BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub:- ANATOMY THEORY (Paper-1) F.M.-70 (Hrs.-3hrs)

1) **Introduction of Bones of the Human Body of :**
   - Upper Limb : clavicle, scapula, humerus, radius, ulna, carpal, metacarpal & phalanges
   - Lower Limb : hipbone, femur, tibia, fibula, tarsus, metatarsus & phalanges
   - Skull : name the bone of skull and sutures between them
   - Thorax : ribs and their articulations
   - Vertebral Column : cervical, thoracic, lumbar, sacral and coccygeal vertebrae
2) **Surface Markings of the Whole Body :**
   - Nine regions of the abdomen
   - Hip
   - Skull
3) **Introduction of different Vital Organs :-**

   A) **Respiratory Organs :**
   - Nasopharynx
   - Oropharynx
   - Larynx
   - Trachea
   - Bronchi
   - Lungs (and their lobular segments)
   - Thoracic cavity
   - Pleura and Pleural cavity

   B) **Circulatory Organs :**
   - Anatomical position of the heart
   - Pericardium of the heart
   - Chambers of the heart
   - Great vessels of the heart
   - Valves of the heart

   C) **Digestive Organs :**
   - Tongue
   - Teeth
   - Oral cavity
   - Pharynx
   - Oesophagus
   - Stomach
   - Small intestine
   - Large intestine

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub:- ANATOMY **Practical (Only INTERNAL)**

1. Labelled Diagram of different organs and bones
2. Surface Markings of the Body
3. Demonstration of Histological Slides-

a. Cartilage b. Bone c. Smooth Muscles d. Skeletal Muscles

4. Radiography of Normal Bones, Joints and Chest.

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D) **Reproductive Organs:**

- Introduction of male Genital Organs (Gonads) :Testes, Epididymis
- Introduction of female Genital Organs:- Ovary, Fallopian Tube, Uterus, Vagina

E) **Liver, Gall Bladder and Spleen :**

- Introduction
- Anatomical position

F) **Excretory Organs:**

- Cortex and Medulla of Kidney
- Ureter
- Urinary Bladder
- Urethra (male and female)

G) **Muscles :**

- Introduction, Origin and Insertion, Function

H) **Embryology:** Only Introduction

I) **Endocrine Glands:** Morphology and Anatomical relation

- Pituitary Gland
- Thyroid Gland
- Para Thyroid Gland
- Supra-renal glands

J) **Nervous System:**

- Neuron Theory
- Classification of Nervous System
- Name of Basal membrane
- Blood supply of brain
- Cranial Nerves
- Sympathetic & Parasympathetic system

K) **Sense Organs:**

- Skin - Histology, Epidermis and Dermis
- Eye - Morphology, Parts of eye, Histology, Visual pathway and Optic nerve
  - Lachrymal apparatus, Extra ocular muscles & it's Nerve supply
- Ear
- Nose
- Tongue

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Subject :- PHYSIOLOGY THEORY (Paper-2) F.M.-70 (Hrs.-3hrs)

1. Cell: **Biology** :- Cell membrance structure, intracellular organelles and their functions and cytoskeleton
   - Definition
   - Structure and functions the cytoplasmic Organelles
   - Reproduction : Meiosis, Mitosis
2. **The important physio-chemical laws applied to physiology**
   - Diffusion
   - Osmosis
   - Dialysis
3. **Fundamentals of different Organ System**
   - Cardiovascular System
   - Respiratory System
   - Digestive System
   - Excretory system
   - Reproductive System
   - Endocrine System
   - Lymphatic System
4. **Blood**
   - Definition
   - Composition
   - Function
5. **Formation of different type of blood Cells**
   - Erythrocytes
   - Leucocytes
   - Thrombocytes
6. **Mechanism of Blood Clotting**
7. **Cerebrospinal Fluid**
   - Formation & Circulation
   - Composition
   - Circulation and Function
8. **Special Senses**
   - Hearing
   - Taste
   - Smell
   - Sight
9. **Kidney**, General introduction, structure and function
10. **Endocrine** : Secretion, regulation and functions of pituitary, thyroid, adrenal, pancreas, parathyroid, testis & ovaries
11. **Respiratory System** : introduction , general Organization, Mechanics of respirations, pulmonary volumes and capacities, Transport of respiratory gases, Nervous and chemical, control of respiration, pulmonary function tests.
12. **Cardiovascular System** : Structure and properties of cardiac muscle, Cardiac cycle Regulation of heart rate, Cardiac output , Blood pressure, its regulation, Regional circulation, coronary , cerebral circulation , Cardio respiratory changes during exercise , Normal ECG.
13. **Physiology of Exercise** : Effects of acute and chronic exercise on Oxygen transport, B.M.R. /R.Q / Body fluids and electrolytes.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Subject :- PHYSIOLOGY PRACTICAL (Only INTERNAL)

Labelled diagrams of different Vital Organs & System

Labelled diagrams of Corpuscles

Blood grouping Rh Typing

Determination of Vital Capacity.

Auscultations of Heart Sound

Blood pressure Recording

Pulse Rate, Heart Rate

BMI

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub :- Pathology THEORY (Paper-3) F.M.-70 (Hrs.-3hrs)

A) **General Pathology**

The Cell in health and disease

a. Introduction of pathology
b. Cellular structure and metabolism
c. Inflammation - Acute and Chronic
d. Derangement of Body Fluids and Electrolytes
   - Types of shocks
   - Ischaemia
   - Infection
e. Neoplasia - Etiology and Pathogenesis

B). **Hematology (Normal and Abnormal)**

a. Formation of Blood
b. Erythropoiesis
c. Leucopoiesis
d. Thrombopoiesis
e. Collection of Blood
f. Anticoagulants- mechanism of coagulation
g. Red cell count - Haemocytometer, Methods and Calculation
h. WBC Count - Methods, RBC - Indices, Platelets
i. Differential Leucocytes Count (DLC) -
   Morphology of White Cells, Normal Values
   Romanowsky Stains : Staining procedures
   Counting Methods, Principle of staining
j. Hb estimation - Method
   Colorimetric Method
   Clinical importance
k. Normal Haemostasis - BT, CT Prothrombin Time
l. Blood Bank - Introduction Blood Grouping and Rh Typing, Cross matching.
m. ESR

C). **Clinical Pathology**

Body Fluids :

a. Urine :
   - Method of Collection
   - Normal Constituents
   - Physical Examination
b. Stool Examination :
   - Method of Collection
   - Normal Constituents and appearance
   - Abnormal Constituents (Ova, Cyst)
c. CSF Examination :
   - Physical Examination
   - Chemical Examination
   - Microscopy
   - Cell Count
   - Staining

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d. Semen analysis
   - Collection
   - Examination
   - Special Tests

D). **Histopathology**

- Introduction
- Techniques of – Receiving, grossing, mounting, section cutting.
- Various fixative modes of action preparation and indication.
- Decalcification of tissues.
- Tissues processing for routine paraffin section.
- Staining of Tissues – H & E staining.
- Maintenance of records and filling of the slides.
- Bio medical waste management.
- Preparation of Museum specimens.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub :- Pathology **Practical (ONLY INTERNAL)**

- Collection of Sample
- Hb estimation
- TLC and DLC
- RBC, WBC, Platelet Count
- Peripheral blood film - staining and study of Malarial Parasite Thick & Thin
  a). Urine, Stool, Semen and CSF – Collection, Handling, Examinations
  b). Absolute Eosinophil Count, PCV, RBC indices, ESR Estimation, Platelet Count
- Blood grouping Rh Factor Tube Method Slide Method
- 1. Bleeding Time, Clotting Time, PT, APTT, TT, Platelet Count & Platelet Function Test
- Histopathology Section cutting and H & E Staining

NO UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub :- Microbiology THEORY (Paper---(4-a)) F.M.-35 (Hrs.-1.5hrs)

COURSE CONTENTS :

1. Introduction and brief history of Microbiology
   - Historical Aspect
   - Micro- Organism in Health and Disease
2. Requirement and uses of common Laboratory Equipments
   - Incubator, Hot Air Oven, Water Bath
   - Anaerobic Jar, Centrifuge, Autoclave
   - Microscope
   - Glassware – Description of Glassware, its use, handling and care
3. Sterilization :
   - Methods of Sterilization and it's Principle
   - Culture Media
   - Autoclave – its structure, functioning, control and indicator
4. Antiseptics & Disinfectants
   - Definition
   - Types
   - Mode of Action
   - Uses
5. Collection, Transportation and processing of clinical samples for Microbiology investigations

COURSE CONTENTS

General Bacteriology

- Definition
- Morphology, Physiology and Classification of Bacteria
- Structure of Bacterial cell, Capsule, Flagella and Spores
- Growth of Bacteria
- Nutrition of Bacteria
- Staining Techniques used for Bacteriology

Virology :

- Definition
- General Properties of Viruses
- Pathogenesis of Viral Infection
- Diseases caused by different Virus and mode of infection

Parasitology :

- Definition
- General description of Parasites and Host
- Classification of Parasite
- Mode of transmission of parasitic diseases

Fungus :

- Definition
- Structure
- Classification

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Sub :- Microbiology **Practical** (ONLY INTERNAL)

Demonstration of washing of instruments
Staining - Type of Staining, Principle, Procedure and Interpretation
Culture - Urine, Blood, Body, Fluid, Water Stool, Swab
Types of media
Colony Characteristics
VDRL, ASO, CRP, WIDAL
Stool Exam
Microscopic Stool Exam

NO UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY **1st Year**

Subject :- BIOCHEMISTRY THEORY (Paper---(4-b)) F.M.-35 (Hrs.-1.5hrs)

(1) PHYSICAL BIOCHEMISTRY

1. Introduction of Biochemistry
2. Elementary knowledge of inorganic chemistry :- Atomic weight, molecular weight, equivalent weight , acid, bases.
3. Definition and preparation of solutions :- percent solution , Molar solution , Normal solution and Buffer Solution etc.
4. Definition and preparation of Reagent.
5. Unit of measurement
6. PH indicators: pH paper, universal and other indicators, pH measurement : different methods.
7. Ionization of water buffer PH value of solution using.

(2) GENERAL BIOCHEMISTRY

1. Aim and scope of Biochemistry
2. Collection and Recording of Biochemical Specimen, separation of serum/plasma preservation and disposal of Biological material.
3. Chemical examination of urine :Qualitative, Sugar, Protein, Bile Salt, Bile Pigment, Ketones Bodies
4. Chemical examination of Stool :Occult Blood.
5. Chemical examination of other Body fluids : CSF , Pleural Fluid , Ascitic Fluid etc.
6. Laboratory management and Maintenance of Records.

INTRODUCTORY KNOWLEDGE OF :-

Carbohydrates:-

- Importance
- Classification
- Properties
- Estimation of Glucose
- Clinical Significance

Protein :-

- Introduction and Physiological importance
- Amino acids
- Essential amino acids
- Classification
- Denaturation of Proteins
- Estimation of Total protein, albumin, Globilin, A/G Ratio

Lipids :-

- Definition and Introduction of Lipids
- Functions of Lipids
- Classification
- Properties of Lipids
- Clinical significance
- Steroids
- Estimation :Total lipids, HDL, LDL, VLDL, Total cholesterol, Triglyceride

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Electrolytes :

- Function
- Properties
- Estimation of Essential electrolytes: Sodium , Potassium, calcium, chloride and phosphate etc.
- Clinical Importance

Liver Function Test (LFT) :-

- Introduction
- Functions of liver
- Bile pigment
- Type of Jaundice
- Clinical significance

Kidney function tests (KFT):-

- Structure and function of Kidney
- Formation of urine
- Urea and Uric acid estimation

(3) ANALYTICAL BIO-CHEMISTRY

Estimation of specific gravity of urine,

Urinary proteins

Blood sugar

Blood urea

Serum Creatinine

Blood Cholesterol

Serum Bilirubin, SGPT,SGOT,

Alkaline Phosphatase

Australia Antigen

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

Subject :- BIOCHEMISTRY PRACTICAL (ONLY INTERNAL)

Practical

Introduction and usage of Glassware and Instruments.

Glassware :

- Composition of Glass
- General glass wares

Instruments :

- Balance
- Hot plate and Magnetic stirrer
- Centrifuges
- Incubators
- Constant temperature bath
- Colorimeter : Principle Function
- Photometer
- Flame Photometry
- Urine Examination Physical, Microscopic, Biochemical
- Stool Examination
- Body Fluids : Physical and chemical examination CSF Pleural Fluid , Ascitic fluid.
- Methods of estimation of glucose : Benedicts Reaction, Glucose oxidase
- Methods of estimation of urea.
- Methods of estimation of creatinine.
- Methods of estimation of Cholesterol.
- Methods of estimation of Bilirubin.
- Methods of estimation of SGOT, SGPT

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

SUBSIDIARY SUBJECT ---------- COMMUNICATIVE SKILLS (ENGLISH)

THEORY F.M.-35 (Hrs.-1.5hrs)

COURSE OUTLINE

COURSE DESCTIPTION : This course is designed to help the student acquire a good command and comprehension of the English language through individual papers and conferences.

BEHAVIOURAL OBJECTIVES :

The student at the end of training is able to

1. Read and comprehend English language.
2. Speak and write grammatically correct English.
3. Appreciates the value of English literature in personal and professional life.

UNIT - I : INTRODUCTION :

Study Techniques

Organization of effective note taking and logical processes of analysis and synthesis use of the dictionary

Enlargement of vocabulary

Effective diction

UNIT - II : APPLIED GRAMMER :

Correct usage

The structure of sentences

The structure of paragraphs

Enlargement of Vocabulary

UNIT - III : WRITTEN COMPOSITION :

Pracee writing and summarizing

Writing of bibliography

Enlargement of Vocabulary

UNIT - IV : READING AND COMPREHENSION :

Review of selected materials and express on self in one's words.

Enlargement of Vocabulary

UNIT - V : THE STUDY OF THE VARIOUS FORMS OF COMPOSITION :

Paragraph, Essay, Letter, Summary Practice, in writing

UNIT - VI : VERBAL COMMUNICATION :

Discussions and summarization, Debater, Oral reports Use in teaching

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BACHELOR OF OPERATION THEATRE TECHNOLOGY 1st Year

SUBSIDIARY SUBJECT - COMPUTER SKILLS

THEORY F.M.-20 (Hrs.-1.5hrs)

&

PRACTICAL F.M.-15

Basic Computer Course (BCC)

1. **Knowing computer:** What is Computer, Basic Applications of Computer; Components of
   Computer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse, Other
   input/output Devices, Computer Memory, Concepts of Hardware and Software; Concept of
   Computing, Data and Information; Applications of IECT; Connecting keyboard, mouse,
   monitor and printer to CPU and checking power supply.
2. **Operating Computer using GUI Based Operating System:** What is an Operating System; Basics of Popular Operating Systems; The User Interface, Using Mouse; Using right Button of the Mouse and Moving Icons on the screen, Use of Common Icons, Status Bar, Using Menu and Menu-selection, Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows; Using help; Creating Short cuts, Basics of O.S Setup; Common utilities.
3. **Understanding Word Processing:** Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.
4. **Using Spread Sheet: Basics of Spreadsheet;** Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- APPLIED PATHOLOGY

THEORY (Paper---(1-a)) F.M.-35 (Hrs.-1.5hrs)

I. CARDIOVASCULAR SYSTEM

- Atherosclerosis- Definition, risk factors, briefly Pathogenesis & morphology, clinical significance and prevention.
- Hypertension- Definition, types and briefly Pathogenesis and effects of Hypertension.
- Aneurysms – Definition, classification, Pathology and complications.
- Pathophysiology of Heart failure.
- Cardiac hypertrophy – causes, Pathophysiology & Progression to Heart Failure.
- Ischaemic heart diseases- Definition, Types. Briefly Pathophysiology, Pathology & Complications of various types of IHD.
- Valvular Heart diseases- causes, Pathology & complication. Complications of artificial valves.
- Cardiomyopathy – Definition, Types, causes and significance.
- Pericardial effusion- causes, effects and diagnosis.
- Congenital heart diseases – Basic defect and effects of important types of congenital heart diseases.

II. HAEMATOLOGY

- Anaemia – Definition, morphological types and diagnosis of anaemia. Brief concept about Haemolytic anaemia and polycythaemia.
- Leukocyte disorders- Briefly leukaemia, leukocytosis, agranulocytosis etc.,
- Bleeding disorders- Definition, classification, causes & effects of important types of bleeding disorders. Briefly various laboratory tests used to diagnose bleeding disorders.

III. RESPIRATORY SYSTEM

- Chronic obstructive airway diseases – Definition and types. Briefly causes, Pathology and complications of each type of COPD.
- Briefly concept about obstructive versus restrictive pulmonary disease.
- Pneumoconiosis- Definition, types, Pathology and effects in brief.
- Pulmonary congestion and edema.
- Pleural effusion – causes, effects and diagnosis.

IV. RENAL SYSTEM

- Clinical manifestations of renal diseases. Briefly causes, mechanism, effects and laboratory diagnosis of ARF & CRF. Briefly Glomerulonephritis and Pyelonephritis.
- End stage renal disease – Definition, causes, effects and role of dialysis and renal transplantation in its management.
- Brief concept about obstructive uropathy.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- APPLIED PATHOLOGY Paper-I(a) **PACTICAL F.M.-25**

1. Description & diagnosis of the following gross specimens.
   (a) Atherosclerosis. (b) Aortic aneurysm (c) Myocardial infraction (d) Emphysema
   (e) Chronic glomerulonephritis (f) Chronic pyelonephritis.
2. Interpretation & diagnosis of the following charts.
   a. hematology Chart - AML, CML, Hemophilia, neutrophilia, eosinophilia.
   b. Urine Chart - ARF, CRF, Acute glomerulonephritis.
3. Estimation of Hemoglobin. 4. Estimation of Bleeding & Clotting time.
5. Frozen Section Technique 6. Cytological Technique 7. Calculate Analysis

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- APPLIED MICROBIOLOGY

THEORY (Paper---(1-B)) F.M.-35 (Hrs.-1.5hrs)

1. Health care associated infections and Antimicrobial resistance: Infections that patientsacquire during the course of receiving treatment for other conditions within a healthcare setting like Methicillin Resistant Staphylococcus aureus infections, Infections causedby Clostriduium difficle, Vancomycin resistant enterococci etc. Catheter related bloodstream infections, Ventilator associated pneumonia, Catheter Related urinary tract infections, Surveillance of emerging resistance and changing flora. The impact and costattributed to Hospital Associated infection.
2. Disease communicable to Healthcare workers in hospital set up and its preventive measure: Occupationally acquired infections in healthcare professionals by respiratory route (tuberculosis, varicella-zoster, respiratory synctial virus etc), blood borne transmission (HIV, Hepatitis B, Hepatitis C, Cytomegalovirus, Ebola virus etc), oro faecal route (Salmonella, Hepatitis A etc), direct contact (Herpes Simplex Virus etc). Preventive measures to combat the spread of these infections by monitoring and control.
3. Microbiological surveillance and sampling: Required to determine the frequency of potential bacterial pathogens including Streptococcus pneumoniae, Haemophilus influenzae, and Moraxella catarrhalis and also to assess the antimicrobial resistance. Sampling: rinse technique, direct surface agar plating technique.
4. Importance of sterilization:
   a. Disinfection of instruments used in patient care: Classification, different methods, advantages and disadvantages of the various methods.
   b. Disinfection of the patient care unit
   c. Infection control measures for ICU's
5. Sterilization:
   a. Rooms: Gaseous sterilization, one atmosphere uniform glow discharge plasma (OAUGDP).
   b. Equipments: classification of the instruments and appropriate methods of sterilization.
   c. Central supply department: the four areas and the floor plan for instrument cleaning, high-level disinfecting and sterilizing areas.
6. Preparation of materials for autoclaving: Packing of different types of materials, loading, holding time and unloading.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE **2nd Year**

SUBJECT- APPLIED MICROBIOLOGY Paper-1(b) **PRACTICALS F.M.-25**

1. Principles of autoclaving & quality control of Sterilization.
2. Collection of specimen from outpatient units, inpatient units, minor operation theater and major operation theater for sterility testing.
3. The various methods employed for sterility testing.
4. Interpretation of results of sterility testing.
5. Disinfection of wards, OT and Laboratory.
6. Revision of First Year Microbiology Practicals
7. Test for Hepatitis Marker
8. Test for H.I.V.

UNIVERSITY PACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- INTRODUCTION TO OPERATION THEATRE TECHNOLOGY

THEORY (Paper-2)) F.M.-70 (Hrs.-3 hrs)

1. C.S.S.D, and logistics
   Cleaning and dusting - methods of cleaning, composition of dust.General care and testing of instruments-forcaps haemostatic, needle, holders, Knife, blade, scissor, use/ abuse, care during surgery.
   Disinfectants and of there instruments and Sterilization- Definition,Methods cleaning agents detergents, Mechanicalwashing,ultrasonic cleaner,lubrication inspection and pitfalls
   Various methods of chemical treatment- formalin, glutraidehavde etc,thermal. Hot Air oven- dry heat, Autoclaving, steam Sterilization water etc,.
   UV treatment, Gamma Ray Sterilization
   Instrument's Etching, care of micro surgical and titanium instruments
   Sterilization of equipments - Arthroscope, Gastroscope, imago Lamp,
   Apparatus, suction Apparatus Anaesthetic equipments including
   endotracheal tubes -
   OT Sterilization including laminar Air flow, Fumigation, Carbolization
   Trouble shooting - colored spots and corrosion, staining, dust deposit,
   Lighting in O.T. including Emergency Lighting
   recent amendment in EPA with reference to waste disposal.
2. Anaesthesia Service,
   History, pre-operative, Intra operative & post operative care
3. General Anaesthesia Techniques
4. Local Anaesthesia Techniques
5. Blood Transfusion
6. Monitoring in the Operation Theatre
7. Positioning of Patient
8. Instrument planning for various surgical procedure and Auxillary instrumentation.
9. O.T. Techniques
   O.T. environment, control of infection scrubbing, theatre cloths including lead apron and goggles.
10. Duties of Nurses - Ethics, behaviour during surgery, etc,.
11. Helping Surgeons and others to wash up and drape for operation, holding out cap, mask, gown and gloves for surgeons and others and handling of sterilized articles
12. Special precaution in handling patients with Sepsis, blood borne infections, H.B.V, H.C.V, H.I.V, etc with terminal disinfection, PEP
13. Surgical Safety Check list, patient receipt, dispatch documentation and record Keeping
14. Preparations of Dressings, swabs and packs, packing of drums and sterilization
15. Procedure for sending specimens for biopsy and fluid for culture
16. Identification of instruments for common surgical operations and examination such as -
    (a) Incision of abscess, whitlow, carbuncles etc, excision of sebaceous cysts, warts, ulcers, ingrowing nails and foreign bodies etc.
    (b) Rectal operation like haemorrhoidectomy, excision of fistula etc,
    (c) Laparatomy instruments---appendicectomy, intestinal obstruction etc,
    (d) Arrest of haemorrhage and operative procedure connected with wounds etc.
    (e) Operations on genito-urinary system like supra pubic cystostomy hydrocele haematocele varicocele phimosis circumcision and vasectomy etc

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- INTRODUCTION TO OPERATION THEATRE TECHNOLOGY

Paper—2 **PRACTICAL** **F.M.-50**

1. Demonstration and identification of surgical instruments
2. Demonstration and identification of anaesthesia apparatus and others
3. Demonstration of Endoscopic instruments etc
4. Demonstration of O.T. disinfectants
5. Demonstration of O.T. lights
6. Demonstration of O.T. rooms layout
7. Live surgical operation demonstration in O.T.

UNIVERSITY PACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- GENERAL PHARMACOLOGY

THEORY (Paper---(3-a)) F.M.-35 (Hrs.-1.5hrs)

General concepts about Pharmacodynamic and Pharmacokinetic Principles involved in drug activity.

I. Autonomic nervous system.

- Anatomy & functional organization.
- List of drugs acting an ANS including dose, route of administration, indications, contra indications and adverse effects.

II. Cardiovascular drugs- Enumerate the mode of action, side effects And therapeutic uses of the following drugs.

a. Antihypertensives
- Beta Adrenergic antagonists
- Alpha Adrenergic antagonists
- Peripheral Vasodilators
- Calcium channel blockers

b. Antiarrhythmic drugs

c. Cardiac glycosides

d. Sympathetic and nonsympathetic inotropic agents.

e. Coronary vasodilators.

f. Antianginal and anti failure agents

g. Lipid lowering & anti atherosclerotic drugs.

h. Drugs used in Haemostais – anticoagulants Thrombolytics and antithrombolytics.

i. Cardioplegic drugs- History, Principles and types of cardioplagia.

j. Primary solutions – History, principles & types.

k. Drugs used in the treatment of shock.

III. Anaesthetic agents.

- Definition of general and local anaesthetics.
- Classification of general anaesthetics.
- Pharmacokinetics and Pharmacodynamics of inhaled anaesthetic agents.
- Intravenous general anaesthetic agents.
- Local anaesthetics – classification mechanism of action, duration of action and methods to prolong the duration of action. Preparation, dose and routes of administration.

IV Analgesics

- Definition and classification
- Routes of administration, dose, frequency of administration, Side effects and management of non opioid and opiod analgesics

V. Antihistamines and antiemetic-

Classification, Mechanism of action, adverse effects, Preparations, dose and routes and administration.

VI. CNS stimulants and depressants

- Alcohol
- Sedatives, hypnotics and narcotics
- CNS stimulants
- Neuromuscular blocking agents and muscle relaxants.

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VII. Pharmacological protection of organs during CPB

VIII. Inhalational gases and emergency drugs.

IX. Pharmacotherapy of respiratory disorders

- Introduction - Modulators of bronchial smooth muscle tone and pulmonary vascular smooth muscle tone
- Pharmacotherapy of bronchial asthma
- Pharmacotherapy of cough
- Mucokinetic and mucolytic agents
- Use of bland aerosols in respiratory care.

X. Corticosteroids - Classification, mechanism of action, adverse effects and complications. Preparation, dose and routes of administration.

XI. Diuretics

- Renal physiology
- Side of action of diuretics
- Adverse effects
- Preparations, dose and routes of administrion.

XII. Chemotherapy of infections

- Definition
- Classification and mechanism of action of antimicrobial agents
- Combination of antimicrobial agents
- Chemoperophylaxis.
- Classification, spectrum of activity, dose, routes of administration and adverse effects of penicillin, cephalosporins, aminoglycosides, tetracyclines, chloramphenicol, antitubercular drugs.

XIII. Miscellaneous.

- IV fluids- various preparations and their usage.
- Electrolyte supplements
- Immunosuppressive agents
- New drugs included in perfusion technology.
- Drugs used in metabolic and electrolyte imbalance.

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- MEDICINE RELEVANT TO OPERATION THEATRE TECHNOLOGY

THEORY (Paper---(3-B)) F.M.-35 (Hrs.-1.5hrs)

- **Drugs used for the Treatment of**
- Diabetes Mellitus
- Hypertension
- Ischaemic heart disease
- Obesity
- Elderly Patient
- Pregnancy
- Shock
- COPD
- Chronic renal failure
- Chronic liver disease/failure
- Anaemia
- Pediatric patient Infant/Neonate
- Epilepsy
- CVA

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBJECT- APPLIED PHARMACOLOGY & MEDICINES RELATED TO O.T. TECHNOLOGY

Paper-III (a) and (b)

PRACTICALS (Combined Internal Practicals for Paper III 'a' & 'b')

1. Preparation and prescription of drugs of relevance.
2. Experimental pharmacology directed to show the effects of commonly used drugs of relevance and interpretation of few charts.
3. Demonstration and Identification of different drugs used in O.T.

NO UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

SUBSIDIARY SUBJECT - COMPUTER SKILLS

THEORY PAPER-4 F.M.-20 (Hrs.-1.5hrs)

&

PRACTICAL F.M.-15

Basic Computer Course (BCC) SECOND YEAR

1. **Communication using the Internet:** Basic of Computer networks; LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting.
2. **WWW and Web Browsers:** World Wide Web; Web Browsing softwares, Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website.
3. **Communications and collaboration:** Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes.
4. **Making Small Presentation:** Basics of presentation software; Creating Presentation/handouts.

INTERNAL and UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 2nd Year

Subsidiary Subject:- Public Health

THEORY PAPER-5 F.M.-20 (Hrs.-1.5hrs)

&

PRACTICAL F.M.-15

1) Concepts in Health & Disease
2) Basics in Epidemiology
3) Nutrition and Health
4) Environment and Health
5) Communication in Health
6) Demography and Family Planning with National Population Policy 2000
7) Essential Medicine and Rational use of Drug (RUD)
8) Health care Delivery System with National Health Policy 2000
9) Health Planning and Management
10) Hospital waste Management
11) Disaster management
12) National Rural Health Mission
13) National Health Programmes in India

INTERNAL and UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBJECT- **MEDICINE**

THEORY (Paper-1) F.M.-70 (Hrs.-3hrs)

DERMATOLOGY - Acne, Scabies, Boil, Carbuncle

CARDIOVASCULAR SYSTEM

1. Introduction of Hypertension

RESPIRATORY SYSTEM

1. PULMONARY TUBERCULOSIS
2. Introduction OF BRONCHIAL ASTHMA
3. Introduction OF CHRONIC BRONCHITIS
4. Introduction OF PNEUMOCOCCAL PNEUMONIA

EXCRETORY SYSTEM

1. Introduction OF RENAL FAILURE

NERVOUS SYSTEM

1. Introduction of MENINGITIS
2. Introduction of ENCEPHELITIS

HAEMATOLOGY

1. Introduction and Clinical features OF IRON DEFICIENCY ANAEMIA, MEGALOBLASTIC ANAEMIA

GASTRO INTESTINAL SYSTEM

1. MANAGEMENT OF DIARRHOEA and VOMITING

ENDOCRINOLOGY

1. Introduction and Clinical features OF DIABETES MELLITUS
2. Introduction and Clinical features OF HYPOTHYROIDISM

NUTRITIONAL DEFICIENCY DISEASES

Clinical features of the following deficiency diseases – protein, energy, Vitamin A, Vitamin B Complex, Vit. C and Vit. D

COMMON DISEASES

- Typhoid
- Malaria
- Kala-azar
- Dengue fever

Note:- Short term posting in Medicine Department for practical knowledge.

NO UNIVERSITY PRACTICA EXAM

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBJECT - OPERATION THEATRE TECHNOLOGY- CLINICAL THEORY (Paper-2) F.M.-70 (Hrs.-3hrs)

Layout of Operation theatres
OT Pollution and Environmental control
Peripheral Support areas, O.T. waste management
Operating room-maintenance of Preoperative, operating and Recovery room
Special procedure rooms, Septic theatre
Potential sources of injury to the cadaver & patient
Laying Tables for surgeon and various surgical trolleys
O.T. store--- indenting, storekeeping, accounting and audit
Principles of asepsis & sterile technologies
surgical scrub, gowning & gloving
Decontamination & disinfections
Sterilization Assembly & packing
Thermal sterilization, Chemical sterilization, Radiation sterilization, Surgical instrumentation
Fabrication, Classification Lay out of ICU
Powered surgical instruments
Handling instruments
Specialized surgical equipment---laparoscope, gastrocope, sigmoidoscope, hysteroscope, colposcope . Laser. Electro cautery, Ultrasonography, Microsurgery, Generalsurgery,
Various operating positions- Lithotomy Trendelenberg and kidney position, Consent and Risk bond for anaesthesia and surgery, Instuments for Robotic surgery, positioning, prepping and draping the patient for-General surgery, breast procedures Abdominal surgery
Liver Procedures , Splenic procedures ,Pancreatic Procedures
Ethical and Legal issues in operation theatre and anaesthesia
Moral of employee in OT, Human relations, Public relation
Elective, Emergency and Ambulatory surgery
Admission and transfer procedures, maintenance of Operation records
Revision of human body anatomy---

(a) Cavities of body and content
(b) Anatomy of head, neck, airways and lungs
(c) Anatomy of oral cavity, salivary glands, tongue
(d) Anatomy of upper and lower extremities
(e) Anatomy of G.I.T. renal
(f) Anatomy of female and male genital organs
(g) Anatomy of heart, circulation of blood
(h) Gross Anatomy of brain, meninges, cranial contents

General Surgery-

Basic Surgical incisions, surgical biopsies, herniorrharaphy (Inguinal, epigastric, femoral, paraumblical, incisional), abdominal laparotomy
Breast tumours and abscess, wounds, ulcers, Tetanus and gas gangrene
Manageent of HIV, HbsAg and HCV cases for operations

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBJECT - ORERATION THEATRE TECHNOLOGY- CLINICAL

PAPER-II Practical F.M.- 50

1. Demonstration of O.T. instruments
2. Clinical O.T. posting in different departments

UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBJECT- OPERATION THEATRE TECHNOLOGY---APPLIED

THEORY (Paper-3) F.M.-70 (Hrs.-3hrs)

Respiratory Physiology and PFT
Preoperative preparation of the patient
Diagnostic procedures
Pathological examination
Radiological examination
Endoscopy
Gas cylinders+ Medical Gas pipeline system
Preanaesthetic checkout drill including consent
Anaesthesia circuits
Airway equipments
Vascular equipments
Monitors
Boyl's apparatus
Anaesthesia techniques
Historical background
Types of Anaesthesia
Choice of Anaesthesia
General Anaesthesia
Indication of general anaesthesia
Endotrachel intubation
Maintenance
Monitoring
Emergency
Balanced Anaesthesia
Care of Anaesthetized patient
Post-anaesthesia care
Oxygen therapy
Care of transport of patient after anaesthesia
Ues and maintenance Defibrillator, cardiac pacemaker, heart-lung machine, cautery
Anaesthesia in camps field areas, remote areas
Anaesthesia in radiology and endoscopy
Management of unconscious patient
Management of head injury patient
Respiratory failure and care
Resuscitation of new born
Tracheostomy and care
Local & regional anaesthesia
Spinal and epidural anaesthesia
Intravenous anaesthesia agents
In halation anaesthetic agents
Complication of general anaesthesia
Complication of local/regional anaesthesia
Blood transfusion, Blood loss monitoring, Hazards of B.T
Lay out of ICU

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBJECT- OPERATION THEATRE TECHNOLOGY---APPLIED

PRACTICAL Paper-III **F.M.-50**

PRACTICAL and CLINICAL DUTIES-------

1. Demonstration and identification of anaesthetic drugs and equipments.
2. Clinical O.T. Posting
3. I.C.U, Posting

UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBSIDIARY SUBJECT - Central Sterile Supply Dept.(CSSD)

THEORY (Paper-4-(a)) F.M.-35 (Hrs.-1.5 hrs)

1) Role of CSSD in health care, Planning, Layout.
2) Infection control and hygiene.
3) Packing material- textiles and surgical linen management.
4) Packaging shelf life and assembly of sets.
5) Dressing matrial—Standard and recommendations.
6) Surgical instruments maintenance.
7) Preparation and supplies for terminal sterilization.
8) Water quality and its importance in CSSD.
9) Different methods of sterilization.
10) Endoscopic sterilization.
11) Trouble shooting in sterilization.
12) Quality assurance in CSSD.
13) Safety in CSSD.
14) Supply of sterile instruments.
15) Receiving of used materials.
16) Recorde maintannance in CSSD.
17) Laundry function in CSSD.
18) Intradepartmental communications.

Note:- Practical training in hospitals.

NO UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 3rd Year

SUBSIDIARY SUBJECT - Hospital Waste Management -

THEORY (Paper-4-(b)) F.M.-35 (Hrs.-1.5 hrs)

1. Introduction to Biomedical wastes
2. Classification and categories of hospital wastes
3. Routs of transmission of disease by biomedical waste
4. Safety measures
5. The laws regarding biomedical waste treatment
6. Collection and segregation of Biomedical wastes
7. Transportation and storage of Biomedical wastes
8. Disposable techniques
9. Awareness and education
10. Persons at risk, rag pickers

Note:- Practical training in hospitals.

NO UNIVERSITY PRACTICAL EXAMINATION

Seminar Topics in O.T. Technology

3rd Year

1. O.T. Sterilization
2. Importance of O.T. Technology in outdoor and indoor surgery
3. Recent advancement in Autoclaving
4. Care and maintenance of anaesthesia instruments lighting and life saving equipments

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4TH Year

SUBJECT- OPERATION THEATRE TECHNOLOGY---ADVANCE ANAESTHESIOLOGY

THEORY (Paper-1) F.M.-70 (Hrs.-3hrs)

Uses and maintenance Defibrillator, cardiac pacemaker, heart-lung machine, cautery
Anaesthesia in camps field areas, remote areas
Anaesthesia in radiology and endoscopy
Management of unconscious patient
Management of head injury patient
Respiratory failure and care
Resuscitation of new born
Tracheostomy and care
Anaesthesia Machine & central gas supply
Difficult intubation
Labour analgesia
Induced hypotension
Pulse – Oximetry, E.C.G.,Temperature, C.V.P.,Cardiac output
Drugs for Monitored anaesthesia care
Fluid and electrolyte balance
Reversal of neuromuscular blockade
Regulation of respiration
C.S.F
Cardiopulmonary resuscitation
I.C.U, N.I.C.U, Management
Blood loss monitoring, hazards of B.T.
Casualty Management of Patient (Shock, Hemorrhage, Dehydration, Burn, Accident, etc.)
Disaster Management
Management of unconscious patient
Management of adult/ children on ventilators
Management in Intensive Cardiac care
Respiratory failure and care
Intensive care of Neurosurgical patients including head Injury
Intensive care of cardio thoracic operated pts
Overview of Intensive care of neonate & children &
Resuscitation of new born
Formation & excretion of urine
Acid-base homeostasis
Physiology of endocrine glands
Reticulo Endothelial system, Immunity & Allergy, Pain management
Anaesthesia for Medical diseases and Obesity

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4TH Year

SUBJECT- OPERATION THEATRE TECHNOLOGY---ADVANCE ANAESTHESIOLOGY

PAPER-I F.M.-50

Practicals and clinical duties---------

1) Demonstration and identification of anaesthetic drugs and Equipments
2) Clinical OT Posting in Specialised deptt
3) ICU Posting
4) Casualty Posting

Note:- Practical training in hospitals.

UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4th Year

SUBJECT – OPERATION THEATRE TECHNOLOGY ADVANCED SURGERY – Part-1

THEORY (Paper-2) F.M.-70 (Hrs.-3hrs)

- **G.I. Surgery-**

Endoscopies, Vagotomy and Pyloroplasty , Gastrectomy, Pancreaticoduodenotomy (Whipple's Procedure), Pancreatectomy, Drainage of pancreatic Cyst (pseudocyst), Resections of Small Bowel, Sigmoid Colon and rectum; Hemi & total Colectomy; Colostomy: Closure of colostomy, Rectopexy & abdominoperineal resection, Drainage of abscess(es) in the region of the liver, Hepatic Resection, liver transplant, Splenectomy; L-R Shunt, Surgery on adrenal gland.

- **Gynecological /obstetric surgery**

- *Obstetric surgery:* Normal labour/Abnormal labour/Abnormal presentation/

3rd stage complications – Atonic PPH, Traumatic PPH, Inversion of uterus, Retained Placenta /Rupture of uterus/cord rolapsed/Vacuum and Forceps, LSCS, Perineal tear / Hysterotomy/Obstetric hysterectomy/Internal Iliac Ligation/Exploration for ectopic Pregnancy /Abortions and Cervical circlage/Vesicular mole/Ectopic pregnancy/Twin pregnancy/MTP – MTP act – Legal and ethical aspect, Methods, complications,
Managemen/Check curettage, Manual removal of placenta, Vaginal exploration for cervical & vaginal tears/Tubectomy – Postpartum, Minilaparotomy and lap TL National programme in Obs and Gynae and family planning

- ***Gynaecological operations*** : Hysterectomy /Cystectomy/Myomectomy / Sling surgery /SUJ repair/ Sacropexy/Wertheim's/ VVF repair/Tuboplasty/Cyto-reduction for ca

ovary/Cx Bx /D&C/ Endometrial Bx/Bartholin Cyst excision

- **Orthopedic surgery**

Orthopaedic surgery: Open reduction & internal fixation of different types of fractures; bone grafting types and procedure; arthroscopy; external fixation; POP and traction; Individual operations on joints; osteotomies: indications, types, steps; Joint replacements
Plaster of Paris cast –Introduction, types
Indications & Contraindications of plaster applicationcastand slabs
Principles and Technique of plaster application-Basics including the requirements of plaster room
Compartment syndrome and other complications of plaster cast
Follow up of patients with plaster cast
Fractures and dislocations-classification, basic scheme of management
Fracture healing and factors affecting the same Complications of fractures
Open fractures and its management principles
Synthetic cast materials and their usage
Upper Limb casts / Plaster U cast, Above- below elbow Casts
Above knee and below knee casts and walking heel application / POP Boot and boot
Wedging, windows, reinforcements / Hanging,
Crutches, measurement and use / Tractions in Orthopedics
Care of patients on tractions, plaster Thomas splint / Braun's splint and its use
Basics of Orthotics / Bandaging, slings, strappings, RJ Bandage
Amputations: Types and operative steps
Faciomaxillary: Craniofacial corrections; faciomaxillary Operations
Operations on spine & spinal cord: Laminectomy, Tumours

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4th Year

PAPER-II SUBJECT -- OPERATION THEATRE TECHNOLOGY ADVANCED SURGERY-

Part-1

Paper 2 F.M.-50

Practical and Clinical duties-----

1) Demonstration and identification of various surgical and anaesthetic instruments and equipments
2) Clinical OT Posting in different deptt. as
   a) Urosurgery b) Neurosurgery c) Plastic surgery d) Eye and ENT surgery e) Cardiac surgery

UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4th Year

SUBJECT-OPERATION THEATRE TECHNOLOGY--ADVANCE SURGERY--PART-2

THEORY (Paper-3) F.M.-70 (Hrs.-3hrs)

Operation Theatre Techniques for Specialty Surgery:-
Preparation, nursing requirement, equipments including instruments, Sutures & etc
Anaesthesia techniques, patient positioning & recovery

- **Paediatric surgery:**

Hydrocephalus, meningocoele, meningomyelocoele, TO fistula, Hirschsprung's disease, ano-rectal malformations, congenital hernia, pyloric stenosis, duodenal atresia, diaphragmatic hernia, omphalocoele, hypospadiasis

- Vascular surgery
- Organ procurement and transplantation
- Thyroid surgery
- Endoscopic procedures & surgery
- Robotic surgery

- **Urologic surgery**

Genito-urinary procedures: Cystectomy, pyelolithotomy, pyeloplasty, ureterolithotomy, nephrolithotomy, renal transplant, operation for vesical fistula, ureterocystostomy, ileal conduit, prostatectomy

- **Neurosurgery**

Principles of neurosurgical surgeries, positions & draping, brain tumours: pituitary, supratentorial, infratentorial, craniotomy, shunts, sterotaxic surgery, Cerebral abscess & AVM

Nerve surgeries: Classification & Management of nerve injuries, Cervical & lumbar sympathectomies, carpal tunnel syndrome

- **Thoracic surgery**

Thoracotomy, thoracoplasty, intercostal drainage, Lobectomy, pneumonectomy, Decortication of the Lung
Excision of mediastinal tumours including thymus,
Constrictive pericarditis / pericardiocentesis

- **Cardiac surgery**

Cardiac Surgery - OT setup
Heart-lung machine & basics of cardiopulmonary bypass
Preoperative preparation of cardiac patient
Cardiac drugs used in cardiac surgery
Anaesthesia risk in cardiac surgery
Functioning & maintenance of cardiac monitors
Basics of one-lung anaesthesia including double-lumen Tubes
Operations on TOF including shunts
Myocardial revascularization
Pacemakers
Cardiac catheterization

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- **Plastic and reconstructive surgery**

Skin grafting, tendon grafting; free flaps and micro vascular anastomosis; reconstructive surgery on ears, mammary glands ,craniosynostosis, rhinoplasty, abdominoplasty, liposuction, faciomaxillary reconstruction, Scar release operation

- **Ophthalmic surgery**

Operations for chalazion, pterygium, entropion, extropion, cataract, iridectomy, glaucoma Surgery , anterior & posterior segment surgery, Lasers, ocular microsurgery, intraocular lens implantation,

Emergencies in eye

Instruments & drugs: Specific instruments used in Ophthalmic surgery

- **Otorhinolaryngologic and head and neck surgery**

Instruments & drugs: Specific instruments used in ENT Surgery

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4th Year

SUBJECT-OPERATION THEATRE TECHNOLOGY--ADVANCE SURGERY--PART-2

PAPER-3 F.M.-50

Practical and Clinical duties-----

3) **Demonstration and identification of various surgical and anaesthetic instruments and equipments**
4) **Clinical OT Posting in different deott as**
   b) **Urosurgery b) Neurosurgery c) Plastic surgery d) Eye and ENT surgery e) Cardiac surgery**

UNIVERSITY PRACTICAL EXAMINATION

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BACHELOR OF OPERATION THEATRE TECHNOLOGY DEGREE 4th Year

SUBSIDIARY SUBJECT PAPER – 4

Project work (F.M.-50)

No university exam

A project work in Operation Theatre Technology will have to be done in any concerned subject

NO UNIVERSITY PRACTICAL EXAMINATION

Seminar Topics in O.T. Technology

4th Year

1. Management of Shock
2. Recent advancement in O.T. Technology
3. Discussion on role of O.T. Technician in super speciality cases
4. Discussion on super speciality in anaesthetic technic

Note- Seminar will have to be attended by all the students.

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BOOKS FOR ANATOMY (TEXT & REFERENCE)

Name Of Books	Author's Name
1) Understanding Human Anatomy & Physiology	Wlliam Davis
2) A Text Book of Anatomy	Chaurasia
3) A Text Book of Human Anatomy	T.S.Rangnathan
4) Human Anatomy (Description & Applied)	Fattana
5) Physiology and Anatomy with Practical consideration	ESTER .M. Grishcimer

BOOKS FOR PHYSIOLOGY (TEXT & REFERENCE)

Name Of Books	Author's Name
1) Text Book of Physiology	Guyton
2) Human Physiology	Chatterjee
3) Concise Medical Physiology	Choudhary
4) Review of Medical Physiology	Ganong

BOOKS FOR BIO - CHEMISTRY (TEXT & REFERENCE)

Name Of Books	Author's Name
1) Bio-chemistry for Medical students	Vasudewan
2) Text book of Bio-chemistry	Harper
3) Clinical Chemistry	Kaplan
4) Clinical Chemistry	Varley
5) Clinical Chemistry	TEITZ
6) Text book of Medical Biochemistry	Ramakrishna
7) Biochemistry	Das
8) Practical Biochemistry	K.P.Sinha

BOOKS FOR PATHOLOGY (TEXT & REFERENCE)

Name Of Books	Author's Name
1) Laboratory Technology	Ramanic Sood
2) Laboratory Technology	Gwadkor
3) Clinical Pathology & Bacteriology	Sachdev K. N.
4) Text book of Pathology	Krishna
5) Histopathology Techniques	Culling
6) Histopathology Techniques	Bancroft
7) Cytology	Koss
8) Diagnostic Cytopathology	Winfred Greg
9) Practical Haematology	Dacie & Lewis
10) Text book of Medical Laboratory For Technician	Satish Gupta

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BOOKS FOR MICOBIOLOGY (TEXT & REFERENCE)

Name Of Books	Author's Name
1) Medical Microbiology	Anathnarayana & Panikar
2) The Practice of Medical Microbiology	Roberty Cruckshank
3) Parasitology-Interpretation to Clinical Medicine	Chatterjee
4) Medical Mycology	Rippon
5) Medical Mycology	Emmons
6) Medical Parasitology	Ajit Damle

BOOKS FOR COMPUTER (TEXT & REFERENCE)

REFERENCE :

1. A. Mansoor, "Internet and Wed Design Made Easier," Pragya Publication.
2. B. Ram , " Computer Fundamentals.
3. T. N. Trainer, "Computer" McGraw Hill.

BOOKS FOR ENGLISH (TEXT & REFERENCE)

REFRENCE

1. English Grammar Collins, Birmingham University, International Language Data Base, Rupa & Co.1993
2. Wren and Martin – Grammar and composition, 1989, Chanda Inter& Co.Delhi
3. Letters for all Occasions, A S Myers. Pub - Harper Perennial
4. Spoken English V Shasi Kumar and P V Dhanija Pub by Tata Mcgraw Hill, New Delhi
5. Journalism Made Simple D Wainwright.
6. Writers Basic Book self Series, Writers Digest series
7. Interviewing by Joan Clayton Platkon
8. Penguin Book of Interviews.

BOOKS FOR Public Health (TEXT & REFERENCE)

Refrence

1) Paarks texts bookpreventive and Social medicine
2) Text book of Community medicine
3) Health Policies and Programme in India

BOOKS FOR HOSPITAL WASTE MANAGEMENT

Hospital waste management and its monitoring ,
Madhuri Sharma - J.P. Brother's medical publisher(P) Ltd.

BOOKS FOR MEDICINE

Davidson's text book of medicine

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BOOKS FOR PHARMACOLOGY

A short text book of pharmacology - Tripathi
Medical Pharmacology - Padmaja Udaykumar - CSB Publishers & Distributors Pvt. Ltd.

BOOKS FOR CSSD

Hospital Sterlization - J.P. Publication
Anand Nagaraja Prem

BOOKS FOR OPERATION THEATRE TECHNOLOGY BSC DEGREE COURSE – 2nd Year & 3rd Year

(1) Applied Microbiology – Same as 1st year Microbiology books
(2) Applied Pathology – Same as 1st year Pathology books
(3) Applied Pharmacology – (a) Pharmacology & Pharmacotherapeutic –Satosker
(b) Essentials of Medical Pharmacology – Triphathi
(c) Clinical Pharmacology ----------Laurence
(4) Introduction to OT Technology ---Same as 3rd year books

3rd Year & 4th Year

(1) OPERATION THEATRE TECHNOLOGY CLINICAL – ---------
(a) Operating Room Technique – Brigden
(b) Operating Room Technique --- Berry & Kohn's
(c) Hand book of Operation theatre Technique – Japee Publishers
(d) The Operating Room Aide – Career Publishers
(e) Operating theatre nursing – MC WARREN
(f) Surgical Nursing & Technique – CHARLES PLUMLEY CHILDE
(g) Perioperative Nursing – LINDA SHIELDS. HELEN WERDER

(2) OPERATION THEATRE TECHNOLOGY APPLIED -- --------
(a) Anaesthesia for Medical Studies ---- GORDON
(b) Clinical use of Anaesthetic drugs ---- ANDERSON
(c) Anaesthesia Recovery and Intensive Care ---- HOPKINS
(d) Text book for Anaesthesia & Operating Technicians ---- Department of Anaesthesia ---- Armed Forces Medical Services

(3) OPERATION THEATRE TECHNOLOGY ADVANCED --- ------
(a) Operating theatre Technology ---- Dr. RASHMI S PATIL
(b) Text book of Operating Surgery ---- FARQUARSON'S
(c) Care of Patients in Surgery ---- ALEXANDER
(d) Essential Surgical Technique ---- COLIN D JOHNSON
(e) Text book of Orthopaedics ---- S MAHEDHWARI ---- JAPEE
(f) Outlines of Orthopaedics ---- ADAMS-ELSIEVER
(g) POP cast , Traction and Orthotics ---- STEWART – CHURCHILL LIVINGSTONE

Paediatric surgery:
Hydrocephalus, meningocoele, meningomyelocoele, TO fistula, Hirschsprung's disease, ano-rectal malformations, congenital hernia, pyloric stenosis, duodenal atresia, diaphragmatic hernia, omphalocoele, hypospadiasis

Vascular surgery
Organ procurement and transplantation
Thyroid surgery
Endoscopic procedures & surgery
Robotic surgery

BOOKS FOR PHARMACOLOGY

A short text book of pharmacology - Tripathi
Medical Pharmacology - Padmaja Udaykumar - CSB Publishers & Distributors Pvt. Ltd.

BOOKS FOR CSSD

Hospital Sterlization - J.P. Publication
Anand Nagaraja Prem

BOOKS FOR OPERATION THEATRE TECHNOLOGY BSC DEGREE COURSE –

2nd Year & 3rd Year

(1) Applied Microbiology – Same as 1st year Microbiology books
(2) Applied Pathology – Same as 1st year Pathology books
(3) Applied Pharmacology – (a) Pharmacology & Pharmacotherapeutic –Satosker
(b) Essentials of Medical Pharmacology – Triphathi
(c) Clinical Pharmacology ----------Laurence
(4) Introduction to OT Technology ---Same as 3rd year books

3rd Year & 4th Year

(1) **OPERATION THEATRE TECHNOLOGY CLINICAL – ---------**
(a) Operating Room Technique – Brigden
(b) Operating Room Technique --- Berry & Kohn's
(c) Hand book of Operation theatre Technique – Japee Publishers
(d) The Operating Room Aide – Career Publishers
(e) Operating theatre nursing – MC WARREN
(f) Surgical Nursing & Technique – CHARLES PLUMLEY CHILDE
(g) Perioperative Nursing – LINDA SHIELDS. HELEN WERDER

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(c) Anaesthesia Recovery and Intensive Care ---- HOPKINS
(d) Text book for Anaesthesia & Operating Technicians ---- Department of Anaesthesia -- Armed Forces Medical Services

(3) **OPERATION THEATRE TECHNOLOGY ADVANCED --- ------**
(a) Operating theatre Technology ---- Dr. RASHMI S PATIL
(b) Text book of Operating Surgery ---- FARQUARSON'S
(c) Care of Patients in Surgery ---- ALEXANDER
(d) Essential Surgical Technique ---- COLIN D JOHNSON
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(f) Outlines of Orthopaedics ---- ADAMS-ELSIEVER
(g) POP cast , Traction and Orthotics ---- STEWART – CHURCHILL LIVINGSTONE

Paediatric surgery:

Hydrocephalus, meningocoele, meningomyelocoele, TO fistula, Hirschsprung's disease, ano-rectal malformations, congenital hernia, pyloric stenosis, duodenal atresia, diaphragmatic hernia, omphalocoele, hypospadiasis

Vascular surgery

Organ procurement and transplantation

Thyroid surgery

Endoscopic procedures & surgery

Robotic surgery

Dr. Seema Sahay Dr. Gyatri Sunil Dr. A.K. Simbha Dr. Vimal Mukesh Dr. K.K. Mishra