

O.T. TECHNICIAN SYLLABUS

ANATOMY & PHYSIOLOGY

1. Elementary Physics & Chemistry
2. Characteristics of Living Matter
3. Structure of Living Matter
4. The Tissues
5. Systems and Various Parts of Human Body
6. Development & Types of Bones
7. Bones of Head & Trunk
8. Bones of the Limbs
9. Joints or Articulations
10. Structure and action of Muscles
11. The chief Muscles of the Body
12. The Brain
13. The Heart and Blood Vessels
14. The Circulatory System
15. The Lymphatic System
16. The Respiratory System
17. The Digestive System
18. The Liver, Biliary System and Pancreas
19. Nutrition & Metabolism
20. Endocrine Glands and Exocrine Glands
21. The Urinary System
22. The Nervous System
23. The ear
24. The Eye
25. The Skin
26. The Reproductive System

SURGICAL INSTRUMENTS AND PROCEDURES

(Including Sterilization and Disinfection, Different Methods, Protection of Patients in Surgery, Preparation of Patients)

1. Preoperative Consideration
Psychological Support of the Surgical Patient
2. Protection of the Patient in Surgery
 - Admission Process

- **Transfer Procedure Position**
- **Environmental Controls**
- **Electro Surgery**
- **Operative Records**
- **Counting Procedure**
- **Sterilization**
- **Emergencies & Disasters**

3. Surgical Instruments

- **Instruments for General Surgery**
- **Operation of Face & Neck**
- **Operation of Nose, Throat and accessory Nasal Sinuses**
- **Ophthalmic Surgery**
- **Sinuses, Ear and Throat**
- **Operations on the Chest**
- **Operations on the Genito-Urinary Tract**
- **Gynaecological & Obstetric Operations**
- **Orthopedic Operations**
- **Neuro-Surgical Operations**
- **Operations on the Vascular System**
- **Radium Insertion**
- **Traumatic Surgery**

4. Surgical procedures

a) Neck Surgery

- **Thyroidectomy**
- **Parathyroidectomy**
- **Thyroglossal Cystectomy**

b) Breast Procedures

- **Breast Biopsy**
- **Mastectomy**

c) Abdominal Extra intestinal Surgery

- **Abdominal Laprotomy**
- **Abdominal Herniography**
- **Cholecystectomy**
- **Drainage of Pancreatic Cyst(Pseudo Cyst)**
- **Pancreaticoduodenectomy(Whipples procedure)**
- **Pancreatectomy**

- Drainage of Abscess(es) in the region of Liver
- Hepatic Resection
- Splenectomy

d) Gastrointestinal Surgery

- Esophagoscopy
- Gastroscopy
- Colonoscopy
- Sigmoidoscopy
- Vagotomy & Pyloroplasty
- Gastrostomy
- Gastrectomy
- Small Bowel Resection
- Cutaneous Ileostomy
- Appendectomy
- Colostomy
- Closure of Colostomy
- Right Hemicolectomy
- Transverse Colectomy
- Anterior Resection of the Sigmoid Colon and Rectum
- Haemorrhoidectomy
- Pilonidal Cystectomy and Sinusectomy
- Theirsch Procedure
- Ripstein Procedure (Prosacral Rectopexy)

e) Gynaecological and Obstetric Surgery

- Dilatation of the Cervix and Curettage of the Uterus (D&C)
- Conization of the Uterine Cervix
- Therapeutic Abortion by Suction Curettage
- Marsupialization of Bartholin's Duct Cyst
- Abdominal Ligation (Different Procedures)
- Culdoscopy
- Vaginal Hysterectomy
- Anterior and /or Posterior Colporrhaphy
- Laparoscopy
- Total Abdominal Hysterectomy
- Salpingo-Oophorectomy
- Tuboplasty of the Fallopian Tubes
- Pelvic Exenteration
- Caesarian Section

f) Genito-Urinary Surgery

- **Hypospadias Repair**
- **Epispadias Repair**
- **Penile Implant**
- **Marshall-Marchetti-Krantz Procedure**
- **Hydrocoelelectomy**
- **Vasectomy**
- **Vasovasostomy**
- **Cutaneous Vasostomy**
- **Spermatoclectomy**
- **Orchectomy**
- **Cystoscopy**
- **Cystoscopy**
- **Transurethral Resection of the Prostate**
- **TURP and /or Lesions of the Bladder or Bladder Neck(TURB)**
- **Open Prostatectomy**
- **Nephrectomy**
- **Upper Tract Urolithotomy**
- **Ureterolithotomy, Phelolithotomy, Nephrolithotomy**
- **Cutaneous Vreterstomy**
- **Illeal Condukt**
- **Adronalectomy**
- **Extracorporeal Shock Wave Lithotripsy (ESWL)**
- **Ultrasonic Lithotripsy**
- **Electrohydraulic Lithotripsy**

g) Thoracic Procedures

- **Bronchoscopy**
- **Mediastioscopy**
- **Segment Resection of the Lung**
- **Wedge Resection of the Lung**
- **Pulmonary Lobectomy**
- **Pneumonectomy**
- **Decortication of the Lung**
- **Insertion of Transvenous Endocardial Pacemaker**
- **Correction of Pectus**
- **Excavatum**
- **Thymectomy**

h) Cardiovascular Surgery

- Carotid Endarterectomy
- Abdominal Aortic Procedures
- Abdominal Aortic Aneurysmectomy, Abdominal Aortic Endarterectomy with Aortic Graft
- Femoro-popliteal bypass
- Greater Saphenous Vein Ligation and Stripping
- Portosystemic Shunt
- Arteriovenous Shunt
- Arteriovenous Fistula
- Cardiac Procedures
- Bypass Surgery (Different Procedures)
- i) Orthopedic Surgery
 - Open Reduction of Carpal Bone Fracture
 - Excision of a Ganglion
 - Carpal Tunnel Release
 - Open Reduction of the Humerus
 - Open Reduction of the radius and / or Ulna
 - Open Reduction of an Olecranon Process Fracture
 - Repair of Recurrent Anterior Dislocation of the Shoulder
 - Open Reduction of Fracture of the Humerus Head(Including Humeral Head Prosthesis)
 - Internal Fixation of the Hip
 - Femoral Head Prosthetic Replacement
 - Total Hip Replacement
 - Open Reduction of the Femoral Shaft
 - Triple Arthrodesis of the Ankle
 - Total Ankle Joint Replacement
 - Open Reduction of Ankle
 - Arthrotomy of the Knee
 - Excision of Popliteal (Baker's)Cyst
 - Total Knee Replacement
 - Open Reduction of the Tibial Shaft
 - Bunionectomy
 - Correction of Hammer Toe Deformity with intraphalangeal Fusion
 - Metatarsal Head Resection
 - Procedure for Correction of Scoliosis
 - Amputation of Lower Extremity
- j) Neurological Surgery

- Craniotomy
- Cranioplasty
- Transphenoidal Hypophysectomy
- Ventricular Shunts
- Laminectomy
- Excision of Cervical Intervertebral Disc with Fusion
- Anterior Approach

k) Plastic Surgery

- Cleft Lip Repair
- Cleft Palate Repair
- Reduction of Nasal Fracture
- Reduction of Mandibular Fracture
- Reduction of Zygomatic Fracture
- Open Reduction of an Orbital Floor Fracture
- Rhinoplasty
- Mentoplasty Augmentation
- Blepharoplasty
- Rhytidectomy
- Dermabrasion
- Otoplasty
- Repair of Syndactyly
- Digital Flexor tendon repair
- Peripheral nerve repair
- Palmar fasciectomy
- Reduction Mamoplasty
- Abdominoplasty/ Abdominal Liposuction
- Liposuction

l) Otorhinolaryngologic (ENT) Surgery

- Myringotomy
- Mastoidectomy
- Tympanoplasty
- Stapedectomy
- Submucous resection of nasal septum/ Septoplasty
- Intranasal Antrostomy/Intranasal fenestration of nasoantral wall
- Nasoantral Wall
- Caldwell- Luo procedure
- (Radical Drainage of the Antrum of the Maxillary Sinuses)

- Nasal Polypectomy
- Drainage of the Frontal Sinus
- Tonsillectomy and adenoidectomy(T and A)
- Laryngectomy
- Radical Neck Dissection
- Excision of lesions of the oral Cavity
- (Partial Glossectomy with Marginal Resection of the Mandible)

m) Ophthalmic Surgery:

- General Information
- Excision of a Chalazion
- Canthotomy
- Correction Of Ectropion
- Blepharoptosis Repair
- Lacrimal Duct Probing
- Dacryocystostomy
- Correction of Strabismus
- Enucleation of Globe
- Enucleation of the Globe
- Orbital Exenteration
- Corneal Transplant/Keratoplasty
- Cataract Extraction
- Iridectomy
- Trabeculectomy
- Excision of a Pterygium
- Repair of Retinal Detachment/Scleral Bucking
- Vitreotomy
- Refractive Keratoplasty

n) Pediatric Procedures:

- Pediatric General Information
- Pediatric Sinusotomy
- Repair of Congenital Diaphragmatic Hernia
- Omphalocele repair
- Pediatric Umbilical Herniography
- Repair Of Congenital Atresia of the Esophagus
- Insertion of a central Venous Catheter (Pediatric)
- Pyloromy for Congenital Hypertrophic Pyloric Stenosis

- Pediatric Gastrostomy
- Relief Of Intestinal Obstruction (Pediatric)
- Reduction of Pediatric intususception
- Pediatric Colostomy
- Pediatric Colorectal Resection For Aganglionic megacolon /Hirschsprung's Disease
- Repair of Imperforate Anus.

ANAESTHESIA

(Including Different Methods and Procedures for Anaesthesia, Preparation of Patient for Anaesthesia, Intensive Care etc.)

1. ANAESTHESIA

- General information
- General Anaesthesia
- Conduction

2. GENERAL ANAESTHESIA

3. CONDUCTION ANAESTHESIA

- Spinal
- Epidural
- Caudal
- Local
- Topical

4. METHODS FOR PREPARATION OF THE PATIENTS FOR ANAESTHESIA:

- Methods for Procedures (During & After Operation)

SURGICAL PROCEDURES AND MONITORING,
OPERATION THEATRE ETHICS/ DISCIPLINE, SAFETY
FOR OPERATING ROOM PERSONNEL, PREPARATION
OF INSTRUMENTAL TRAYS, NATIONAL HEALTH
PROGRAMMES & POLICY AND Health care delivery
system in the country etc.

1. Surgical Procedures & Monitoring

2. Safety for operation room personnel

- **In service education**
- **Body mechanic**
- **Fatigue factors**
- **Radiation Safety**
- **Infection Control**
- **Chemical hazards**

3. Preparation of Instrumental Trays

- **Major procedures tray**
- **Basic/ Minor procedures tray**
- **Limited procedures tray**
- **Thyroid tray**
- **Long instruments tray**
- **Biliary Tract procedures tray**
- **Choledochoscopy tray**
- **Basic rigid Sigmoidoscopy tray**
- **Gastrointestinal procedures tray**
- **Rectal procedures tray**

4. Gynaecological And Obstetric Trays

- **Dilatation of the cervix and curettage of the Uterus (D&C Tray)**
- **Cervical cone tray**
- **Laparoscopy**
- **Abdominal Hysterectomy**
- **Caesarian section tray**
- **Vaginal Hysterectomy tray**

5. Genito-Urinary Tray

- **Vasectomy tray**
- **Open Prostatectomy**
- **Kidney tray**

6. Thoracic Trays

- **Mediastinoscopy tray**
- **Thoractomy tray**
- **Pacemaker tray**

7. Cardiovascular trays

- **Vascular procedures tray**
- **Vascular shunt tray**
- **Cardiac procedures tray**

8. Orthopedic tray

- **Basic orthopedic procedures tray**
- **Minor orthopedic procedures tray**
- **Bone holding instruments tray**
- **Hip Retractor tray**
- **Knee Arthrotomy tray**
- **Knee or Ankle Anthroscopy tray**

9. Neurologic Procedures Tray

- **Craniotomy tray**
- **Laminectomy tray**
- **Kerrison Rongeurs and Pituitary corceps tray**

10. Otorhinolaryngologic (ENT) Tray

- **Basic ear procedures tray**
- **Nasal procedures tray**
- **Myringotomy tray**
- **Tonsillectomy and Adenoidectomy tray**
- **Trachostomy tray**
- **Antral puncture tray**

11. Ophthalmic Trays

- **Basic Eye procedures tray**
- **Eyelid and Conjunctival procedures tray**
- **Basic eye muscle procedures tray**
- **Dacryocystorhinostomy tray**
- **Corneal procedures tray**
- **Cataract Extraction and Lens procedures tray**
- **Glaucoma procedures tray**
- **Basic eye procedures /Laparoscope tray**
- **Retinal procedures tray**

12. Pediatric Tray

- **Pediatric major procedures tray**
- **Pediatric minor procedures tray**
- **Pediatric gastrointestinal procedures tray**

(With special emphasis on National Health Programmes & Policies including Health Care delivery System of India.)

BOOKS RECOMMENDED FOR THE DIPLOMA COURSE

- 1. Anatomy & Physiology by Evelyn.C.Pearce**
- 2. Synopsis of Medical Instruments by Arora & Yadav**
- 3. Operation Theatre Technique by Rashmi J.Patil**
- 4. A text book of Social and Preventive Medicine by J.E.Park**