

**SYLLABUS**  
**O.T. YEARLY SYLLABUS**  
**O.T. FIRST YEAR**

**1. ANATOMY & PHYSIOLOGY**

*“Anatomy is the study of various structures of various systems and physiology deals with study of functions of various systems”.*

• **Anatomy & Physiology.**

- (a) Liver, Gall Bladder- Pancreas
- (b) Respiration System-*Larynx, Lungs*
- (c) Circulatory System- *Heart*
- (d) Nervous System. -*Function of Brain*
- (e) Endocrine System –**Glands**- Pituitary, Thyroid, Adrenal, Ovaries and Testes, Pancreas.
- (f) Organs Of special Senses:-Eye, Nose, Tongue, Ear, Skin.

**2. OPERATIVE ROOM TECHNIQUE**

- a. **OPERATIVE ROOM**- Physical Setup, Preparation of Anaesthetic Table, Setting up of Sterile Trolley, Scrubbing, Gloving.
- b. **SPECIAL POSITIONING OF OPERATIVE PROCEDURE**
  - (a) Kidney Position
  - (b) Lithotomy Position
  - (c) Gall Bladder Position
  - (d) Trendelenburg Position
  - (e) Position for Operation In The
    - (i) Neck, Bronchoscopy and Oesophagoscopy
    - (ii) Breast and Axilla
- c. **STERILIZATION AND DISINFECTION**-
  - (a) (i) Sterilization by heat (ii) Boiling
  - (b) Preparation and sterilization of Rubber Goods, gloves, gun elastic, surgical dressing, sterile water and infusion fluid, needles, syringe, glass wares and other materials.
- d. **TECHNICAL TERMS IN COMMON USE**-
- e. **PREVENTION OF CONTAMINATION IN O.T.**

**3. FUNDAMENTAL OF OPERATION THEATRE**

- 1. **MICROORGANISM AND THEIR INFLUENCE ON HUMAN BODY**  
**SOME OF THESE ARE: -**
  - (i) Bacteriology, Virology, Mycology, Parasitology, Classification of Microorganism.(ii) Bacteria, Viruses, Fungi, Parasites.
- 2. **ENTRY OF THE INFECTION: -** From Air, Food Material, Soil, Etc.
- 3. **NOSOCOMIAL INFECTION**-
- 4. **Fluid AND ELECTROLYTE BALANCE**  
Introduction- acid base balance, buffer system, general instruction for IV infusions, complication of IV infusions.
- 5. **FLUIDS**- Isotonic, Hypotonic, hypertonic, blood transfusion, and their complication.
- 6. **C.P.R. (Cardio Pulmonary Resuscitation)**
  - (a) Airway Control- Mouth-to-Mouth Ventilation.
  - (b) Breathing Support-External Cardiac Compression.
  - (c) Circulation Support.

#### 4. ANAESTHESIA & MANAGMENT

Introduction **Oxygen Therapy**- Physiology of oxygen, oxygen and CO<sub>2</sub> Transport to the tissues, Methods of oxygen Administration

**Acid base balance, buffer**- interpretation and management, acid base, homeostasis, buffer system, homeostasis buffer, fluid balance, fluid management.

**Monitors in Anaesthesia**- Pulse, ABP (Arterial Blood Pressure) blood flow detectors, E.C.G. temperature monitoring, heart sounds, heart rate, drugs interaction, advance drug reaction.

**Risk of Anesthesia in Cardiac Patients** – Hypertension, myocardial infraction, cardiac failure.

**Anaesthetic Management**- Role of Anesthetic in Management the ICU, casualty, psychological problems in ICU, Hazards of treatment in ICU.

# O.T. YEARLY SYLLABUS

## O.T. SECOND YEAR

### 1. PHARMACOLOGY

Pharmacology is the scientific study of drugs in human beings. A drug is defined usually as a substance or a mixture of substance used in diagnosis, cure, treatment or prevention of diseases.

**Drugs:-**Sources of Drugs, Distribution of the Drugs, Drugs Metabolism, Drugs and Anaesthesia (before operation), Drugs use for producing pain relief (Analgesia) and unconsciousness and maintain of Anaesthesia, Drugs route (IM, IV) Drugs Administered by inhalation route.

Non-depolarizing Muscles Relaxant Drugs. (Pharmacological Actions, preparation and Dose)

**Local Anaesthetic Drugs:-** Method of Administration.

**Anaesthesia-** Introduction- Gen Anaesthesia, Inhalation Anaesthetics, Technique of induction and ventilation with bag or Mask, Laryngoscopy, endotracheal intubation, fixation of tracheal tube with elastoplast (first piece & second piece)

Lateral & sitting position of the patient for spinal/epidural, anaesthesia.

Spinal tray, Epidural tray, facility for oxygenation, A good overhead lighting system.

### 2. O.T. MANAGEMENT

- **Role of the O.T. Technician**
- **Responsibilities of the Scrubbed Nurse**
- **Care of O.T. Room- Pre Medication Room, Recovery Room**
- **Prevention of Contamination in operation Room**
- **General Setup of Instrument-** Ligatures, Abscess Incision, Amputations, Operation on the Breast, Appendectomy, Bone Grafting, Bronchoscopy, Circumcision, Cleft Palate Repair, Gastrectomy, Excision Jaw, Herniotomy, Hydrocele, Operations on Uterus and Fallopian Tube, Nephrectomy, Oesophagoscopy, Perineorrhaphy, Skin Grafting, Vasectomy, E.N.T. Operations, Tonsillectomy, Eye Operation
- **Instrument specification and the use-** Towel Clips, Bard Parker Knife Handle, Scissors, Dissecting Forceps, Artery Forceps, Kocher's Forceps, Retractors, Allis Tissue Forceps, Needle Holder, Suture Needles Probe, Speculums- Aural, Long Blocked, Nasal, Vaginal, Ovum Forceps, Vulsellum Forceps, Episiotomy Scissors, Uterine Packing Forceps, Catheter, Myoma Hook, Fistula Director, Pile Holding Forceps.
- **E.N.T. Instrument-** Boyle-Davis Mouth Gag, Crocodile Punch Biopsy Forceps, Tonsil Holding Forceps, Fixation Forceps, Broad Needle Iris Forceps.
- **Bone Cutter Amputation saw**

### 3. NURSING CARE AND FIRST AID

**Basic principles and concept of Nursing-** Hygienic Needs and importance care of skin, mouth teeth and dentures, nose, eye and hair.

**Function, Dietary sources and daily requirement** –protein, fats, carbohydrate, cellulose, calorie, minerals, vitamin.

**Feeding care in the ICU.**

**FIRST AID-** aims of first aid, rule of first aid, ambulance service

**BURNS AND SCALDS-** management of burns, accidents, first aid of drowning, in severe external bleeding, first aid in bites, first aid in foreign body.

**BANDAGES-** type of bandage.

**SPECIAL TERMS-** Dialysis, Head Injuries Infection Control in the Intensive Care Unit, Shock, Chest Physiotherapy, Aids and the Health Care Personnel.

**METHODS OF STERILIZATION-** Physical & Chemical Method.

#### **4. SURGICAL INSTRUMENT**

##### **INSTRUMENTS AND EQUIPMENTS USES FOR ANAESTHESIA**

- (a) **Anaesthetic machine-**Boyle's Machine, Gas Cylinders, Flow meters, Vaporizers.
- (b) **Breathing circuits and attachments-**Schimmel Busch Mask, Magill's Breathing Attachment, Closed or Rebreathing System, Reservoir Bag Breathing Tubes (Face Mask, Harness, Endotracheal Tubes & Connectors, Catheter Mounts).
- (c) **Instrument aiding anaesthesia-** Laryngoscope, Macintosh Spray, AMBU-Bag, Medical suction Apparatus, Oropharyngeal Airway.

