B.Sc. DEGREE IN OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

I YEAR SYLLABUS

Subjects – Teaching hours

Anatomy, Physiology and Lab Sciences	**-**	**80 hours**
Communication skills in English	**-**	**80 hours**
Computer Skills	**-**	**80 hours**
Principles of Management	**-**	**30 hours**
		270 hours
Hospital Orientation & Training		**1665 hours**

BASIC ANATOMY

THEORY

Introduction to Anatomy

Basic Anatomical terminology

Osteology- Upper limb – clavicle, scapula, humerous, radius, ulna
Lower limb - femur, hipbone, sacrum, tibia, fibula
Vertebral column

Thorax – Intercostal space, pleura, bony thoracic cage, ribs sternum & thoracic vertebrae

Lungs – Trachea, bronchial tree

Heart – Surface anatomy of heart, chambers of the heart, valves of the heart, major blood vessels of heart, pericardium, coronary arteries.

Skeleto-muscular system – Muscles of thorax, muscles of upper limb (arm & fore arm) Flexor and extensor group of muscles (origin, insertion, action)

Excretory sytem – Kidneys**,** ureters, bladder

PRACTICALS

Mannequins to be provided for Teaching

Osteology – Bones identification (right and left side) and prominent features and muscle attachment of the bone, clavicle, scapula, radius, ulna, humerous, femur, hip bone, sacrum, tibia, fibula.

Surface Anatomy,
Radiology, X-ray Chest PA view

PHYSIOLOGY

THEORY

1) **The Cell:**

   (i) Cell Structure and functions of the varies organelles.
   (ii) Endocytosis and exocytosis
   (iii) Acid base balance and disturbances of acid base balances (Alkalosis, Acidosis)

2) **The Blood:**

   (i) Composition of Blood, functions of the blood and plasma proteins, classification and protein.

   (ii) Pathological and Physiological variation of the RBC.

   (iii) Function of Hemoglobin

   (iv) Erythrocyte Sedimentation Rate.

   (v) Detailed description about WBC-Total count (TC), Diffierential count (DC) and functions.

   (vi) Platelets – formation and normal level and functions

   (vii) Blood groups and Rh factor

3) **Cardio-Vascular System:**
   (i) Physiology of the heart
   (ii) Heart sounds
   (iii) Cardiac cycle, Cardiac output.
   (iv) Auscultatory areas.
   (v) Arterial pressures, blood pressure
   (vi) Hypertension
   (vii) Electro cardiogram (ECG)

4. **Respiratory system:**

   (i) Respiratory movements.
   (ii) Definitions and Normal values of Lung volumes and Lung capacities.

5. **Excretory system:**

   (i) Normal Urinary output
   (ii) Micturation
   (iii) Renal function tests, renal disorders.

6. **Reproductive system:**

   (i) Formation of semen and spermatogenesis.
   (ii) Brief account of menstrual cycle.

7. **Central Nervous system:**

   (i) 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)**
   (i) Physiological Anatomy of the GIT.
   (ii) Food Digestion in the mouth, stomach, intestine
   (iii) Absorption of foods
   (iv) Role of bile in the digestion.

PRACTICAL

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

BIO-CHEMISTRY

Carbohydrates

Glucose and Glycogen Metabolism

Proteins:

Classification of proteins and functions

Lipids:

Classification of lipids and functions

Enzymes:

Definition – Nomenclature – Classification – Factors affecting enzyme activity – Active site – Coenzyme – Enzyme Inhibition – Units of enzyme – Isoeznzymes – Enzyme pattern in diseases.

Vitamins & Minerals:

Fat soluble vitamins(A,D,E,K) – Water soluble vitamins – B-complex vitamins- principal elements(Calcium, Phosphorus, Magnesium, Sodium, Potassium, Chlorine and sulphur)- Trace elements – Calorific value of foods – Basal metabolic rate(BMR) – respiratory quotient(RQ) Specific dynamic action(SDA) – Balanced diet – Marasmus – Kwasoirkar

Acids and bases:

Definition, pH, Henderson – Hasselbalch equation, Buffers, Indicators, Normality, Molarity, Molality

BIOCHEMISTRY SYLLABUS FOR PRACTICALS

1 Benedict's test

2. Heat coagulation tests

PATHOLOGY

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.
Fungal infections
Parasitic infections

5. Neoplasia.
Definitions
Nomenclature
Biology of tumor growth benign and malignant neoplasms
Epidemiology
Carcinogenic agents and their cellular interactions
Clinical features of tumors

6. Environmental and nutritional disorders.
Environmental and disease
Common environmental and occupational exposures
Nutrition and disease.
Coronary artery disease.

PRINCIPLES OF MANAGEMENT

(a): PRINCIPLES OF MANAGEMENT

Development of Management: Definitions of Management – Contributions of F.W. Taylor, Henry Fayol and others

Functions of Management: Planning – Organizing – Directing – Controlling

Planning: Types of planning – Short–term and long plans – Corporate or Strategic
Planning – Planning premises – Polices – Characteristics and sources – principles of policy making – Strategies as different from policies – Procedures and methods – Limitations of planning

Organizing: Importance of organization – Hierarchy – Scalar chain – Organization relationship – Line relationship – Staff relationship - Line staff relationship – Functional relationship - Committee organization – Management committees – Departmentation

Motivation: Motivation theories – McGregor's theory X and theory Y – Maslow's and Herzberg's theory – Porter and Lawler model of complex view of motivation – Other theories – Diagnostic signs of motivational problems – Motivational techniques

Communication: Types of communication – Barriers of effective communication – Techniques for improved communication

Directing: Principles relating to Direction process – Principles and theories of leadership – Leadership Styles – Delegation of authority

Controlling: Span of control – Factors limiting effective span of control – Supper management, General managers, Middles managers and supervisors – Planning and controlling relationships – Management control process – Corrective measures – Strategic control points – Budgetary control – Types of budgets

Co-ordination: Co-ordination and co-operation – Principles of co-ordination – Techniques of co-ordination charts and records – Standard procedure instructions

(b): PERSONNEL MANAGEMENT

Objective of Personnel Management – Role of Personnel Manager in an organization – Staffing and work distribution techniques – Job analysis and description – Recruitment and selection processes – Orientation and training – Coaching and counseling – disciplining – Complaints and grievances – Termination of employees – Performance appraisal – Health and safety of employees - Consumer Protection Act as applicable to health care services

(c): FINANCIAL MANAGEMENT

Definition of financial Management – Profit maximization – Return maximization – wealth maximization – Short term Financing – Intermediate Financing – Long term Financing – leasing as a source of Finance – cash and Security Management – Inventory Management – Dividend policies – Valuations of Shares – Financial Management in a hospital – Third party payments on behalf of patients.
Insurance – health schemes and policies

ENGLISH

Communication:-
Role of communication
Defining Communication
Classification of communication
Purpose of communication
Major difficulties in communication
Barriers to communication
Characteristics of successful communication – The seven Cs
Communication at the work place
Human needs and communication "Mind mapping"
Information communication

Comprehension passage:-

Reading purposefully
Understanding what is read
Drawing conclusion
Finding and analysis

Explaining:-

How to explain clearly
Defining and giving reasons
Explaining differences
Explaining procedures
Giving directions

Writing business letters:-

How to construct correctly
Formal language
Address
Salutation
Body
Conclusion

Report writing:-

Reporting an accident
Reporting what happened at a session
Reporting what happened at a meeting

BASICS OF COMPUTER

COURSE CONTENT:

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 computer languages – Number system – Binary and decimal conversions – Different operating system – MS DOS – Basic commands – MD, CD, DIR,TYPE and COPY CON commands – 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 – Introduction to "C" language – Different variables, declaration, usage – writing small programs using functions and sub – functions.

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 MS-Powerpoint
- Customizing the slide show and inserting pictures and tables in the slides using MS-powerpoint
- Creating a worksheet using MS-Excel with data and sue of functions
- Using MS-Excel 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
- Using C language writing programs using functions

B.Sc. Operation Theatre & Anaesthesia Technology

Course

II year syllabus

Main Syllabus

1. Applied Anatomy and Physiology
2. Clinical Pharamacology
3. Clinical microbiology
4. Medical Ethics.
5. Medicine outline
6. Principles of Anaesthesia
7. Basic Anaesthetic techniques

1. APPLIED ANATOMY AND PHYSIOLOGY RELATED TO ANAESTHESIA

I. RESPIRATORY SYSTEM

A. Structure and function of the respiratory tract in relation to respiratory system

Nose - Role in humidificatlon
Pharynx - Obstruction in airways
Larynx - Movement or vocal cords, Cord palsies.
Trachea & Bronchial tree - vessels, nerve supply, respiratory tract, reflexes, bronchosparm
Alveoli - Layers, Surfactants

B. Respiratory Physiology

- Control or breathing
- Respiratory muscles - diaphragm,intercostals
- Lung volumes - dead space, vital capacity, FRC etc.
- Pleural cavity - intrapleural pressure, pneumothorax.
- Work of breathing - airway resistance, compliance
- Respiratory movements under anaesthesia.
- Tracheal tug - signs, hiccup

C. Pulmonary Gas Exchange And Acid Base Status

- Pulmonary circulation
- Pulmonary oedema,
- pulmonary hypertension
- Pulmonary function tests.
- Transfer of gases - oxygen & Carbondioxide
- Acid base status, definitions, acidosis types, Alkalosis types, buffers in the body.

D. Oxygen: prop0erties, storage, supply, hypoxia

E. Respiratory failure, type, clinical features, causes.

II. CARDIOVASCULAR SYSTEM

Anatomy - Chambers of the heart, major vasculature.
Coronary supply, innervation.
Conduction system.

Cardiac output - determinants, heart rate, preload, after load.
Coronary blood flow& myocardial oxygen supply

ECG

Arrhythmias cardiovascular response to

Anaesthetic & surgical procedures.

Hypotension - causes, errects, management.

Cardio pulmonary resuscitation.

Myocardial infarction, hypertension.

III. FLUIDS AND ELECTROLYTES

- Body Fluids - Composition
- Water, sodium and potassium balance
- I.V. Fluids - composition & administration
- I.V. Cannulation.

IV. BLOOD TRANSFUSION

Blood grouping, storage, administration

2. Clinical Pharmacology

ANTISIALAGOGUES

Atropine, Glycophyrrolate

SEDATIVES *I* ANXIOLYTICS

Diazepam, Midazolam, Phenergan, Lorazepam, Chloropromazine,

Trichlopho

NARCOTICS

Morphine, Pethidine, Fentanyl, Pentazozine

ANTIEMETICS

Metaoclopramide,Ondanseteron, Dexamethasone

ANTACIDS

Na citrate, Gelusil, Mucaine gel.

H2 BLOCKERS

Cimetidine, Ranitidine, Famotidine

INDUCTION AGENT

Thiopentone , Diazepam, Midazolam, Ketamine, Propofol, Etomidate.

MUSCLE RELAXANTS

Depolarising - Suxamethonium,

Non depolar:sing -Pancuronium, Vecuronium, Atracurium, rocuranium

INHALATIONAL GASES

Gases - 02, N20, Air

Agents - Ether-, Halothane, Isofllurane, Saevoflurane, Desflurane

REVERSAL AGENTS

Neostigmi*ne*, Glysopyrrolate, 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, Isoprenaline
- Atropine, bicarbonate, calcium, ephedrine, xylocard,
- Ionotropes : dopamine, dobutamine, amidaron
- Aminophylline, hydrocortisone, antihistamlnics, potassium.
- Cardlovascular drugs
- Antihypertensives
- Antiarhythmics
- Beta - Blockers
- Ca - Channel blockers.
- Vasodilators - nitroglycerin & sodium nitroprusside
- Respiratory system - Bronchodilators, respiratory stimulants
  - Bronchiolytic agents
- Renal system - Diuretics,furosemide,mannitol
- Obstetrics - oxoytocin,methergin
- Miscellaneous - Antibiotics, paracetamol, diclofenac- IV fluids,various preparations Nacl, Ringer lacatate, haemaceal,hetastarch heparin,protamine, insulin , analgesics, nsaid, ibuprufen, ketorolac,

3. CLINICAL MICROBIOLOGY

- Sterilization & decontamination- I
  - Dry Heat
  - Moist Heat
- Sterilization - II
  - Chemical methods
  - Gaseous methods
  - Filtration
- Wound Infection & Urinary Tract Infections
- Blood stream Infections
- Respiratory tract Infcetion
- S.Typhi, Salmonel1a Paratyphi 'A', Salmonella Typhimurium
- Catheter, IV associated Infections
- Hospital acquired infections & prevention of hospital acquired infections
- Hepatitis C

4. MEDICAL ETHICS

1. Medical ethics - Definition - Goal - Scope

2. Code of conduct - Introduction –

3. Basic principles of medical ethics – Confidentiality

4. Malpractice and negligence - Rational and irrational drug therapy

5. Autonomy and informed consent - Right of patients

6. Care of the terminally ill- Euthanasia

8. Organ transplantation

9. Medico legal aspects of medical records - Medicolegal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - rentention of medical records - other various aspects

5. MEDICINE OUTLINES

1. Disorder of haemoporesis - Anaemias - iron deficience anaemia,
2. Infections diseses - Sepsis and septic stock, fever of unknown origin, infective endocarditis, infective of skin, muscle, soft tissue, infection control in hospital, diseases caused by bacteria, viruses, myobacterm, viruses, fungi and protozoa and helminthes, common secondary infection in HIV.
3. Diseases of CVS - congenital RHD - Rheumatic fever, CAD, Peripheral vascular diseases.
4. Respiratory system - asthma pneumonia
5. Kidney & Urinary tract - acute renal failure, Glomerulonephritis, Haemodialysis, Transplant, Urinary tract infection
6. Liver and biliary tract disease - Viral hepatitis, alcoholism
7. Endocrinology and metabolism - Diabetes mellitus, Hyper - and hypothyroidism

6. PRINCIPLES OF ANAESTHESIA

1. MEDICAL GAS SUPPLY

- Compressed gas cylinders
- Colour coding
- Cylinder valves; pin index.
- Gas piping system
- Recommendations for piping system
- Alarms & safety devices.

2. ANAESTHESIA MACHINE

- Hanger and yoke system
- Cylinder pressure gauge
- Pressure regulator
- Flow meter assembly
- Vapourizers - types, hazards, maiI\tenance, filling and draining, etc.

3. BREATHING SYSTEM

- General considerations: humidity & heat
- Common components - connectors, adaptors, reservoir bags.
- Capnography ; etc02
- Pulse oximetry
- Methods of humidification.
- Classification of breathing system
- Mapleson system - a b c d e f
- Jackson Rees system, Bain circuit
- Non rebreathing valves - ambu valves
- The circle system
- Components
- Soda lime, indicators

4. FACE MASKS & AIRWAY LARYNGOSCOPES

- Types, sizes
- Endotracheal tubes - Types, sizes.
- Cuff system
- Fixing, removing and inflating cuff, checking tube position complications.

5. ANAESTHESIA VENTILATOR AND WORKING PRINCIPLES.

6. MONITORING

- ECG
- Sp02
- Temperature
- IBP
- CVP
- PA Pressure
- LA Pressure

7. BASIC ANAESTHETIC TECHNIQUES

HISTORY OF ANAESTHESIA

- First successful clinical demonstration:
- Pre - historic (ether) era
- Inhalational anaesthetic era
- Regional anaesthetic era
- Intravenous anaesthetic era
- Modem anaesthetic era
- Minimum standard of anaesthesia
- Who should give anaesthesia?

PRE-OP PREPARATION:

Pre anaesthetic assessment~ History – , past history - disease / Surgery / and personal history - Smoking / alcohol

General physical assessment, systemic examination – CVS, RS, CNS

INVESTIGATIONS

Routine
- Haematological - their significance
- Urine
- E.C.G.
- Chest X - ray

Special
- Endcorine, hormonal assays
- Echocardiography
- Angiography
- Liver function test
- Renal function test
- Others

Case acceptance: ASA grading - I, II, III, IV. V

PRE - ANAESTHETIC ORDERS:

Patient
- Informed consent
- Npo
- Premedication - advantages, drugs used
- Special instructions - if any

Machine	-	Checking the machine 02, N20, suction apparatus Laryngoscops, et tubes, airways
	-	Things for IV accessibility
	-	Other monitoring systems
Drugs	-	Emergency drugs
	-	Anaesthetic drugs

INTRAOPERATIVE MANAGEMENT

- ConfIrm the identification of the patient
- Monitoring - minimum
- Noninvasive & Invasive monitoring
- Induction - drugs used
- Endotracheal intubation
- Maintenance of anaesthesia
- Positioning of the patient
- Blood / fluid & electrolyte balance
- Reversal from anaesthesia - drugs used
- Transferring the patient
- Recovery room – set up and things needed

POST OPERATIVE COMPLICATIONS & MANAGEMENT

B.Sc. Anaesthesia Technology Course

III year syllabus

Main Syllabus

1. Basics of surgery.
2. CSSD Procedures.
3. Regional anaesthetic techniques
4. Anaesthesia for speciality Surgeries.
5. Basic Intensive care

1. Basics of surgery

1. History of Surgery, role of the surgeon, importance of team work and anticipating the needs of surgeons; stresses that may arise during operative procedure
2. surgical terminology, types of incision and indications for the use of particular incision;

3. Haemorrhage-signs and symptoms of internal and external; classification and management;
4. identification of types of tourniquets reasons for use and duration of application, dangers of use;
5. Wounds, types, process of healing, treatment and complications; inflammation; wound infections-causes and treatment; incision and drainage of abscesses; importance of personal cleanliness and aseptic techniques;
6. Pre-operative and post-operative care of the surgical patient; Emergency procedures;
7. .Knowledge of surgical asepsis, skin preparation for invasive procedures

2. CSSD Procedures

1. Waste disposal collection of used items from user area, reception protective clothing and disinfections sage gaurds,
2. use of disinfectionts sorting and classification of equipment for cleaning purposes, sharps, blunt lighted etc. contaminated high risk baby care - delicate instruments or hot care instruments,
3. cleaning process - use of detergents. Mechanical cleaning apparatus, cleaning instruments, cleaning jars, receivers bowls etc. trays, basins and similar hand ware utensils. Cleaning of catheters and tubings, cleaning glass ware, cleaning syringes and needles.
4. Materials used for wrapping and packing assembling pack contents. Types of packs prepared. Inclusion of trays ahd galliparts in packs. Method of wrapping and making use of indications to show that a pack of container has been through a sterilization process date stamping.
5. General observations principles of sterlization. Moist heat sterlization. Dry heat sterlization. EO gas sterlization. H202 gas plasma vapo sterlization.

3. Regional Anaesthetic techniques.

a. Local anaesthetic technique

b. Nerve blocks

c. Spinal Anaesthesia

d.Epidural anaesthesia

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4. Anaesthesia for speciality Surgeries

NEURO ANAESTHESIA

- Glassgow coma scale
- Premedication
- Special investigation -CT, Angiography and MRI
- Checklist
- Induction of a patient
- Reinforced Endotracheal tubes
- Postioning in neuro surgery
- I.C.P.
- Air embolism
- Reversal of the patient
- Transferring to I.C.U. / Ward

OBSTETRIC ANAESTHESIA

- Differences between a pregnant and a normal lady
- Rsiks for anaesthesia.
- Precautions to be taken
- Check list
- Regional vs general anaestjesoa
- Induction / maintenance and recovery.
- Resuscitation of the new born, apgar score
- Reversal and extubation
- Emergencies
  - manual removal of placenta
  - A.P .H.
  - P.P.H.
  - Ruptures uterus
  - Ectopic Pregnancy

PAEDIATRIC ANAESTHESIA

- Theatre setting
- Check list
- Premedication - modes
- Induction

- Intubation - Securing the EIT
- Reversal & extubation – Problems
- Transferring / ICU management
- Pain management

ENT Anaesthesia

- Anaesthesia for adenotonsillectomy
- Anaesthesia for mastoidectomy
- Bronchoscopy and oesophagoscopy

CARDIAC ANAESTHESIA :

- NYHA classification
- Arrhythmias
- Angina
- Dyspnoea
- Special investigations
    - echo cardiography
    - angiography
- Premedication
- Setting up of monitoring system
- Monitoring - invasive and non - invasive
- Getting ready for the case
- Induction of cardiac patient, precautions to be taken
- Cardiopulmonary bypass
- Weaning of CPB
- Transferring the patient to ICU.
- Care to be taken
- I.C.U management.
- Chest tube management

ANAESTHESIA OUTSIDE THE O.R.

- Situations
- Cath Lab
- Radiology
- E.C.T.
- Short comings.

DAY CARE ANAESTHESIA

- Special features
- Set up
- Advantages
- Disadvantages
- Complications
- Future

GERIATRIC ANAESTHESIA

- Physiological changes
- Diseases of aging
- Nervous system
- Geriatric pharmacodynamics / pharmacokinetics
- Postoperative nervous system dysfunction.

ANAESTHESIA FOR TRAUMA & SHOCK

- Resuscitation
- Preoop investigation I assessment
- Criculatory management
- Management of anaesthesia
- Rapid sequence induction
- Other problems

THORACIC ANAESTHESIA

- Pulmonary function tests
    - bed side
    - Vitallograph
- Preoperative preparation
- Premedication
- Check list
- Induction. Intubation
- Double lumen tubes
- monitoring
- Pain management
- Extubation
- ICU management

Postoperative problems

- Nausea & Vomiting
- Sore throat
- Laryngeal granuloma
- Neurological complications.
- Awareness

- Vascular complications.
- Trauma to teeth
- Headache
- Backache
- Ocular complications
- Auditory complications

MAJOR CATASTROPHES

- Mortality
- Causes of death
- Cerebral damage
- Prevention.

5. Basic Intensive Care

1.MONITORING AND DIAGNOSTIC PROCEDURES IN I.C.U.

- Central Venous access.
- ECG monitoring.
- Invasive hemodynamic monitoring

2.GENERAL CARE OF PATIENT IN I.C.U.

- Eye
- Bladder Skin
- Care of mechanically ventilated patient
- Tracheostomy, humidification
- Vascular lines - arterial, venous line
- Radiography
- Physiotherapy - chest physiotherapy

3.FLUID BALANCE AND PARENTERAL NUTRITION

4.INFECTIOUS DISEASES IN I.C.U.

- Antibiotics in I.C.D.
- Oxygen therapy
- Mechanical ventilation

5.ACID - BASE DISORDERS

6.CARDIOVASCULAR FAILURE

- Inotropic support
- Vaso dilator drugs.

7.RENAL FAILURE & LIVER FAILURE

8.HEAD INJURY

9.PRINCIPLES OF TRANSFUSION THERAPY

- Whole blood, erythrocyte products
- Plasma components
- Platelets concentrate)Massive transfusion, acute transfusion reactions.

B.Sc. ALLIED HEALTH SCIENCES

EXAMINATION PATTERN – I YEAR COMMON FOR THE FOLLOWING

COURSES

1. B.Sc. in Accident and Emergency Care Technology
2. B.Sc. in Operation Theatre and Anaesthesia Technology
3. B.Sc. in Critical Care Technology
4. B.Sc. in Dialysis Technology

Subjects	Internal Assessment (IA)		Theory		Practical	
	Max	Min	Max	Min	Max	Min
1. Applied Basic Sciences	50	25	100	50	50	25
2. Computer and English	50	25	100	50	50	25

B.Sc. ALLIED HEALTH SCIENCES

EXAMINATION PATTERN – II YEAR

B.Sc. Degree in Operation Theatre and Anaesthesia Technology

Subjects	Internal Assessment (IA)		Theory		Practical	
	Max	Min	Max	Min	Max	Min
1. Applied Pharmacology & Microbiology	50	25	100	50	50	25
2. Medicine and Medical Ethics	50	25	100	50	50	25
3. Principles of Anesthesia - I	50	25	100	50	50	25

B.Sc. ALLIED HEALTH SCIENCES

EXAMINATION PATTERN – III YEAR

B.Sc. Degree in Operation Theatre and Anesthesia Technology

Subjects	Internal Assessment (IA)		Theory		Practical	
	Max	Min	Max	Min	Max	Min
1. Sterilization Procedures	50	25	100	50	50	25
2. Principles of Anesthesia - II	50	25	100	50	50	25

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