

CURRICULUM FOR

Diploma in Operation Theatre Technology

(Applicable w.e.f. academic session 2022-23)

COURSE NAME: Diploma in Operation Theatre Technology

DURATION OF COURSE: TWO YEARS

FULL-TIME/ PART – TIME: FULL-TIME

**SRI GURU RAMDAS UNIVERSITY OF HEALTH
SCIENCES, SRI AMRITSAR, PUNJAB**

1. Diploma in Operation Theatre Technology

The main aim will be to train candidates in the practice of technical assistance in operation theatre techniques relevant to various surgical specialties and intensive care medicine. Along with didactic teaching, major stress will be laid on practical training in operation theatre techniques and handling of work in intensive care units by rotating them to different specialty theatres and ICU. Initially they will observe the management of work in operation theatres, later they will assist the technicians and finally they should be able to independently handle their work when posted in different operation theatres and ICU. During their period of training they shall remain attached to regular technical staff for necessary instructions, training and monitoring.

2. Duration of Course

The Diploma in Operation Theatre Technology Course is proposed to be a 2 years diploma course.

3. Eligibility Criteria for Admission

The students shall be admitted as per the admission criteria and qualification prescribed in the Notification issued by the Board of Management of Sri Guru Ram Das University of Health Sciences from time to time.

4. Medium of Instructions

The Medium of instruction during the course and for the university examination shall be in English.

5. Examination Scheme

- 5.1 The examination for the first and second shall ordinarily be held twice year in the months of May/June and November/ December by the Institute as per University rules.
- 5.2 Annual Examination shall be held in May/June and supplementary within 6 months of annual examination.
- 5.3 The examination in theory/practical shall be held at the end of the 1st academic year (1st Year) and the end of 2nd academic year (2nd Year) with one internal and one external examiners.
- 5.4 Date of examination and appointment of examiner will be made by the Board of Management on recommendation of Faculty of Medical Sciences.
- 5.5 The examination for the first, second year of Diploma in Operation Theatre Technology Course would be held according to the prescribed syllabus.

6. Rules of Examination for Diploma in Operation Theatre Technology Course:

- 6.1 The students shall submit his/her application for admission to the examination to Controller of Examinations SGRDUHS, Sri Amritsar through the Director Principal of the SGRDIMSAR, Sri Amritsar on the prescribed form with the required fee (the last date of which will be updated on university website after notification issued from Board of Management time to time).

- 6.2 The candidates will be given 25 marks for theory and 15 marks for practical as internal assessment in each subject on the basis of their performance during the year. That a candidate be eligible to appear in the examination provided he/she secured a minimum of 35% marks in internal assessment in theory and practical.
- 6.3 There will be fresh internal assessment and compulsory attendance for the students for the examination in which he/she has failed at the time of subsequent examination in that subject.
- 6.4 The students will not be allowed to appear in the examination unless he/she attends 75% of the total theory and practical in each subject separately.
- 6.5 Director Principal of the college is empowered to condone the shortage of attendance of lectures to the extent of 5% lectures delivered in each course of theory and practical.
- 6.6 A student will be deemed to have passed in the examination if he/she passes in each subject separately.
- 6.7 In case of students joining late owing to the late admission with the approval of the Vice-chancellor, their lecturers are to be counted from the date of joining. Deficiency in studies should be made up by attending special classes for them at the level of Head of the Department.

7. **First Year Diploma in Operation Theatre Technology Examination:**

The First Year **Diploma in Operation Theatre Technology** examination shall be in the following subjects and candidate shall be required to pass all the subjects:-

Diploma Part – I

| Paper | Subjects | Theory | | | Practical | | | Grand Total |
|--------------------|---|--------|---------------------|-------|-----------|---------------------|-------|-------------|
| | | Marks | Internal Assessment | Total | Marks | Internal Assessment | Total | |
| Paper-I | Human Anatomy, Physiology and Pathology | 75 | 25 | 100 | 35 | 15 | 50 | 150 |
| Paper-II | Basic Operation Theatre Equipment and Techniques. | 75 | 25 | 100 | 35 | 15 | 50 | 150 |
| Paper-III | Basic Anaesthesia drugs, equipment, Techniques & resuscitation. | 75 | 25 | 100 | 35 | 15 | 50 | 150 |
| Supportive Subject | Basics of Computer | --- | ----- | ---- | ---- | ----- | --- | ---- |

Note. The Examination in the subject of Basics of Computer will be conducted at college level and Grade will be sent to University for final inclusion in the result.

Grading System

| | | | | | | | | |
|-------------|-----------|----------|-----------|----------|-----------|----------|----------|----------|
| Marks Range | 81 - 100 | 76 - 80 | 71 - 75 | 61 - 70 | 51 - 60 | 41 - 50 | 31 - 40 | 0 - 30 |
| Grade | A+ | A | B+ | B | C+ | C | D | E |

8. Second Year Diploma in Operation Theatre Technology Examination:

The First Year Diploma in Operation Theatre Technology Examination shall be open to a person who has previously passed the Second Year Diploma in Operation Theatre Technology Examination of this University.

Diploma Part – II

| Paper | Subjects | Theory | | | Practical | | | Grand Total |
|-----------|---|--------|---------------------|-------|-----------|---------------------|-------|-------------|
| | | Marks | Internal Assessment | Total | Marks | Internal Assessment | Total | |
| Paper-I | Microbiology and Pharmacology | 75 | 25 | 100 | 35 | 15 | 50 | 150 |
| Paper-II | Advanced Operation theatre equipment and techniques | 75 | 25 | 100 | 35 | 15 | 50 | 150 |
| Paper-III | Basic and Advanced Surgical skills and procedures | 75 | 25 | 100 | 35 | 15 | 50 | 150 |

9. Promotion and Number of Attempts allowed

- 9.1 A candidate who fails in all the subjects in the First Year Diploma in Operation Theatre Technology examination shall not be promoted to Second Year class.
- 9.2 A Candidate who fails in one more or more subjects will be given **four attempts** including first attempt as a regular candidate, plus one mercy chance at the discretion of the Vice-Chancellor, at six monthly intervals. However, he/she will have to clear all these attempts within 4 years of admission to the said course.
- 9.3 The candidate who will absent himself/herself from the examination will be deemed to have been failed in that subject.
- 9.4 A candidate who passes in at least one subject of University level First Year Diploma in Operation Theatre Technology examination will be permitted to attend classes of Second Year. However, the candidate will be required to pass in all subjects of 1st Year examination at least 6 months before the final examination of 2nd Year examination.
- 9.5 Candidate who passes in one or more subjects of Second Year Diploma Operation Theatre Technology examination shall be exempted from appearing in these subject at a subsequent examination, but the candidate must pass the examination in a maximum of four attempts including first attempt, as a regular candidate plus one mercy chance at the discretion of the Vice-Chancellor failing, at six monthly intervals. However, he/she will have to clear all these attempts within 4 years of admission to the said course.

10. Appointments of Examiners:

- 10.1 There shall be two examiners – One internal and one external.

- 10.2 Professor & head of the Department shall be Convener. The Examiner at least 3 years post PG teaching experience in that specification field will be appointed as Internal Examiner.
- 10.3 The external examiner shall be appointed from other Universities at least 3 years post PG teaching experience in that specification field.

11. Paper Setting and moderation of Question Papers

The questions papers for 1st Year and 2nd Year will be set under the direction of Controller of Examinations.

Each Question Paper covering entire course consists of seven questions out of which six questions carry 10 Marks and one question carry 15 marks.

12. Evaluation of Answer Books

The answer books shall be got evaluated by putting fictitious roll numbers thereon or spot evaluation (Table marking) or any other method under the direction of the Controller of Examinations.

13. Minimum Pass Marks

During all the three annual examinations in each subject paper the candidate shall have to obtain 50% in theory, practical & internal assessment taken together.

13.1 The successful candidates shall be classified into divisions as under:-

- a) Those who obtain 60% or more marks First Division.
- b) Those who obtain 50% or more marks but below 60% marks Second Division.
- c) A candidate who will obtain 75% or more marks of the total marks in any subject shall be declared to have obtained distinction in that subject provided he/she passed in all the subjects of the courses in all the parts in the first attempt.

A candidate is eligible to appear in the examination provided he/she secures a minimum of 35% marks in internal assessment in theory and practical separately.

14. Grace Marks

There shall be no provision for grace marks.

15. Declaration of Result

The results will be tabulated and declared by the Controller of Examination's office.

16. Award of Diploma

On successfully passing the Second Year Diploma in Operation Theatre Technology examination the students shall be awarded the diploma of Diploma in Operation Theatre Technology.

First Year Syllabus

Paper-I: Human Anatomy, Physiology & Pathology

Anatomy

Theory Syllabus (50 Hrs)

1. Introduction:

- 1.1 Definition of anatomy and its divisions, Terms of location, positions and planes.
- 1.2 Cell and its organelles, Tissues & its classification, Glands.

2. Musculoskeletal system:

- 2.1 Structure of Bone & its types.
- 2.2 Joints- Classification of joints with examples; details of synovial joint.
- 2.3 Bones & joints of upper limb, lower limb and their movements.
- 2.4 Axial skeleton & appendicular skeleton.
- 2.5 Skull, spine & its movements, intervertebral disc.
- 2.6 Muscles & its types.
- 2.7 Muscles of the upper limb, lower limb, trunk and neck.

3. Cardiovascular System:

- 3.1 Arteries & veins, Capillaries & arterioles.
- 3.2 Heart- size, location, chambers, blood supply of heart, pericardium.
- 3.3 Systemic & pulmonary circulation.
- 3.4 Major blood vessels of Heart- Aorta, pulmonary artery, common carotid artery, subclavian artery, axillary artery, brachial artery, common iliac artery, femoral artery.
- 3.5 Inferior vena cava, portal circulation, great saphenous vein.

4. Lymphatic System:

- 4.1 Lymph & Lymph vessels.
- 4.2 Structure of lymph node, names of regional lymphatics, axillary and inguinal lymph nodes.

5. Gastro-intestinal System:

- 5.1 Parts of GIT, structure of tongue, pharynx, salivary glands.
- 5.2 Location & Gross structure of Oesophagus, stomach, intestine (small and large), liver, gall bladder, pancreas, spleen.

6. Respiratory system:

- Parts of Respiratory system; Structure of nose, nasal cavity, larynx, trachea, lungs, pleura, bronchopulmonary segments.

7. Urinary System:

- Parts of Urinary system, location and gross structure of kidney, ureter, urinary bladder, urethra.

8. Reproductive system:

- 8.1 Parts of male reproductive system, gross structure of testis, vas deferens, epididymis, prostate.
- 8.2 Parts of female reproductive system, gross structure of uterus, ovary, fallopian tube, mammary gland.

9. Endocrine glands:

- Name of all endocrine glands, gross structure & functions of pituitary gland, adrenal gland, thyroid gland and parathyroid gland.

10. **Nervous system:**

- 10.1 Neuron, classification of NS.
- 10.2 Meninges, ventricles, CSF.
- 10.3 Gross features of cerebrum, midbrain, pons, medulla oblongata, cerebellum, name of basal nuclei.
- 10.4 Blood supply of brain, cranial nerves.
- 10.5 Spinal cord and spinal nerves.
- 10.6 Autonomic nervous system.
- 10.7 Visual & auditory pathways

Practical Syllabus(20 Hours):

1. **Demonstration** of all bones of the human body.
2. **Demonstration** of all organs of the human body.
3. **General Histology:**
Epithelium: Simple (squamous, cuboidal, columnar, ciliated), Stratified, Transitional.
Bone, muscles (skeletal, smooth, cardiac) • Cartilage (hyaline, elastic, fibro cartilage).
Connective Tissue (loose and dense).
Arteries (large & medium sized), Veins.

Books Recommended

1. Ross and Wilson, Anatomy and Physiology, Churchill Livingstone.
2. Companion Pocketbook for quick review B.D. Chaurasia's Human Anatomy: -Vol. (1,2,3)
3. B.D. Chaurasia's Human Anatomy -Vol. (1,2,3)
4. B.D. Chaurasia's Handbook of General Anatomy
5. Textbook of Anatomy & Physiology for Nurses- Nachiket Shankar/ Mario Vaz
6. Anatomy for B.Sc. Nursing – Dr Renu Chauhan

PHYSIOLOGY

THEORY SYLLABUS (50 Hrs)

1. The Cell:

- Cell Structure and functions of the various organelles.
- Endocytosis and exocytosis
- Acid base balance and disturbances of acid base balances (Alkalosis, Acidosis)

2. The Blood:

- Composition of Blood, functions of the blood and plasma proteins, classification and protein.
- Pathological and Physiological variation of the RBC.
- Function of Hemoglobin
- Erythrocyte Sedimentation Rate.

- Detailed description about WBC-Total count (TC), Differential count (DC) and functions.
- Platelets – formation and normal level and functions
- Blood groups and Rh factor

3. **Cardio-Vascular System:**

- Physiology of the heart
- Heart sounds
- Cardiac cycle, Cardiac output.
- Auscultatory areas.
- Arterial pressures, blood pressure
- Hypertension
- Electro cardiogram (ECG)

4. **Respiratory system:**

- Respiratory movements.
- Definitions and Normal values of Lung volumes and Lung capacities.

5. **Excretory system:**

- Normal Urinary output
- Micturation
- Renal function tests, renal disorders.

6. **Reproductive system:**

- Formation of semen and spermatogenesis.
- Brief account of menstrual cycle.

7. **Central Nervous system:**

- Functions of CSF.

8. **Endocrine sytem:**

- Functions of the pituitary, thyroid, parathyroid, adrenal and pancreatic Hormones.

9. **Digestive system (for the students of Diploma in Scope Support Technology)**

- Physiological Anatomy of the GIT.
- Food Digestion in the mouth, stomach, intestine
- Absorption of foods
- Role of bile in the digestion.

PRACTICAL SYLLABUS

1. The compound Microscope
2. Determination of ESR-By westergren's method
3. Determination of Blood Groups.
4. Measurement of human blood pressure.
5. Examination of Respiratory system to count respiratory rate and measure inspiration and respiration

Books Recommended

1. Ross and Wilson, Anatomy and Physiology, Chruchill Livingstone.
2. Basics of medical physiology- D Venkatesh, HH Sudhakar
3. Textbook of anatomy and physiology for nurses-Nachiket Shankar,Mario Vaz
4. Manual of practical physiology for BDS-DR. A.K.Jain

PATHOLOGY (30 hrs)

- 1) Cellular adaptation, Cell injury & cell death. Introduction to pathology.
Overview: Cellular response to stress and noxious stimuli.
Cellular adaptations of growth and differentiation.
Overview of cell injury and cell death.
Causes of cell injury.
Mechanisms of cell injury.
Reversible and irreversible cell injury.
Examples of cell injury and necrosis
- 2) Inflammation.
General features of inflammation
Historical highlights
Acute inflammation
Chemical mediators of inflammation
Outcomes of acute inflammation
Morphologic patterns of acute inflammation
Summary of acute inflammation
Chronic inflammation
- 3) Immunity disorders.
General features of the immune system
Disorders of the immune system
- 4) Infectious diseases.
General principles of microbial pathogenesis
Viral infections
Bacterial infections-Rheumatic heart disease.
Neoplasia. Definitions Nomenclature
Biology of tumor growth benign and malignant neoplasms
Epidemiology
Carcinogenic agents and their cellular interactions
Clinical features of tumors
- 5) Environmental and nutritional disorders.
Environmental and disease
Common environmental and occupational exposures
Nutrition and disease.
Coronary artery disease.

Diploma in Operation Theatre Technology 1st Year

Paper II: Basic Operation Theatre Equipment and Techniques

Theory Syllabus

- **Medical Gas Supply**
 - Compressed gas cylinders
 - Colour coding
 - Cylinder valves; pin index.
 - Gas piping system
 - Recommendations for piping system
 - Alarms & safety devices.
- **Introduction to OT equipments**
 - OT- Lights
 - OT Table
 - Suction
 - Diathermy
- Care & Maintenance of OT Equipment
- General Surgical equipment – for minor & major surgeries
- Scrubbing Techniques
- IV cannulation
- IV Fluids
- Intramuscular injections
- Cannula. Syringe needle handling
- Types of Suture Material
- Dressing materials
- Cleaning & maintenance of surgical instruments
- Packaging & storing of Surgical equipment
- Patient Handling & Shifting techniques
- Positioning of Patients for various surgical procedure
- Operation Theatre Ethics & Discipline
- Basic Nursing Care
- Recovery room care, ethics, requirements & monitoring

Paper III: Basic Anaesthesia drugs, equipment and Techniques Theory Syllabus

- Breathing System - Common components - connectors, adaptors, reservoir bags.
 - Capnography ; etc O₂, ECG, NIBP
 - Pulse oximetry
 - Methods of humidification.
 - Classification of breathing system - Mapleson system - a b c d e f
 - The circle system – Components & Soda lime, indicators
 - Ambu bag & its working
- **Anaesthesia Machine/Work station**
 - Hanger and yoke system
 - Cylinder pressure gauge
 - Pressure regulator
 - Flow meter assembly
 - Vapourizers - types, hazards, maintenance, filling and draining, etc.
- **Face Masks & Airway Laryngoscopes**- Types, sizes
- **Endotracheal tubes** - Types, sizes.
 - Cuff system
 - Fixing, removing and inflating cuff, checking tube position complications.
 - Problems during intubation
 - Difficult airway algorithm
 - Difficult airway cart
- **Oxygen therapy and related equipments**
- **Drugs**
 - Induction Agent: Thiopentone , Diazepam, Midazolam, Ketamine, Propofol, Etomidate.
 - Muscle Relaxants: Depolarising - Suxamethonium, Non depolarising - Pancuronium, Vecuronium, Atracurium, rocuranium
 - Inhalational Gases: Gases - O₂, N₂O, Air
 - Agents - Ether-, Halothane, Isoflurane, Saevoflurane, Desflurane
 - Reversal Agents: Neostigmine, Glycopyrrolate, Atropine, Nalorphine, Naloxone, Flumazenil (Diazepam)
 - Local Anaesthetics: Xylocaine, Preparation, Local – Bupivacaine - Topical, Prilocaine-jelly, Emla - Ointment, Etidocaine. Ropivacaine
 - Emergency Drugs
 - Adrenaline : Mode or administration, dilution, dosage, Effects,
 - Noradrenaline

- Atropine, bicarbonate, calcium, ephedrine, xylocard,
- Ionotropes : dopamine, dobutamine, amidaron
- Aminophylline, hydrocortisone, antihistamlnics,
- Potassium.
- Cardiovascular drugs
- Antihypertensives
- Antiarrhythmics
- Beta - Blockers
- Ca - Channel blockers.
- Vasodilators - nitroglycerin & sodium nitroprusside
- Respiratory system - Bronchodilators, respiratory stimulants
- **Basic Anesthesia Techniques:**
 - PAC
 - General anaesthesia
 - Regional anaesthesia
 - Local anaesthesia
- **Multiparameter Vital Sign Monitors**
 - Types of Multiparameter Vital Sign Monitor and ECG Machines and their applications.
 - Repair and maintenance of the Multiparameter Vital Sign Monitor
 - Types of patient electrodes and their application.
 - Recording of ECG and safety in use of equipment.
- CPR

Marks distribution for practical exam:

Drugs: 10 marks

Anaesthesia Machine: 10 Marks

Equipments: 15 Marks

Total marks : 35

BASICS OF COMPUTERS (Supportive Subject)

Theory : 30 hours

Practicals : 30 hours

THEORY

Introduction to computer – I/O devices – memories – RAM and ROM – Different kinds of ROM – kilobytes, MB, GB their conversions – large computer – Medium, Micro, Mini computers - Different operating system – Networking – LAN, WAN, MAN (only basic ideas)

Typing text in MS word – Manipulating text – Formatting the text – using different font sizes, bold, italics – Bullets and numbering – Pictures, file insertion – Aligning the text and justify – choosing paper size – adjusting margins – Header and footer, inserting page No's in a document – Printing a file with options – Using spell check and grammar – Find and replace – Mail merge – inserting tables in a document.

Creating table in MS-Excel – Cell editing – Using formulas and functions – Manipulating data with excel – Using sort function to sort numbers and alphabets – Drawing graphs and charts using data in excel – Auto formatting – Inserting data from other worksheets.

Preparing new slides using MS-POWERPOINT – Inserting slides – slide transition and animation – Using templates – Different text and font sizes – slides with sounds – Inserting clip arts, pictures, tables and graphs – Presentation using wizards.

Introduction to Internet – Using search engine – Google search – Exploring the next using Internet Explorer and Navigator – Uploading and Download of files and images – E- mail ID creation – Sending messages – Attaching files in E- mail.

Role of Computers in the Health care: - HIS, Medical Equipment, Pharmacy in inventory management, Patient record maintenance.

PRACTICAL

- Typing a text and aligning the text with different formats using MS-Word
- Inserting a table with proper alignment and using MS-Word - Create mail merge document using MS-word to prepare greetings for 10 friends
- Preparing a slide show with transition, animation and sound effect using MSPowerpoint
- Customizing the slide show and inserting pictures and tables in the slides using MSpowerpoint
- Creating a worksheet using MS-Excel with data and sue of functions Using MSExcel prepare a worksheet with text, date time and data Preparing a chart and pie diagrams using MS-Excel
- Using Internet for searching, uploading files, downloading files creating e-mail ID

Diploma Operation Theatre Technology 2nd year

Paper I: Microbiology and Pharmacology Theory Syllabus

MICROBIOLOGY (30 hours theory + 20 hours practical)

- Introduction to Microbiology & Aseptic techniques
- Medically important Gram Positive & Gram Negative Cocci
- Medically important Gram Negative Bacilli(GNB)
- Classification of fungus,
- Biomedical waste management
- Hospital acquired infections
- Blood stream infection
- Wound Infection & Urinary Tract Infections
- Respiratory tract Infection
- Catheter, IV associated Infections
- Hospital acquired infections & prevention of hospital acquired infections
- Hepatitis C
- Safety Measures in Microbiology lab
- Aseptic techniques
- Culture media (Liquid)
- Culture media (Solid)
- Antimicrobial sensitivity testing (AST)
- Sterilization in details
- Principles Of Sterilization & Disinfections
 - Types of Sterilization (Dry & Wet), methods, hazards and testing
 - Sterilization of dry hot air.
 - Sterilization by gases e.g. ethylene oxide etc.
 - Sterilization by radiation.
 - Sterilization by chemical lotions, different chemicals and their applied chemistry.
 - Sterilization by gamma-rays, ethylene oxide, ultra violet rays and etc
 - Sterilization for soft rubber articles.
 - Sterilization for carbonized articles.
 - Sterilization for Ventilators
 - Hazards of sterilization and their prevention
 - Hazards of radiation, gases and chemical lotions and their prevention
 - Methods to Checking sterility
- Types of disinfections;

- Disinfection by boiling method.
- Disinfection by chemical method.

PHARMACOLOGY: (50 hours theory + 20 hours practical)

- Routes of administration and dosage forms
- Pharmacokinetics
- Pharmacodynamics
- ANS
- Autacoids (histamine, serotonin, PGs)
- NSAIDs
- Drugs for cough and bronchial asthma
- Skeletal muscle relaxants
- Thyroid and anti thyroid drugs
- CHF
- Hematinics and drugs affecting coagulation, bleeding, thrombosis
- Anti arrhythmics
- Anti hypertensives
- Drugs acting on skin and mucous membrane
- Diuretics and antidiuretics
- Anti anginals
- General chemotherapy:
 - Beta lactams
 - Sulfonamides
 - Quinolones
 - Aminoglycosides
 - Macrolides
 - Miscellaneous antimicrobials
- Drugs acting on uterus
- Atropine, Glycopyrrolate
- Diazepam, Midazolam, Phenergan, Lorazepam,
- Morphine, Pethidine, Fentanyl, Pentazocine
- Metoclopramide, Ondansetron, Dexamethasone
- Na citrate, Gelusil, Mucaine gel.
- Cimetidine, Ranitidine, Famotidine
- Bronchiolytic agents
 - Renal system - Diuretics, furosemide, mannitol
 - Obstetrics - oxytocin, methergin
 - Miscellaneous - Antibiotics, paracetamol, diclofenac- IV fluids, various preparations
NaCl, Ringer lactate, haemacel, hetastarch, heparin, protamine, insulin, analgesics,
nsaid, ibuprofen, ketorolac,
- Laryngeal Sprays: Principal, uses mechanism and its maintenance.

Paper II: Advanced Operation Theatre Equipment and Techniques including Resuscitation

- Defibrillators:
 - Principle and mechanism of the defibrillator and its types.
 - Uses and safety precaution during use.
 - Maintenance and its operational capabilities.
- Equipment in cardiac surgery OT – Heart Lung Machine, IABP machine,
- Monitors – multipara, cardiac output monitor, Endoscopic TV monitors, Nerve conduction monitors
- Surgical Instruments – Minor set, Major Set
- Endoscopes
- Brochoscope
- Laproscope set
- Fluoroscope & fluoroscopic compatible Tables
- Operating Microscope
- Types of Cautery
- Upkeep & maintenance of Surgical equipment
- Autoclaves
- Sterlization equipment
- Positioning of Patients for various surgical procedure
- Initial preparation of surgical patients
- CPR

Paper III: Basic & Advanced Surgical skills & Techniques

Theory Syllabus

- Types of wounds
- Wound Care
- Dressings Materials
- Types of dressings
- Types of Suture Material
- Suturing Techniques
- Types of Swellings
- Management of different type of swellings
- Types of Urinary catheters & catheter care
- Types of feeding tubes, its insertion & care

- Basic surgical instruments
- Advanced surgical instruments
- Endoscopes & their uses
- Uses of various instruments for different super-speciality surgeries
- Upkeep & maintenance of surgical instruments
- Emergency care of patients
- Management of bleeding in patient
- Postoperative Complications
- Post operative care of surgical patients

Marks distribution for practical exam:

Drugs: 10 marks

Anaesthesia Machine: 10 Marks

Equipments: 15 Marks

Total marks : 35 Marks