

BACHELOR OF SCIENCE

(OPERATION THEATER TECHNOLOGY)

COURSE SYLLABUS

1ST YR

Sub code No.	Subject Title	Teaching scheme hours per week			Total Credit	Examination Scheme		Total Marks
		L	T	P		Internal evaluation	External evaluation	
BSOTT 101	Anatomy and Physiology	4	-	-	4	30	70	100
BSOTT 102	Pathology & Microbiology	4	-	-	4	30	70	100
BSOTT 103	Surgical Equipment and Machinery	4	-	-	4	30	70	100
BSOTT 104	Introductory Biology	4	-	-	4	30	70	100
BSOTT 201	Medicine	4	-	-	4	30	70	100
BSOTT 202	Surgery	4	-	-	4	30	70	100
BSOTT 203	Obstetrics & Gynecology	4	-	-	4	30	70	100
BSOTT 204	Eye & E.N.T.	4	-	-	4	30	70	100

ANATOMY AND PHYSIOLOGY

Anatomy

1. Introduction to Anatomy & Histology, Structure of cell, epithelial tissue, muscular tissue, nervous tissue.
2. Skeletal System, Structure of bones, types of bones, Bones of cranium, face vertebral column upper and lower limbs, fracture of bone.
3. Muscular System, Structure and types of muscles in human body, important muscles and their group action.
4. Circulation System, Structure of heart, names and position of main blood vessels.
5. Lymphatic System, Lymph vessels, lymph nodes and lymphoid organs, their structure & functions.
6. Digestive systems. Parts of gastrointestinal tract and associated glands.
7. Respiratory System. Parts of Respiratory System.
8. Urinary System. Parts of Urinary System.
9. Endocrine System. Various endocrine glands. Thyroid. Parathyroid. Adrenal glands pituitary pancreas. Thymus and sex glands.
10. Reproductive System. Male & female Reproductive organs.
11. Nervous System. Parts of brain, spinal cord.

Physiology

- 1 Blood. Composition and function of blood, haemopesis, . Blood groups.
- 2 Cardiovascular Systems. Circulation of blood. function of heart and blood vessels.
- 3 Respiratory system. Function of lungs, mechanism of breathing and exchange of gases in the lungs, regulation of respiration, Respiration disorder like anoxia.dyspnea cyanosis etc.artificial respiration.
- 4 Digestive Systems. Digestion of food in mouth, stomach & small intestines. Absorption of food, function of liver function tests.
- 5 Excretory Systems. Structure & function of kidney and urinary bladder. Mechanism of urine formation. disorders of kidney.
- 6 Endocrine Glands Functions of various endocrine glands and hormones secreted by them..
- 7 Nervous System.Neurone & its function, function of central nervous system

PRACTICAL: Identification of bones & other organs of the body and viva voce as per theory syllabus.

PATHOLOGY & MICROBIOLOGY

Pathology

CHAPTER 1:

CELL INJURY AND ADAPTATION: Causes of cell injury. Mechanism of cell injury, ischaemic & hypoxic injury, chemical injury, reversible injury, necrosis, cellular adaptation of growth & differentiation atrophy, hypertrophy, metaplasia, hyperplasia, classification of tumors, premalignant lesion, diagnosis of cancer.

CHAPTER 2:

DISORDERS OF VASCULAR FLOW AND SHOCK: Oedema, hyperemia or congestion, thrombosis, embolism.

Infarction shock, Ischemia, Over hydration, dehydration.

CHAPTER 3:

THE RESPONSE TO INFECTION Categories of infectious agents, host barriers to infection, how disease is caused, inflammatory response to infectious agents

CHAPTER 4:

THE HAEMATOPOIETIC AND LYMPHOID SYSTEM: Haemorrhage. various type of Anaemia, leukopenia, leukocytosis, bleeding disorders coagulation mechanism, maintenance of blood volume. Abnormalities of pH of blood.

Microbiology

CHAPTER 1: INTRODUCTION TO MICROBIOLOGY: Discovery of micro organisms. Classification and general characteristics of microorganisms, nutritional requirements of Micro-organisms.
CHAPTER 2: PRINCIPLES OF MICROBIAL CONTROL: Sterilization, importance of sterilization in OT techniques various methods-physical UV radiation, alcohols and heavy metals, Autoclave structure functioning control and indicators.
CHAPTER 3: IMMUNOLOGY: Antigen-antibody reaction anaphylaxis hypersensitivity
CHAPTER 4: VIROLOGY Imp disease caused by different viruses of mode of infection

SURGICAL EQUIPMENT AND MACHINERY

CHAPTER 1:
Armamentarium: Cox and storing in O.T, Sterilization and disinfections
CHAPTER 2: GENERAL SURGICAL PRINCIPLES AND INSTRUMENTS The surgical patient, operation room technique .
CHAPTER 3 :
INSTRUMENTS USED FOR PREPAIRING SURGICAL
Cheates forceps,rampely,s sponge holding forceps mayo's towel chip,esmach's bandage, Simple tourniquet, pneumatic tourniquet
CHAPTER 4 :
INCISION MAKING METHOD AND INSTRUMENTS : Bard parker knife handle, major abdominal incision, artery forceps and their types instruments used in homeostasis, Kocher's forceps, electric cautery.
CHAPTER 5:
RETRACTORS: Single hook retractors , Czerny's retractor, s, nerve hook retractors, Morris retractors, deaver's, retractors.
CHAPTER 6 :
WOUND MANAGEMENT Seissors and its types sucking material and techniques,disinfectants and irritants, dressing procedures ,different types of bandages, surgical needle & needle holders, various types of suture material
PRACTICAL :
Identification & Demonstration of working of the equipment and viva voce as per theory syllabus.

INTRODUCTORY BIOLOGY

Unit I

Living World

Biology & Its Branches; relationships with other sciences; scientific methods in Biology; historical breakthroughs; scope of biology and career options; role of Biology in dispelling myths and misbeliefs; characters of living organisms, (elementary idea of metabolism, transfer of energy at molecular level, open and closed systems, omoeostasis, growth and reproduction, adaptation, survival, death).

Origin and evolution of life - theories of evolution; evidence of evolution; sources of variations (mutation, recombination, genetic drift, migration, natural selection); concept of species; specification and isolation (geographical and reproductive); origin of species.

Unit II

Diversity of Life

Variety of living organisms, Systematic; need, history and types of classification (artificial, natural, polygenetic); biosystematics; binomial nomenclature; Two kingdom system, Five kingdom System, their merits and demerits, status of bacteria and virus; botanical gardens and herbia; zoological parks and museums.

Unit III

Cell and Cell Division

Cell as a basic unit of life - discovery of cell, cell theory, cell as a self - contained unit;

prokaryotic and eukaryotic cell; unicellular and multicellular organisms; tools and techniques (compound microscope, electron microscope and cell fractionation); Ultrastructure of prokaryotic and eukaryotic cell - cell wall, cell membrane - unit membrane concept (fluid mosaic model); membrane transport; cellular movement (exocytosis, endocytosis); cell organelles and their functions

- nucleus, mitochondria, plastids, endoplasmic reticulum, Golgi complex, lysosomes, lysosomes, microtubules, centriole, vacuole, cytoskeleton, cilia and flagella, ribosomes..

Unit IV

Genetics

Continuity of life - heredity, variation; Mendel's laws of inheritance, chromosomal basis of inheritance; other patterns of inheritance - incomplete dominance, multiple allelism, quantitative inheritance.

Chromosomes - bacterial cell and eukaryotic cell; parallelism between genes and chromosomes; genome, linkage and crossing over; gene mapping; recombination; sex chromosomes; sex determination; sex linked inheritance; mutation and chromosomal aberrations; Human genetics - methods of study, genetic disorders.

DNA as a genetic material - its structure and replication; structure of RNA and its role in protein synthesis; Gene expression - transcription and translation in prokaryotes and eukaryotes; regulation of gene expression, induction and repression - housekeeping genes; nuclear basis of differentiation and development; oncogenes.

Unit V

Morphology of Plants and Animals

Morphology - root, stem and leaf, their structure and modification; Inflorescence, flower, fruit, seed and their types; Description of Poaceae, Liliaceae, Fabaceae, Solanaceae, Brassicaceae and Asteraceae.

Morphology of animals - salient features of earthworm, cockroach and rat; tissue systems, structure and function of tissues - epithelial, connective, muscular and nervous.

Practical

1. Study of parts of Compound Microscope
2. Study of mitosis in onion root tip and animal cell (grasshopper)
3. Study of meiosis in onion flower buds, and testis of grasshopper.
4. Study of cyclosis in leaf cell of Hydrilla, or Tradescantia and in Paramecium.
5. Study of cell wall components (cellulose, lignin, suberin and mucilage).
6. Study of mitochondria by staining with a Janus Green.
7. Study of specimens and their identification with reason - Bacteria, Oscillator, Spirogyra, Rhizopus, mushroom/bracket fungi, yeast, liverwort, moss, fern, Pinus, one monocotyledon, one dicotyledon and lichens.
8. Study of characters of specimens and identification with reason - Amoeba, Hydra, Liver - Fluke, Ascaris, Leech, Earthworm, Prawn, Silk moth honey bee, snail, Starfish, Dogfish, Rohu, Frog, Lizards, Pigeon/ any other bird and rabbit/ any other mammal.
9. Study of squamous epithelium, muscle fibres, nerve cells and mammalian blood film through temporary/permanent slides.
10. Study of external morphology of earthworm, cocroach, from and rat through models.

MEDICINE

CHAPTER 1: HISTORY TAKING AND SYMPTOMALOGY OF VARIOUS DISEASES. FEVER, polyuria, heart,

burns, vomiting, diarrhea, jaundice, epistaxis,

Chapter 2: ABDOMEN Hepatomegaly, splenomegaly, ascitis, cirrhosis, hepatitis, malaria, typhoid, aids.

CHAPTER 3 DISORDERS OF CIRCULATORY AND RESPIRATORY

SYSTEM Pleural effusion, pulmonary tuberculosis, pneumonia, dyspnoea, asphyxia, hypoxia, cardiac failure, pericardial effusion, congenital heart diseases, cyanosis, hypertension, cardiac monitors, defibrillator.

CHAPTER 4 DISORDER OF NERVOUS AND ENDOCRINE SYSTEM:

Hemiplegia, paraplegia, paralysis, Parkinson's disease, coma, diabetes, Addison's disease, hyperthyroidism.

CHAPTER 5 MEDICAL EMERGENCIES : Cardiac arrest, bronchial asthma, respiratory failure, acute gastroenteritis, meningitis, renal colic, hypoglycemia, acute poisoning.

CHAPTER 6 PREVENTIVE ASPECTS OF MEDICINE: Concept of health, preventive medicine, social medicine, public health, epidemiology of infectious diseases, methods of prevention and control of infectious diseases.

PRACTICAL: Demonstrating the use of medical equipment and viva voce as per theory syllabus.

SURGERY

CHAPTER 1 Introduction of surgery and basic principles of surgery, basic principles of surgery.

CHAPTER 2 : Tumors, benign and malignant, cysts, ulcers, sinuses, fistula, differential diagnosis of cyst and tumor.

CHAPTER 3 : FRACTURES AND DISLOCATION – Classification of fracture, management, fixation, reduction, immobilization, principles of closed reduction, artificial prosthesis.

CHAPTER 4 COMPARATIVE AND SURGICAL ANATOMY Investigation of breast, benign disease, carcinoma of breasts, treatment of carcinoma of breast, mastectomy.

CHAPTER 5 : - HEAD INJURY – Common manifestation, management of patient, surgical interventions.

CHAPTER 6 : Cleft lip & palate, acute appendicitis, urethral strictures.

CHAPTER 7 : DIFFERENT SURGICAL INSTRUMENTS: Instruments used in major surgical operation including Biliary, Tract Surgery, anorectal surgery, urological surgery, orthopedic surgery instruments, plastic surgery instruments

PRACTICAL : Demonstrating the use of medical equipment and viva voce as per theory syllabus.

OBSTETRICS & GYNECOLOGY

OBSTETRICS : Pregnancy, normal delivery, Forceps Delivery, episiotomy, caesarian delivery, Twin pregnancy birth control methods, Medical termination of pregnancy.

GYNECOLOGY : Anatomy of female sex organs, gynecological examination and diagnosis, diseases of vulva, diseases of vagina, S.T.D in female, disorders of menstruation. Prolapsed uterus, Fibromyomas of uterus, endometriosis, various ovarian tumors, gynaec examination instruments speculum & dilators, instruments of common gynecological and obstetrics procedures or surgery.

PRACTICAL : Identification of Instrument and viva voce as per theory syllabus.

EYE & E.N.T.

EYE

CHAPTER 1: INSTRUMENTS USED FOR EXAMINATION OF EYE,

DESMASEL, S EYE LID : retractor, ophthalmic loop, ophthalmoscope and anatomy of eye.

CHAPTER 2 : Clinical methods in ophthalmology ,history taking ,ocular examination & diagnostic test, snell's formulae, tonometry, direct ophthalmoscopy.

CHAPTER 3 : Various eye diseases ,diseases of conjunctiva, trachoma, diseases of cornea, ulcerative keratitis, scleritis, diseases of lens, cataract glaucoma, retinal detachment, intraocular lens implementation for cataract.

ENT

CHAPTER 1: EAR: Anatomy of the ear, diseases of middle ear, Ramsay hunt syndrome, ear of mastoid surgery, parotid surgery & trauma to face, tumors of external ear, auricle, middle ear, and rehabilitation of hearing impaired.

CHAPTER 2 : NOSE: Anatomy of nose, nasal septum & its diseases ,acute & chronic rhinitis, nasal polyps,epistaxis,fracture of nasal septum,

CHAPTER 3 : THROAT: Anatomy of throat, diseases of larynx, tracheotomy:- types, steps of operation, post operative care.

CHAPTER 4 : Instruments used in operation in Ear, Nose & Throat.

PRACTICAL : Demonstration the use of medical equipment and viva voce as per theory syllabus.

CLINICAL

Physical facility

Layout of operation theatres

Operating room

Special procedure rooms

Principles of aspects and sterile technologies

Decontamination and disinfection

Thermal sterilization

Chemical sterilization

Radiation Sterilization

Pre-Operative room

Recovery room

Identification of instruments for common surgical operations and examinations, such as:-

(a) Incision of abscess, whitlow, carbuncles etc, excision of sebaceous cysts, warts, ulcers, in-growing nails and foreign bodies etc .

(b) Rectal operations, like - haemorrhoidectomy, excision of fistula and fissure-in-ano and incision of ischio-rectal abscess etc

(c) Laparotomy for appendicectomy, intestinal obstruction and perforated peptic ulcer etc.

Setting up of tray for various surgeries

Scrubbing, gloving & gowning / Assisting the scrub nurson

Laying tables for surgeries

OT Stores – Indenting, storekeeping, accounting and audit

Inventory Management

Electrical and fire safety

OT Waste management

References

Operating Room technique Berry and Kohn's

Pocket guide to the operating room ..2nd edition by Maxime A. Goldman

APPLIED PREOPERATIVE PREPARATION OF THE PATIENT DIAGNOSTIC PROCEDURES

1. Pathological examination
2. Radiological examination
3. MRI
4. Nuclear medicine studies

 Ultrasonography

 Endoscopy

5. Anaesthesia techniques

 Historical background

 Types of anaesthesia

 Choice of Anaesthesia

 General Anaesthesia

 Indication of general anaesthesia

 Endotracheal intubation

 Balanced anaesthesia

 Local and regional anaesthesia

 Spinal and epidural anaesthesia

 Intravenous anaesthesia agents

Complications of general anaesthesia

Complications of local/ regional anaesthesia

Anaesthesia machine and central gas supply

References

Operating Room technique Berry and Kohn's

Pocket guide to the operating room ..2nd edition by Maxime A. Goldman

PATHOLOGY

1 Cardiovascular system

Atherosclerosis : Definition, risk factors, pathogenesis, clinical effects

Hypertension: Definition, types, pathogenesis and effect of hypertension

Aneurysms: Definition, classification

Atherosclerotic Aneurysms: definition, pathogenesis, effects

Syphilitic aneurysms: pathogenesis, effects

Dissecting Aneurysma and cystic medial necrosis

Heart Failure: Definition, etiology, types of heart failure

Congenital heart disease: definition, classification

Ischaemic heart diseases: definition, classification

Cardiomyopathy: definition, types

Pericardial disease: definition, types

Tumours of heart: Classification

2 : HEMATOLOGY

Anaemia: definition, morphology types and diagnosis of anaemia

Brief concept about haemolytic anaemia and hypochromic anaemia

Leucocyte disorders: briefly leukaemia, leukocytosis

Bleeding disorders: definition, classification, causes and effects of important types of bleeding disorders, briefly various laboratory tests used to diagnosis bleeding disorders

3:Respiratory system:

Chronic obstructive pulmonary diseases: definition and types, pathologic changes

Briefly concept about obstructive versus restrictive pulmonary diseases

Pulmonary infection

Pleura: normal structure and inflammations

APPLIED MICROBIOLOGY

1: Health care associated infections and Antimicrobial resistance: infections that patients acquire during the course of receiving treatment for another conditions within a healthcare setting like Methicillin Resistant Staphylococcus aureus infections, Infections caused by Clostridium difficile, Vancomycin resistant enterococci etc. Catheter Related blood stream infections,ventilator associated pneumonia, catheter related urinary tract infections, surveillance of emerging resistance and changing flora. The impact and cost attributed to Hospital Associated infection.

2: Disease communicable health care workers hospital diseases. Respiratory tract infection, blood borne diseases(HIV, HCV, HFV,HBV,HSV),salmonella staphylococcus, streptococcus, pneumonia, haemophilus, influenza,etc

3: sampling in microbiology, agar plating technique, requirement media, antibiotics drugs testing.

4. A. Disinfection of instruments used in patient care: Classification, different methods, advantages and disadvantages of the various methods.

B. Disinfection of patient care unit

C. Infection control measures for ICU's 10 hours

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 8 hours

(d) Autoclaving material, different type of Autoclave, loading, processing, control indicators.

PHYSIOLOGY

UNIT 1

- Blood groups, ABO system/Rh system
- Blood grouping and typing
- Crossmatching
- Blood transfusion- universal donar/ universal recipient
- Selection criteria of a blood donar transfusion reactions
- Anticoagulants

UNIT 2 - Cardiovascular system

- Heart anatomy, nerve supply of heart, cardiac cycle, cardiac output(definition)
- Heart sounds, pulse(only definition)
- Pulmonary and systemic circulation
- Blood pressure(definition), normal value, clinical management of BP

UNIT 3- Digestive system

- Physiological anatomy of GT tract
- Functions of digestive system
- Salivary glands, functions of Salivary glands
- Liver, functions of liver
- Gall bladder and its functions
- Small and large intestine, functions and absorption

UNIT 4- Respiratory system

- Functions of respiratory system, physiological anatomy of respiratory system, stages of respiration
- Transportation of O₂, lung volumes, gas exchange

UNIT 5-Endocrine glands

- Functions of various endocrine glands and hormone secreted by them

UNIT 5-Nervous system

- Neurone, its functions and structure, Neuroglia, Nerve fibre

UNIT 6-Excretory system

- Structure and functions of kidney and urinary bladder, mechanism of urine formation
- Composition of normal urine

UNIT 7-Reproductive system

- Puberty, functions of testes, spermatogenesis, endocrine functions of testes
- Female reproductive system- ovulation, menstrual cycle

UNIT 8- Lymphatic system

Lymph and its functions

BIOCHEMISTRY

1. Specimen collection: Pre-analytical variables. Collection of blood. Collection of CSF & other fluids. Urine collection. Use of preservatives. Anticoagulants.

2. Introduction to laboratory apparatus Pipettes: different types (graduated, volumetric, Pasteur, automatic etc). Calibration of glass pipettes. Burettes, beakers, petri dishes, depression plates. Flasks: different types (volumetric, round bottomed, Erle Meyer conical etc). Funnels: different types (conical, Buchner etc). Bottles: reagent bottles – graduated and common, wash bottles – different type specimen bottles

3. Measuring cylinders, porcelain dish Tubes: test tubes, centrifuge tubes, test tube draining rack. Tripod stand, wire gauze, bunsen burner. Cuvettes, significance of cuvettes in colorimeter, cuvettes for visible and UV range. Cuvette holder racks: bottle, test tube, pipette, dessicator, stop watch, timers, scissors. Dispensers: reagent and sample. Maintenance of lab glass ware and apparatus. Glass and plastic ware in laboratory. Use of glass: significance of boro silicate glass, care and cleaning of glass ware, different cleaning solutions of glass. Care and cleaning of plastic ware, different cleaning solution

4. Instruments (Theory and demonstration) Diagrams to be drawn Use, care and maintenance of: water bath, oven & incubators, water distillation plant, water de ionisers, refrigerators, cold box, deep freezers, reflux condenser, centrifuge, balances, colorimeter, spectrophotometer, pH meter and electrodes. Centrifuges: definition, principles, Svedberg unit, centrifugal force, centrifugal field, RPM, conversion of G to RPM and vice versa, different types of centrifuges. Manual balances: single pan, double pan, triple balance, direct read out electrical balances. Guideline to be followed and precautions to be taken while weighing. Weighing different types of chemicals, liquids, hygroscopic compounds etc. Colorimeter, spectrophotometer, pH meter, electrodes, salt bridge solution: principles, parts, types, guidelines to be followed and precautions to be taken while using.

5. Safety of measurements

6. Acids and Bases Definition, physical and chemical properties with examples. Arrhenius concept of acids and bases, Lowery – Bronsted theory of acids and bases. Classification of acids and bases. Differences between bases and alkali, acidity and basicity, monoprotic and polyprotic acids and bases. Concepts of acid base reaction, hydrogen ion concentration, ionization of water, buffer, pH value of a solution. Preparation of buffer solutions using pH meter. Salts: definition, classification, water of crystallization, definition and different types, deliquescent and hygroscopic salts.

8. Acid- base indicators: (Theory and Practicals) Theory Definition, concept, mechanism of dissociation of an indicator, colour change of an indicator in acidic and basic conditions, use of standard buffer solution and indicators for pH determinations, preparation and its application, list of commonly used indicators and their pH range, suitable pH indicators used in different titrations, universal indicators.

REFERENCE BOOKS 1. Varley: Clinical chemistry 2. Teitz: Clinical chemistry 3. Kaplan: Clinical chemistry 4. Ramakrishna S, Prasanna KG, Rajna: Text book of Medical Biochemistry. Latest Ed. Orient longman Bombay –1980 5. Vasudevan DM, Sreekumari,S: Text book of Biochemistry for Medical students, Latest Ed 6. Das, Debajyothi): Biochemistry, Latest ED, Academic, Publishers, Calcutta – 1992 7. Rajagopal G & Ramakrishna, 1983: Practical Biochemistry for Medical Students Oriental Blackswan Pvt. Ltd. 8. Rajagopal: Practical Biochemistry for Medical students-, Orient Longman PVT Ltd.

C.S.S.D

Cleaning and dusting- methods of cleaning, composition of dust

General care and testing of instruments- forceps' haemostatic, needle, holders, knife, blade, scissors, care during surgery.

Disinfectants and of there instruments and sterilization- - Definition, mechanical washing, ultrasonic cleaner, lubrication inspection and pitfalls

Various methods of chemical treatment- formalin, glutaraldehyde etc

Thermal, hot air oven- dry heat, Autoclaving, steam sterilization, UV treatment

Instruments Etching, care of micro surgical and titanium instruments

Sterilization of equipments- Arthroscope, Gastro scope, Imago lamp, Apparatus, suction apparatus Anaesthetic equipments including end tracheal tubes

OT sterilization including laminar air flow

Blood transfusion

Monitoring in the operation theatre

Positioning of patient

Instrument planning for various surgical procedure and auxiliary instrumentation

OT environment, control of infection

Duties of nurses- ethics, behaviour during surgery

NURSING CARE AND FIRST AID

HAEMORRHAGE IN OT, ASSESSMENT MANAGEMENT AND

NURSING CARE

CALCULATION OF DAILY FLUID REQUIREMENT

PREPARATION OF STERILE FIELD. PREPARATION OF SKIN FOR PATIENT;

SPECIAL PRECAUTION IN HANDLING PATIENTS WITH SEPSIS,

BLOOD BORNE INFECTION – HEP.B, HCV, HIV ETC; CLEANING

AND DISINFECTION OF THE ARTICLES AND OT (WITH SPECIAL

REFERENCE TO HIV, & HCV TERMINAL DISINFECTION OF THEATRE).

VARIOUS POSITIONS DURING OPERATIONS LITHOTOMY POSITION,

ANTE- TRENDELENBERG'S POSITION, KIDNEY POSITION

PHARMACOLOGY

1 general pharmacology principles

- a. definitions, role of drug administration
- b. pharmacokinetics
- c. pharmacodynamics

2. drugs acting on autonomic nervous system

- a. general condition
- b. cholinergic drugs
- c. cholinergic blocking drugs
- d. sympathomimetic drugs
- e. drugs acting on autonomic ganglia
- f. drugs acting on autonomic ganglia
- g. neuromuscular blocking agents

- 3. cardiovascular drugs
- Antihypertensives
- beta adrenergic antagonists
- alpha adrenergic
- vasodilators
- calcium channel blockers
- Antiarrhythmic drugs
- Vasodilators and Antianginal drugs

4: Drugs acting on blood and blood forming organs

- Drugs affecting coagulation of blood
- Fibrinolytic agents and Antiplatelet drugs
- Drugs effective in iron deficiency anaemia

- Blood substitutes and plasma expanders
- 5. Anaesthetic agents
 - General anaesthetics (classification and definition)
 - Local anaesthetics (classification and definition)
- 6. Drugs acting on central nervous system
 - Alcohols
 - Sedatives, hypnotics
 - Central nervous system stimulants
 - Centrally acting muscle relaxants
- 7. Analgesics
 - a. definition and classification
 - b. drugs used in parkinsonism
 - c. drugs dependence and abuse of drugs
- 7. Drugs acting on respiratory system
 - a. drugs used in bronchial system
 - b. nasal decongestants
 - c. drugs used in treatment of cough
- 8. Drugs acting on kidney
 - a. Diuretics
 - b. Antidiuretics
- 9. hormones and Hormone antagonists
 - a. general considerations
 - b. Anterior pituitary hormones
 - c. Adrenocortical steroids
 - d. Androgens and anabolic steroids
 - e. Estrogens and Progestins
 - f. Oral contraceptives and ovulation inducing drugs
 - g. thyroids and anti thyroids drugs

10. Drugs acting on uterus

a. oxytocics and uterine relaxants

11. Chemotherapy

a. general consideration

b. sulfonamides, nitrofurans and other synthetic antimicrobial agents

c. penicillins and other antibiotics mainly effective against gram +ve organism

d. aminoglycosides and other antibiotics effective mainly against gram -ve organisms

e. cephalosporins, tetracyclines and other antibiotics effective against both gram -ve organisms

f. antifungal antibiotics

g. chemotherapy of viral infections

h. chemotherapy of malaria

i. chemotherapy of cancer

j. chemotherapy of leprosy

k. chemotherapy of urinary tract infections

ENT

Ear

- Development of the ear, Anatomy of the ear, Physiology of the ear
- Ear diseases, examination of the ear, other common disorders of the inner ear
- Tumors of the ear, tinnitus, deafness, hearing aids, principle of audiometry

Nose

- Development of anatomy of the nose, physiology of the nose, structure
- Congenital diseases of the nose
- Diseases of the nose
- Functions of the nose (pharynx, larynx)
- Examination of the nose

Throat

- The oral cavity, pharynx, salivary glands, larynx.
- Common diseases of oral cavity.
- Tumors of the pharynx.
- Disorder of voice, thyroid.

GYNAECOLOGY

Anatomy of uterus, ovaries and female genitalia

Normal labour/Abnormal labour/Abnormal presentation/3rd stage complications -

Atonic PPH, Traumatic PPH, Inversion of uterus, Retained

placenta/Rupture of uterus/cord prolapse/Vacuum and

Forceps, LSCS, Perineal tear/Hysterectomy/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,

ANAESTHESIA

principles of Anaesthesia

general Anaesthesia(definition and classification)

local Anaesthesia(definition and classification)

Anaesthesia for General Surgery

Anaesthesia for orthopaedic Surgery

Anaesthesia for ENT Surgery

Anaesthesia for ophthalmic Surgery

Anaesthesia for obstetrics / gynaecology

Anaesthesia for urology Surgery

Anaesthesia for Neuro Surgery

Anaesthesia for plastic & reconstructive Surgery

Anaesthesia for paediatric Surgery

Anaesthesia for cardiology / cardiothoracic Surgery

Anaesthesia for vascular Surgery

Anaesthesia for maxillofacial Surgery

Anaesthesia for Surgery in remote areas – psychiatry,

radiology and imaging, IVF, ESWL, Endoscopy

Anaesthesia in camps / field areas ,

Complications during anaesthesia

Care of transport of patients

OT MANAGEMENT

1 ORGANIZATION OF HOSPITAL - ORGANIZATION OF OPERATING ROOMS - SINGLE AND MULTIPLE THEATRE UNITS - ELECTIVE AND EMERGENCY SURGERIES, AMBULATORY SURGERY.

2 ADMISSION & TRANSFER PROCEDURE; MAINTENANCE OF OPERATIVE RECORDS

3 COMMUNICATION AND HEALTH CARE PROVIDER – PATIENT RELATIONSHIP, METHODS OF EFFECTIVE COMMUNICATION: ATTENDING SKILLS, RAPPORT BUILDING SKILLS, EMPATHY SKILLS, BARRIERS TO EFFECTIVE COMMUNICATION

4 MANAGEMENT, NEED FOR SCIENTIFIC MANAGERMENTS, DELEGATION, DECISION MAKING

5 SUPERVISION –TECHNIQUES

6 ASSIGNMENTS-INDIVIDUAL AND TEAM FUNCTION

7 MORAL- EMPLOYEE

8 HUMAN RELATIONS, PUBLIC RELATIONS, PLANNING OF COURSES BLOCK TRAINING PROGRAMME, WEEKLY SCHEDULE

9 ETHICAL AND LEGAL ISSUES IN OPERATION THEATRE AND ANAESTHESIA

SURGERIES

- preparation, nursing requirements, equipments including instruments, sutures
- 2. Anesthesia techniques, patient positioning and recovery
- 3. Gynecology/ obstetric surgery
- 4. Urologic surgery
- 5. Orthopedic surgery
- 6. Neurosurgery
- 7. Ophthalmic surgery
- 8. Plastic and Reconstructive surgery
- 9. Otorhinolaryngologic and head and neck surgery
- 10. Thoracic surgery
- 11. Cardiac surgery
- 12. Vascular surgery
- 13. Thyroid surgery

References

Operating Room technique Berry and Kohn's

Gynaecology by DC DUTTA

Ear, Nose and throat Diseases by Mohd.Maqbool

Text book of Gynaecology, Contraception and Demography by C.S dawn

Textbook of pathology by Harsh Mohan

Textbook OF Microbiology By Satish Gupta, RC Dubey,

Pharmacology by N Murugesh

Anatomy and Physiology By Ross and Wilson