prosthetic surgery
8. Principles of retention and stability and support
9. Principles and techniques of impression making
10. Preparation of casts, trays and temporary denture bases occlusal rims
11. Jaw relations and methods of registration Mandibular movements
12. Artificial teeth, their selection and arrangements and esthetics
13. Articulators and face bows
14. Occlusion and articulation in complete dentures

15. Processing and finishing of dentures
16. Corrections of occlusal discrepancies
17. Insertion and adjustments and complaints and aftercare of complete dentures
18. Nutrition care for the denture – wearing pt.
19. Sequelae of ill fitting dentures
20. Repair, rebasing and relining
21. Immediate dentures
22. Implant prosthodontia
23. Overdentures
24. Single complete dentures
25. Geriatric Dentistry

Removable Partial dentures

1. Introduction and scope
2. Classification
3. Examination, diagnosis and treatment planning
4. Mouth preparation for partial dentures
5. Components parts of removable partial dentures and their function
6. Impression procedures
7. Surveyors
8. Designs of removable partial dentures and its associated problems
9. Fabrication of cast metal frame work
10. Jaw relation record
11. Selection and arrangements of teeth
12. Acrylic partial denture and other types of partial Denture
13. Trying in of partial dentures
14. Processing, finishing, insertion and maintenance of partial dentures
15. Immediate partial dentures
16. Precision attachments

Crown and Bridge Prosthodontics

1. Introduction and Definition
2. Indication and contra-indications for FPD
3. Examination, diagnosis and treatment planning. Difference between RPD & FPD
4. Mouth preparation for FPD
5. Selection and choice of abutment teeth
6. Principles of tooth preparation
7. Procedures of preparation of abutment teeth for receiving various types of retainers
8. Gingival retractions and impression procedures
9. Temporary protection of prepared tooth
10. Construction of dies and working casts
11. Technique of friction of retainers
12. Selection and Fabrication of pontics
13. Connectors, stress breakers and assembly of fixed bridges
14. Finishing
15. Cementation

16. Maintenance crowns and bridges
17. Bridge failure Management
18. Materials in FPD & Recent advancement in CERAMICS

Maxillofacial Prosthetics
1. Splints
2. Obturators
3. Carriers
4. Extra oral and intra oral prosthetics
5. Implants in Maxillofacial prosthetics
6. Materials for Maxillofacial Prosthetics
7. Etiology & Type

Text Books
1. Contemporary fixed prosthodontics / Stephen F.Rosenstiel, Mortein F.Land, Junjei Fujimoto.Ed.3rd
2. Fundamentals of tooth preparations for cast metal and porcelain restorations/ Herbert T.Shillingbrug, Richard Jacobi, Susan E.Brackett, Ed
3. Tylmon theory and practice of fixed prosthodontics F.P.Malone, David h, Ed.8th
4. Essentials of complete denture prosthodontics / Sheldon Winkler Ed.2nd
5. Clinical removable partial Prosthodontics:Stewart
6. Prosthodontics for edentulous patients:Zarb Bolender

Reference Books
1. Fundamentals of fixed prosthodontics / Herbert T.Shillingburg (Etal). Ed 3rd
2. Syllabus of complete dentures / Charles M.Heartwell.Ed.5th
3. Planning and making crowns & brindges / Beniord G.N.Smith
4. Problem & solutions in complege denture prosthodontics / David L.Lamb
5. Removable Partial Prosthodontics – McGregor
6. Science of Dental Materials – Annusavize
7. Removable Partial Prosthodontic – Osborne & Lammie

Student Activities
1. Monthly class cycle tests
2. Internal Exams
3. Pre-Clinical and Clinical Tests
4. Viva Voce
5. Seminars
6. Group discyussions
7. Scientific paper presentations. In National and International level
8. Conferences
9. CME Programmes
10. Project works
11. Hands on works and workshops

IV YEAR BDS SYLLABUS

407 – PEDODONTICS

1. INTRODUCTION, DEFINITION, SCOPE & IMPORTANCE OF PEDODONTICS
2. GENERAL NOTES ON PRIMARY TEETH
3. EXAMINATION, DIAGNOSIS & TREATMENT PLANNING
4. MORPHOLOGY OF DENTITION & ITS APPLICATION

a. Applied morphology of primary & secondary teeth
b. Importance of first permanent molar
c. Eruption & teething disorders
d. Young permanent teeth

5. RADIOGRAPHIC TECHNIQUES
6. CHILD PSYCHOLOGY & MANAGEMENT
7. MANAGEMENT OF DISABLED OR HANDICAPPED CHILD
8. CHILD ABUSE & NEGLECT
9. FUNDAMENTALS OF DENTAL HEALTH – ORAL HYGIENE MAINTENANCE
10. GINGIVAL DISEASES
11. PERIODONTAL DISEASES
12. SPACE MAINTAINERS & REGAINERS
13. ORTHODONTIC MANAGEMENT OF MIXED DENTITION

a.Habits
b.Habits & minor irregularities
c.Serial extraction

14. DEVELOPMENT OF NORMAL OCCLUSION
15. CLEFTLIP & CLIFT PALATE
16. DENTAL CARIES
17. PREVENTION OF DENTAL CARIES

a. DIET
b. FLUORIDES

18. ISOLATION TECHNIQUES
19. RESTORATIVE DENTISTRY IN CHILDREN
20. PIT & FISSURE SEALANTS
21. MANAGEMENT OF FRACTURES IN ANTERIOR TEEETH
22. ENDODONTIC TREATMENTS
23. STAINLSS STEEL CROWNS
24. PROSTHODONTIC MANAGEMENT
25. PRINCIPLES OF EXTRACTION
26. LOCAL ANAESTHESIA
27. FLUORIDES

TOTAL LECTURE CLASSES - 50 Hrs
TOTAL PRACTICAL & CLINICALS - 240 Hrs

Clinical Case Quota

1. Extraction - 10
2. Restoration - 20
3. Prophylaxis - 15
4. Diet Diary - 5
5. Fluoride Application - 1

6. Case Sheets - 5
7. Special cases - (pulpal therapies, Management of
Nursing bottle caries, Rampant caries, Appliances / RPD) 1 in No
8. Preclinical work - LIP bumber
Oral Screen

List of Library Books

01. MC Donald, Finn, Shoba Tandon, Braham & Morris, Satish Chandra, Mathewson, Stewart
02. Amrit Tewari

Text Books

Mcdonald, Finn, Shoba Tandon

Reference Book

Braham of Morris, Satish Chandra, Mathewson, Stewart

Student Activities

Seminars, Viva and clinical case discussion