

**Bachelor of Vocation (Operation Theatre Technology)**  
**B.Voc. (OTT)**  
**Year 1 (Diploma)**

<b>I Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Content Type</b>	<b>Credit</b>
1	BVOTT-101	Human Anatomy & Physiology-1	Gen	4
2	BVOTT-102	General Bio-Chemistry	Skill	4
3	BVOTT-103	First Aid and Bandaging	General	4
4	BVOTT-104	Bio Medical Waste Management	Skill	3
5	BVOTT-105	Fundamental of Computers	Gen	3
6	BVOTT-106	General English & Soft Skills	Gen	2
7	BVOTTP-101	Human Anatomy & Physiology-1Lab	Skill	2
8	BVOTTP-102	General Bio-Chemistry Lab	Skill	2
9	BVOTTP-103	First Aid and Bandaging Lab	Skill	2
10	BVOTTP-104	Bio Medical Waste Management Lab	Skill	2
11	BVOTTP-105	Fundamental of Computers Lab	Skill	2
<b>Total</b>				<b>30</b>

<b>II Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Type of Course</b>	<b>Credits</b>
1	BVOTT-201	Human Anatomy & Physiology -2	Gen	4
2	BVOTT-202	OT Equipment Management	Skill	2
3	BVOTT-203	Elementary Nursing	Skill	4
4	BVOTT-204	Clinical Pathology	Gen	4
5	BVOTT-205	Clinical Microbiology	Skills	3
6	BVOTT-206	Basics of Health Market & Economy	Gen	3
7	BVOTTP-201	Human Anatomy & Physiology -2 Lab	Skill	2
8	BVOTTP-202	OT Equipment Management Lab	Skill	2
9	BVOTTP-203	Elementary Nursing Lab	Skill	2
10	BVOTTP-204	Clinical Pathology Lab	Skill	2
11	BVOTTP-205	Clinical Microbiology Lab	Skill	2
		Internship in Hospital		
<b>Total</b>				<b>30</b>

**Bachelor of Vocation (Operation theatre technology)**  
**B.Voc. (OTT)**  
**Year 2 (Advanced Diploma)**

<b>III Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Type of Course</b>	<b>Credits</b>
1	BVOTT-301	Applied Anatomy & Physiology	Skill	4
2	BVOTT-302	Principle of Anesthesia	Skill	3
3	BVOTT-303	Basics of Equipment and OT Tray Set up	GEN	4
4	BVOTT-304	Clinical Pharmacology	Skill	3
5	BVOTT-305	Advance Computing Skills	General	2
6	BVOTT-306	Human Values & Professional Ethics	Gen	4
7	BVOTTP-301	Applied Anatomy & Physiology Lab	Skill	2
8	BVOTTP-302	Principle of Anesthesia Lab	Skill	2
9	BVOTTP-303	Basics of Equipment and OT Tray Set up Lab	Skill	2
10	BVOTTP-304	Clinical Pharmacology Lab	Skill	2
11	BVOTTP-305	Advance Computing Skills Lab	Skill	2
<b>Total</b>				<b>30</b>

<b>IV Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Type of Course</b>	<b>Credits</b>
1	BVOTT-401	Basic Aesthetical Techniques	SKILL	4
2	BVOTT-402	Community Health Nursing and Communicable Disease	SKILL	4
3	BVOTT-403	Essential Critical Care and Nursing Skills	GEN	4
4	BVOTT-404	OT Techniques in EYE and E.N.T	Gen	4
5	BVOTT-405	Medical Ethics & Patient Care	Gen	2
6	BVOTT-406	Advance Communication & Soft Skills	Gen	2
7	BVOTTP-401	Basic Aesthetical Techniques Lab	Skill	2
8	BVOTTP-402	Community Health Nursing and Communicable Disease Lab	Skill	2
9	BVOTTP-403	Essential Critical Care and Nursing Skills Lab	Skill	2
10	BVOTTP-404	OT Techniques in EYE and E.N.T Lab	Skill	2
11	BVOTTP-405	Medical Ethics & Patient Care Lab	Skill	2
		Internship in Hospital		

**Bachelor of Vocation (Operation Theatre Technology)**  
**B.Voc. (OTT) Syllabus**  
**Year 3 –B. Voc Degree**

<b>V Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Type of Course</b>	<b>Credits</b>
1	BVOTT-501	Basics of Surgery	Skill	3
2	BVOTT-502	CSSD Procedures	Skill	3
3	BVOTT-503	Regional Aesthetic Techniques	Gen	4
4	BVOTT-504	Basic Intensive Care	Skill	3
5	BVOTT-505	Digital Literacy & Account Literacy	Gen	4
6	BVOTT-506	Introduction to national Healthcare System	Gen	3
7	BVOTTP-501	Basics of Surgery Lab	Skill	2
8	BVOTTP-502	CSSD Procedures Lab	Skill	2
9	BVOTTP-503	Regional Aesthetic Techniques Lab	Skill	2
10	BVOTTP-504	Basic Intensive Care Lab	Skill	2
11	BVOTTP-505	Digital Literacy & Account Literacy Lab	Skill	2
<b>Total</b>				<b>30</b>

<b>VI Semester</b>				
<b>S.No.</b>	<b>Course Code</b>	<b>Subject</b>	<b>Type of Course</b>	<b>Credits</b>
1	BVOTT-601	Anaesthesia for Special Surgeries	Skill	4
2	BVOTT-602	Hygiene, Sanitation Nutrition, Dietics	Gen	4
3	BVOTTP-601	Anaesthesia for Special Surgeries Lab	Skill	2
4	BVOTTP-602	Hygiene, Sanitation Nutrition, Dietics Lab	Skill	2
5	BVOTTP-603	Internship in hospital	Skill	8
6	BVOTTP-604	Project Work in a Hospital	Skill	10
<b>Total</b>				<b>30</b>

# **OPERATION THEATRE TECHNOLOGY**

## **Year 1 (Diploma)**

### **Semester I**

#### **BVOTT -101 BASICS OF HUMAN ANATOMY AND PHYSIOLOGY-1**

##### **UNIT -1**

Terminology and General Plan of the Body, Body Parts and Areas, Terms of Location and Position, Body Cavities and Their Membranes, Dorsal cavity, Ventral cavity, Planes and Sections, Cells: Structure, function and location, Prokaryotic and eukaryotic cells, Cell organelles, Cell division.

##### **UNIT-2**

Tissue, Types, Structure, Location and Function of Epithelial Tissue, Connective Tissue, Muscle Tissue, Nerve Tissue, Membranes, Glandular tissue The Integumentary System: structure and function of The Skin, Subcutaneous Tissue, Musculoskeletal System: Basic anatomy of important muscles and bones.

##### **UNIT-3**

Cell physiology: Structure, membrane, transport across cell membrane, Active, Passive, Organization of the Body, Body Composition, Body Fluid Volumes and its measurement, Diffusion, Osmosis, Tonicity, Homeostasis

##### **UNIT-4**

Blood-composition, function, cellular component & their function, hemoglobin & anemia, blood groups and coagulation

## **BVOTT -102 GENERAL BIOCHEMISTRY**

### **UNIT 1**

Carbohydrates- Glucose; fructose; galactose; lactose; sucrose; starch and glycogen (properties and tests, Structure and function), Metabolism of carbohydrate,

### **UNIT 2**

Proteins -Amino acids, peptides, and proteins (general properties & tests with a few examples like glycine, tryptophan, glutathione, albumin, hemoglobin, collagen)

### **UNIT 3**

Lipids- Fatty acids, saturated and unsaturated, cholesterol and triacylglycerol, phospholipids and plasma membrane

### **UNIT 4**

Vitamins -General with emphasis on A, B2, C, E and inositol (requirements, assimilation and properties)

Minerals--Na, K, Ca, P, Fe, Cu and Se (requirements, availability and properties)

### **Unit 5**

Nucleotides and nucleic acids DNA, Replication

Organ function test: LFT, KFT, Gastric function test, Cardiac function test

## **BVOTT -103 FIRST AID AND BANDAGING**

### **UNIT-1**

First Aid 1: Definition of first aid, scope, principles and essentials, methods of approach and qualifications of a first aider. Wounds, Snake bite, bite by rabid animal, and stings of insects- first aid and treatment. Fractures- Varieties, general signs and symptoms, general rules for treatment, padding of splints, individual fractures and treatment.

### **UNIT-2**

First Aid 2: Haemorrhage Varieties, arrest of external haemorrhage, arrest of haemorrhage from special regions, mouth, nose and ear. Artificial respiration, Asphyxia - Definition and causes. Poisons, classification, general rules for the treatment of poisoning, burn injury, Shock, Effects of heat and cold

# **BVOTT -104 BIOMEDICAL WASTE MANAGEMENT**

## **UNIT-1**

Introduction to bio medical waste management: definition of bio medical waste management, hazards of bio medical waste and its management, infection control, principles of bio medical waste management.

## **UNIT-2**

Categories of BMW: Different waste category, different types of waste, to manage bio medical waste in the work place, disposal of laboratory waste.

## **UNIT-3**

Color coding: Use of different colors of bags, describe waste management in hospital, need for bio medical waste, history of bio medical waste, problems associated with BMW, waste treatment.

## **UNIT-4**

Bio safety: components of safety in Operation Theatre, personal protective equipment's, cleaning and disinfecting medical equipment's, sterilization basic care of OT.

# **BVOTT-105-Fundamental of Computers**

## **Unit-1**

### Introduction to Computers

History of Computer, Generations, Characteristics, Advantages and limitations of Computer, Classification of Computers, Functional Components of Computer, input, Output and Processing, Concept of Hardware and Software, Data & Information. Concept of data storage. Number system. Decimal, Binary, Hexadecimal ASCII.

## **UNIT-2**

Introduction to GUI Based Operating System Basics of Operating system, Basics of DOS & LINUX, The User interface, File and directory management, Windows setting, Control Panel, devices and Printer setting, Using various window commands for desktop.

## **UNIT-3**

### Word Processing

Word processing basics, Menu Bar, Opening and closing documents, save & save as, Page setup, print preview, and printing. Text creation and manipulation Editing, cut copy paste. Document creation, editing, Formatting the text – Paragraph indenting, bullets and numbering, changing case, Table manipulation – creation of table, insertion and deletion of cell, row and column.

## **UNIT-4**

Network basics, Internet Basics of computer network LAN, WAN etc, Concept of Internet, Basic of Internet Architecture, Services on Internet Architecture, World wide web and websites, Communication on Internet, Internet Services, Preparing Computer for Internet Access, ISPs and Examples, Internet Access Technologies. Web Browsing, configuring web browser, Popular search engines Downloading and printing web pages. Internet application Basics of E-mail, E-mail addressing, forwarding and searching, Composing

## **BVOTT-106-GENERAL ENGLISH AND SOFT SKILL**

### **Unit-1 Introduction to English language**

- a) Role and significance of English language in the present scenario
- b) English language: its relevance for the Indian industry.
- c) Introduction to listening, speaking, reading, writing and bench marking of the class.

### **Unit 2: Grammar and usage**

Verbs

Determiners

Active Voice and Passive Voice

Tenses

### **Unit 3:**

Letter writing & Notice Writing

### **Unit 4:**

Précis and Report writing

### **Practical Knowledge**

English communication Concept:

- a) About myself, my family and my friends
- b) Let's talk, making conversation, meeting and greeting
- c) My opinions, my likes and dislikes
- d) Life at collage, hostel and workplace: Conversation test

## **PRACTICALS:**

### **BVOTTP 101.PRACTICAL ANATOMY AND PHYSIOLOGY**

#### **Human anatomy (practical)**

Demonstration of

- Study of Human Skeleton parts with skeletal models.
- Study with charts and models of all organ systems mentioned above.
- Microscopic slides examination of elementary human tissues, cells.
- Major organs through models and permanent slides.
- Parts of circulatory system from models.
- Parts of respiratory system from models.
- Digestive system from models.

Excretory system from models.

#### **Human Physiology (Practical)**

- To measure pulse rate
- To measure blood pressure
- To measure temperature
- Measurement of the Vital capacity
- Determination of blood groups
- Transport of food through esophagus
- Calculation and evaluation of daily energy and nutrient intake.
- Measurement of basal metabolic rate
- Demonstration of ECG
- Bile juice secretion and excretion 11. Urine formation and excretion

## **BVOTTP 102-PRACTICAL GENERAL BIOCHEMISTRY**

- 1. Analysis of Normal Urine
- 2. Liver Function tests
- 3. Lipid Profile
- 4. Renal Function test
- 5. Blood gas and Electrolytes
- 6. Demonstration of Glucometer with strips

## **BVOTTP -103 PRACTICAL FIRST AID AND BANDAGING**

- first aid and treatment.
- general rules for the treatment of poisoning, burn injury, Shock, Effects of heat and cold

## **BVOTTP-104 PRACTICAL BIOMEDICAL WASTE MANAGEMENT**

- bio medical waste management
- waste infection control, principles of bio medical waste management.
- Categories of BMW
- Use of different colors of bags,
- sterilization basic care of OT.

## **BVOTTP 105- PRACTICAL FUNDAMENTALS OF COMPUTER**

- Starting MS WORD, Creating and formatting a document,
- Changing fonts and point size,

- Table Creation and operations, Autocorrect, Auto text, spell Check, Word Art, Inserting
- objects, Page setup, Page Preview, Printing a document, Mail Merge.
- Starting Excel, Work sheet, cell inserting Data into Rows/ Columns, Alignment, Text
- wrapping , Sorting data, Auto Sum, Use of functions, referencing formula cells in other
- formulae , Naming cells, Generating graphs, Worksheet data and charts with WORD, Creating
- Hyperlink to a WORD document , Page set up, Print Preview, Printing Worksheets.
- Starting MS–Power Point,, Creating a presentation using auto content Wizard, Blank
- Presentation, creating, saving and printing a presentation, Adding a slide to presentation,
- Navigating through a presentation, slide sorter, slide show, editing slides, Using Clipart, Word
- art gallery, Adding Transition and Animation effects, setting timings for slide show, preparing
- note pages, preparing audience handouts, printing presentation documents, MS-Access,
- Creating tables and database, Internet, Use of Internet (Mailing, Browsing, Surfing).

## **SEMESTER II**

### **BVOTT -201 HUMAN ANATOMY AND PHYSIOLOGY-2**

#### **UNIT-1**

Cardiovascular system: Basic anatomy of heart and important blood vessels Brief introduction about Lymphatic System, The Nervous System: Basic anatomy of brain and spinal cord, meninges and cerebrospinal fluid, Cranial, Endocrine System: Brief anatomy of Pituitary, Thyroid, Parathyroid, Pancreas, Adrenal, Special Senses: Basic anatomy of eye, ear and nose

#### **UNIT-2**

Genitourinary system: Basic anatomy of kidney and associated organs, male reproductive organs, female reproductive organs, Respiratory system: Basic anatomy of nose, larynx, trachea, bronchi and lung, Digestive system: basic anatomy of esophagus, stomach, small intestine, large intestine, liver, gall bladder, pancreas

#### **UNIT-3**

Cardiovascular system-general arrange, heart, arteries, veins and capillaries, heart structure and function, cardiac cycle, heart sounds, heart rate, blood pressure, mechanism of circulation, definition of hypertension & shock ,Respiratory system: parts of respiratory system, mechanism of respiration, pulmonary function, pulmonary circulation, lungs volume, Gas transport between lungs and tissues, Definition of hypoxia, dyspnea, cyanosis, asphyxia and obstructive airways diseases Unit, Gastrointestinal physiology: Organs of GIT and their structure & function, secretion, digestion, absorption and assimilation, gastrointestinal hormones, physiology of digestion of carbohydrates, proteins & lipids, Structure & function of liver, spleen, gall bladder & pancreas, Jaundice, Cirrhosis & Pancreatitis.

#### **UNIT-4**

Excretory System: Kidneys, Nephron, Mechanism of Excretion, Urine formation (Glomerular filtration and Tubular reabsorption) , Electrolytes: their balances and imbalances Introduction of acidosis and alkalosis , Muscle nerve physiology, types of muscles, their gross structural and functional difference with reference to properties ,Nervous system- general organization of CNS, function of important structure and spinal cord, neuron, nerve impulse, type of nerves according to function, Autonomic nervous system organization & function Special senses-general organization & functions, Endocrine System: Brief introduction about endocrine glands and their secretion, common endocrinological disorder such as diabetes mellitus, hyper & hypothyroidism, dwarfism, gigantism, tetany. Reproductive System: male & female reproductive organs, sex hormones, secondary sexual characteristics, puberty, spermatogenesis, oogenesis, menstrual cycle, pregnancy, menopause, contraceptive measures.

# **BVOTT -202 OT EQUIPMENT MANAGEMENT**

## **UNIT-1**

- Pulse oximeter
- Nebulizer
- Glucometer
- ECG machine

## **UNIT-2**

- Cardiac monitor
- Defibrillator
- Total patient bed side monitor
- SWD
- Oxygen concentrator

## **BVOTT -203 ELEMENTARY NURSING**

### **UNIT-1**

Bed making: Materials used for hospital beds and bedding, Bed making, Special types of beds, Positions in bed, Moving and lifting of patients, Additional appliances used for beds.

### **UNIT-2**

Caring of sick: Daily toilet of the patient, bathing in the bed and the bathroom, care of hair and the mouth tray, bed sores and tropic ulcers and their prevention, giving of bedpans and urinals, spittoons, feeding of the bed-ridden cases.

### **UNIT-3**

Aspiration and continuous drainage of stomach and duodenum, Artificial feeding, Administration of oxygen, Inhalations, Preparation of patient for examination, Dressings and instruments commonly used in the wards, Prepare nursing trays and trolleys.

# **BVOTT -204 CLINICAL PATHOLOGY**

## **UNIT-1**

Histopathology: Introduction to Histo-Pathology, receiving of Specimen in the laboratory, Grossing Techniques, mounting Techniques - various Mountants, maintenance of records and filing of the slides, use & care of Microscope, various fixatives, Mode of action, Preparation and Indication, Section Cutting, tissue processing for routine paraffin sections, decalcification of tissues, staining of tissues H& E Staining.

## **UNIT-2**

Clinical Pathology : Introduction to Clinical Pathology, Collection, Transport, Preservation, and Processing of various clinical specimens, Urine Examination - Collection and Preservation of urine, Physical, chemical, Microscopic Examination of body fluids cerebrospinal fluid (CSF), Sputum Examination, feces.

## **UNIT-3**

Hematology : Introduction to Hematology, Normal constituents of Blood, their structure and function, Collection of Blood samples, Various Anticoagulants used in Hematology, various instruments and glassware used in Hematology, Preparation and use of glassware, laboratory safety guidelines.

# **BVOTT 205 CLINICAL MICROBIOLOGY**

## **UNIT-1**

□sterilization & decontamination- I

Dry Heat

Moist Heat

Sterilization - II

Chemical methods

Gaseous methods

Filtration

- Wound Infection & Urinary Tract Infections
- Blood stream Infections
- Respiratory tract Infection
- S.Typhi, Salmonella Paratyphi 'A', Salmonella Typhimurium
- Catheter, IV associated Infections
- Hospital acquired infections & prevention of hospital acquired infections
- Hepatitis C.

## **UNIT-2**

Characteristics: characteristics of bacteria, virus and fungus, Sources of infection, mode of spread, Destruction of bacteria, Control of infection, Inflammation, healing and repair, Infection, wounds, ulcers, blisters, boils, fractures, burns, scalds, gangrene and hemorrhage.

## **UNIT-3**

Characteristics: Characteristics of normal urine, variations in diseases, collection of samples and routine tests, Characteristics of normal feces, variation in diseases, collection of samples and routine tests, Sputum and vomit - Characteristics in different diseases, collection of samples.

# **BVOTT-206-BASIC OF HEALTH MARKET AND ECONOMY**

## **Unit I**

Health Care Market An Introduction : Main Problems in the Market for Health Care, Health Care and

Economic Basics, Analyzing Health Care Markets. Demand-Side Considerations: Demand for Health

and Health Care, Market for Health Insurance

## **Unit II**

Supply-Side Considerations: Managed Care, Health Care Professionals, Hospital Services,

Confounding Factors Public Policy in Medical Care: Policies to Enhance Access, Policies to Contain

Costs, Medical Care Systems Worldwide,

## **UNIT-III**

Health Sector in India: An Overview Health Outcomes; Health Systems; Health Financing

Evaluation of Health Programs Costing, Cost Effectiveness and Cost-Benefit Analysis; Burden of

Diseases ,Role of WHO , Health Care Budget: purpose, types & practices in Indian context.

## **UNIT-IV**

Health Economics: Fundamentals of Economics: Scope & coverage of Health Economics, demand for

Health Sciences; Health as an investment, population, Health &Economic Development.

Tools of Economics-Concepts of need, demand, supply & price in Health Services.

Methods & Techniques of Economic Evaluation of Health Programmes: Cost benefit

&cost effective methods-output & input analysis.

Market, monopoly, perfect & imperfect competition. Health Financing from various sources – Public ,

Private, TPA.

Economics of Health Programmes for Nutrition, diet &population control, economics of abuse of

tobacco & alcohol, environmental influences on health and feeding.

Economics of Communicable (STDs & Malaria) & non-communicable (IHD & Cancers) diseases.

## **PRACTICALS:**

### **BVOTTP -201 Practical Human Anatomy & Physiology-II**

Human Anatomy-II (Practical)

Demonstration of:

- Nervous system from models.
- Structure of eye and ear
- Structural differences between skeletal, smooth and cardiac muscles.
- Various bones
- Various joints
- Various parts of male & female reproductive system from models

Human Physiology- II (Practical)

- To perform total platelet count.
- To perform bleeding time.
- To perform clotting time.
- To study about CSF examination.
- To study about intrauterine contraceptive devices.
- To demonstrate microscopic structure of bones with permanent slides.
- To demonstrate microscopic structure of muscles with permanent slides.

### **BVOTTP -202 PRACTICAL OT EQUIPMENT MANAGEMENT**

**USE OF:**

- Pulse oximeter
- Nebulizer
- Glucometer
- ECG machine, Cardiac monitor, Defibrillator

## **BVOTTP -203 PRACTICAL ELEMENTARY NURSING**

- Bed making
- how to do Administration of oxygen,
- Inhalations
- Preparation of patient for examination,
- Dressings and instruments commonly used in the wards,
- Prepare nursing trays and trolleys.

## **BVOTTP -204 PRACTICAL CLINICAL PATHOLOGY**

- use & care of Microscope,
- staining of tissues H & E Staining.
- Collection,
- Transport,
- Preservation,
- Processing of various clinical specimens,

## **BVOTTP 205 PRACTICAL CLINICAL MICROBIOLOGY**

- sterilization & decontamination-
- Chemical methods
- Gaseous methods
- Filtration

## **Year 2 (Advance Diploma)**

### **Semester III**

#### **BVOTT -301 APPLIED ANATOMY AND PHYSIOLOGY**

##### **UNIT-1**

Respiratory system: a)Structure and function of the respiratory tract in relation to respiratory system: Nose - Role in humidification, Pharynx - Obstruction in airways, Larynx - Movement of vocal cords, cord palsies, trachea & Bronchial tree - vessels, nerve supply, respiratory tract, reflexes, bronchospasm, alveoli - Layers, Surfactants b)Respiratory Physiology- control of 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 anesthesia, tracheal tug - signs, hiccup. c) Pulmonary Gas Exchange And Acid Base Status, pulmonary circulation, pulmonary edema, pulmonary hypertension, pulmonary function test transfer of gases - oxygen & Carbon dioxide, acid base status, definitions, acidosis types, Alkalosis types, buffers in the body. d)Oxygen: properties, storage, supply, hypoxia, e) Respiratory failure, type, clinical features, causes.

##### **UNIT-2**

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, effects, management cardio pulmonary resuscitation, myocardial infarction, hypertension.

##### **UNIT-3**

Fluid and electrolytes: body fluids- composition, water, sodium and potassium balance, IV fluids- composition and administration, IV cannulation, blood transfusion- blood grouping, storage, administration.

# **BVOTT -302 PRINCIPLES OF ANESTHESIA**

## **UNIT-1**

Medical gas supply: Compressed gas cylinders, Colour coding, Cylinder valves; pin index. gas piping system, recommendations for piping system, alarms & safety devices, anaesthesia machine, hanger and yoke system, cylinder pressure gauge, Pressure regulator, flow meter assembly, vapourizers - types, hazards, maintenance, filling and draining, etc.

## **UNIT-2**

Breathing system: general considerations: humidity & heat, common components - connectors, adaptors, reservoir bags, capnography, 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, face mask and airway laryngoscopes- types, sizes, endotracheal tubes - types, sizes, cuff system, fixing, removing and inflating cuff, checking tube position complications.

## **UNIT-3**

Anesthesia, ventilator and working principles: monitoring, ECG , SpO<sub>2</sub>, temperature, IBP, CVP, PA Pressure, LA Pressure.

# **BVOTT -303 BASICS OF OT EQUIPMENT AND OT TRAY SET UP**

## **UNIT-1**

Equipment preparation for anesthesia – Anesthesia Machines, Circuits, Monitors, transducers, Airway devices and Pre-anesthesia Checks ('Cockpit Drill'), Conduct of General Anesthesia including observation and assessment of patient, Preparation and arrangement for Neuraxial and regional anesthesia, Conduct of Neuraxial Blocks – Spinal Epidural and CSE, Conduct of Regional Anesthesia and plexus Blocks .

# **BVOTT -304 CLINICAL PHARMACOLOGY**

## **UNIT-1**

Antisialagogues- Atropine, Glycopyrrrolate, sedatives & anxiolytics- diazepam, midazolam, phenergan, lorazepam, chlorpromazine, trichlopho, narcotics-morphine, pethidine, fentanyl, pentazocine, antimetics, metaclopramide, ondansetron, dexamethasone, antacids, Na citrate, gelusil, mucaïne gel

## **UNIT-2**

H<sub>2</sub> blockers- Cimetidine, ranitidine, famotidine, induction agent-thiopentone, diazepam, midazolam, ketamine, propofol, etomidate, muscle relaxants- depolarising - suxamethonium, non depolarising - pancuronium, vecuronium, atracurium, rocuronium, inhalation gases: O<sub>2</sub>, N<sub>2</sub>O, Air, agents - Ether-, halothane, isoflurane, sevoflurane, desflurane, reversal agents- neostigmine, glycopyrrrolate, atropine, nalorphine, naloxone, flumazenil (diazepam), local anaesthetics xylocaine, preparation, local – bupivacaine - topical, prilocaine-jelly, emla - ointment, etidocaine. Ropivacaine.

## **UNIT-3**

Emergency drugs: adrenaline- Mode of administration, dilution, dosage, effects, isoprenaline, atropine, bicarbonate, calcium, ephedrine, xylocard, inotropes: dopamine, dobutamine, amiodarone, aminophylline, hydrocortisone, antihistamines, potassium, cardiovascular drugs antihypertensives, antiarrhythmics, beta-blockers, Ca<sup>2+</sup> - Channel blockers, vasodilators- nitroglycerin & sodium nitroprusside, respiratory system- bronchodilators, respiratory stimulants, Broncholytic agents, renal system- diuretics, furosemide, mannitol, obstetrics - oxytocin, methergin, miscellaneous - antibiotics, paracetamol, diclofenac- IV fluids, various preparations NaCl, Ringer lactate, haemaccel, hetastarch heparin, protamine, insulin, analgesics, NSAIDs, ibuprofen, ketorolac.

# **BVOTT-305-ADVANCE COMPUTING SKILL**

## **Unit-1**

Advance Word Processing Tools

Setting the layout of Table and documents, Mail merge techniques. Letter envelopes etc,

Using spell check and Thesaurus, Foot note nad Endnotes, Using Charts , shapes and pictures in

word .

## **Unit-2**

Basics of Spreadsheet

Functions of Spreadsheet , Applications , Elements of Electronic Spread sheet ,creating

document saving and printing the worksheet, manipulation of cells ,Functions and charts, using

formulas , Functions and charts

## **UNIT-3**

Advance Spreadsheet Tools

Manipulations with charts and its types, Sorting, Filtering of data ,Pivot table, data validation techniques. Grouping and subtotaling of data. Text to column option . Printing of customized worksheet.

## **UNIT-4**

Presentation Software

Using Powerpoint, Opening an powerpoint presentation, Saving a presentation , Entering and editing text, inserting and deleting slides in a presentations , preparation of slides , adding clip arts, charts etc., Providing Aesthetics , Enhancing text presentation ,working with color lines styles and movie and sound ,adding header and footer, presentation

# **BVOTT-306-HUMAN VALUE AND PROFESSIONAL ETHICS**

## **UNIT-1**

Need, Basic Guidelines, Content and Process for

Value Education

Understanding the need, basic guidelines, content and process for Value Education

Self-Exploration its content and process, Natural Acceptance' and Experiential Validation- as the

mechanism for self-exploration

Continuous Happiness and Prosperity- A look at basic Human Aspirations

Right understanding, Relationship and Physical Facilities- the basic requirements for fulfilment of

aspirations of every human being with their correct priority

Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario

Method to fulfil the above human aspirations: understanding and living in harmony at various levels

## **UNIT 2:**

Understanding Harmony in the Human BeingUnderstanding human being

Understanding the Body as an instrument

Understanding the harmony of Body, correct appraisal of Physical needs, meaning of Prosperity in detail

## **UNIT 3:**

Understanding Harmony in the Family and Society-

Harmony in Human Relationship

Understanding Harmony in the family – the basic unit of human interaction

Understanding values in human-human relationship

Trust and Respect as the foundational values of relationship

Understanding the meaning of trust

Difference between intention and competence. Understanding the meaning of respect

Understanding the harmony in the society (society being an extension of family)

#### **UNIT-4**

Natural acceptance of human values

Definitiveness of Ethical Human Conduct

Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order

Competence in professional ethics:

- a) Ability to utilize the professional competence for augmenting universal human order
- b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems,
- c) Ability to identify and develop appropriate technologies and management patterns for above production systems.

Case studies of typical holistic technologies, management models and production systems

Strategy for transition from the present state to Universal Human Order:

- a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers
- b) At the level of society: as mutually enriching institutions and organizations

## **PRACTICALS:**

### **BVOTTP -301 PRACTICAL APPLIED ANATOMY AND PHYSIOLOGY**

#### **DEMONSTRATION OF:**

- acid base status, definitions, acidosis types, Alkalosis types, buffers in the body.
- IV fluids- composition and administration, IV cannulation, blood transfusion- blood grouping, storage, administration.

### **BVOTTP -302 PRACTICAL PRINCIPLES OF ANESTHESIA**

- Medical gas supply
- use of ambu valves
- cuff system, fixing, removing and inflating cuff, checking tube position complications.
- ventilator and working principles
- monitoring, ECG , SpO<sub>2</sub>, temperature, IBP, CVP, PA Pressure, LA Pressure.

### **BVOTTP -303 PRACTICAL BASICS OF OT EQUIPMENT AND OT TRAY SET UP**

#### **DEMONSTRATION OF:**

- Equipment preparation for anesthesia

### **BVOTTP -304 PRACTICAL CLINICAL PHARMACOLOGY**

- management of drug reaction

## **BVOTTP- 305-Practical Advance Computing skills**

Word Processing

Mail merge techniques

Using Charts , shapes and pictures in word .

Basics of Spreadsheet

document saving and printing the worksheet

formulas , Functions and charts

Advance Spreadsheet Tools

worksheet.

Presentation Software

Using Powerpoint working with color lines

styles and movie and sound ,presentations.

## **Semester IV**

### **BVOTT 401 BASIC ANESTHETICAL TECHNIQUES**

#### **UNIT-1**

History of anaesthesia: first successful clinical demonstration, pre - historic ( ether) era, inhalational anaesthetic era, regional anaesthetic era, intravenous anaesthetic era, modern anaesthetic era, minimum standard of anaesthesia , pre-operation: pre anaesthetic assessment-history – , past history - disease / Surgery / and personal history - Smoking / alcohol, general physical assessment, systemic examination – CVS, RS, CNS, investigation, routine - haematological - their significance, urine, E.C.G, chest X – ray, special -endocrine, hormonal assays: echocardiography, angiography, liver function test, renal function test, others, case acceptance: ASA grading - I, II, III, IV, V.

#### **UNIT-2**

Pre- anaesthetic orders: patient - Informed consent, Npo, Premedication - advantages, drugs used, Special instructions - if any, machine- checking the machine, O<sub>2</sub>, N<sub>2</sub>O, suction apparatus, laryngoscopes, et tubes, airways, things for IV accessibility, other monitoring systems, drugs - emergency drugs, anaesthetic drugs.

#### **UNIT-3**

Intraoperative management: confirm the identification of the patient, monitoring- non invasive & 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 and management.

# **BVOTT -402 COMMUNITY HEALTH NURSING AND COMMUNICABLE DISEASE**

## **UNIT-1**

Community health nursing :Health Determinants, Indicators of Health, Levels of Health Care, Primary Health Care, National Health Policy, National Population Policy, National Health Programmes- NAMP, RCH, RNTCP, NACP, Pulse Polio, Immunization schedule.

## **UNIT-2**

Preventable diseases: Classification and mode of spread, Common disease and their prevention - diarrheas and dysenteries, malaria, rabies, round worm, small pox, tuberculosis, typhoid, typhus, venereal diseases, life history and prevention against housefly and mosquito, Infection, Isolation, Disinfection methods.

## **UNIT-3**

Communicable diseases: Nursing care -general management, Specific diseases : Diphtheria, measles, whooping cough, chicken pox, mumps, influenza, typhoid and paratyphoid, typhus, dysentery, food poisoning, cholera, plague, tetanus, malaria, dengue, HIV/AIDS.

## **BVOTT 403 -ESSENTIAL CRITICAL CARE AND NURSING SKILLS**

### **UNIT-1**

Critical care & ICU training : BLS, ACLS, ATLS – CPR, emergency recognition and response, Combat Med Care – Role in war, anaphylaxis, dressing, OT procedure and patient flow in OT Eqpt, Stretcher, Patient Triage & Casualty Evacuation, OT design and medico legal aspects in OT.

### **UNIT-2**

Emergency Recognition and Response must be conversant with:

- (a) Causation, sign and symptoms of hemorrhage and shock.
- (b) Cardiac and Respiratory Emergencies
- (c) Major Trauma Management
- (d) Broad principles of intravenous therapy and transfusions.
- (e) Transfusion fluids in common use, methods of transfusion, reconstitution of plasma for intravenous use.

### **UNIT-3**

Basic and Advanced Life Support:

- (a) BLS, ACLS and ATLS
- (b) Neonatal and Pediatric Advanced Life Support
- (c) Life Support Equipment – Defibrillators/AED, Ambu Bag, Respiratory Circuits, Transport and ICU Ventilators, advanced monitoring systems.

### **UNIT-4**

Operating Theatre work must be conversant with: -

- (a) Assembly and dismantling of various common surgical appliances, cleaning and sterilization.
- (b) Must be conversant with the operative techniques, anesthesia, intensive care and resuscitation and be able to assist in all common and advanced operations carried out in military hospital surgical units including eye, ENT, and all sub-specialties in surgery and anesthesiology. Exposure and extended work in specialties of interest namely, Cardiothoracic surgery, Neurosurgery, Urosurgery, Oncosurgery, Ophthalmology, Otorhinolaryngology, Reproductive and infertility surgery, Gastrointestinal Surgery, Transplantation surgery, laparoscopic surgery and pediatric surgery.
- (c) Application of Plaster of Paris casts, Plaster of Paris Jackets and Spices.

## **BVOTT 404 OT TECHNIQUES IN EYE AND E.N.T**

### **UNIT-1**

Instruments used for examination of eye, Desmasel's Eye Lid: retractor, ophthalmic loop, ophthalmoscope and anatomy of eye. various eye diseases, scleritis, diseases of lens, cataract glaucoma. , diseases of cornea, ulcerative keratitis.

### **UNIT-2**

Ear: Anatomy of the ear, diseases of middle ear, Nose: Anatomy of nose, nasal septum & its diseases Throat: Anatomy of throat, diseases of larynx.

### **UNIT-3**

History taking and symptomatology of various diseases, fever, Polyuria, Heart, Burns, Vomiting, Diarrhoea, Jaundice, Epistaxis. Typhoid, AIDS.

### **UNIT-4**

Medical Emergencies: Cardiac arrest, bronchial asthma, respiratory failure, renal colic, hypo-glycaemia, Preventive aspects of Medicine: Concept of health, preventive medicine, social medicine, public health, epidemiology of infectious diseases, methods of prevention and control of infestations diseases.

# **BVOTT-405-Medical Ethics and Patients Care**

## **UNIT 1**

Medical ethics - Definition - Goal - Scope

Introduction to Code of conduct

## **UNIT 2**

Basic principles of medical ethics –Confidentiality

Malpractice and negligence - Rational and irrational drug therapy

## **UNIT 3**

Autonomy and informed consent - Right of patients

Care of the terminally ill- Euthanasia

## **UNIT 4**

Organ transplantation, Medico legal aspects of medical records –Medico legal case and type-Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects,Professional Indemnity insurance policy ,Development of standardized protocol to avoid near miss or sentinel events , Obtaining an informed consent.

## **BVOTT 406-Advance communication and soft skill**

### **UNIT-1**

#### Functional Grammar-II

- a) Application writing
- b) Paragraph writing, essay writing and précis writing
- c) Pre-testing of oral and writing skills

### **UNIT-2**

#### Professional Skills

- a) Biodata, CV and resume writing
- b) Joining letter, cover letter and resignation letter
- c) Inter- office memo, formal Business letter, informal notes
- d) Minutes of the meeting, reporting events, summary writing

### **UNIT-3**

#### Presentation skills

- a) Power-point presentations and presenting techniques
- b) Body language
- c) Describing people, places and events
- d) Extempore, speech and just- a minute sessions

### **UNIT-4**

#### Interview skills

- a) Developing skills to- debate, discussion, basics of GD and styles of GD
- b) Discussion in groups and group discussion on current issues
- c) Steps to prepare for an interview and mock interviews

#### Public speaking

- a) Art of public speaking
- b) Welcome speech
- c) Farewell speech

d) Votes of thanks

Oral practice

a) Debate

b) Just-a-minute

c) Group discussion

d) Mock interviews

## **PRACTICALS:**

### **BVOTTP 401 PRACTICAL BASIC ANESTHETICAL TECHNIQUES**

- minimum standard of anaesthesia ,
- pre anaesthetic assessment-history
- drugs - emergency drugs, anaesthetic drugs.
- Intraoperative management
- set up and things needed, post operative complications and management.

### **BVOTTP -402 PRACTICAL COMMUNITY HEALTH NURSING AND COMMUNICABLE DISEASE**

- Visit to different NGOS
- Community health nursing
- National Health Policy,
- National Population Policy,
- National Health Programmes
- Preventable diseases.

### **BVOTTP 403 - PRACTICAL ESSENTIAL CRITICAL CARE AND NURSING SKILLS**

- Critical care & ICU training
- Basic and Advanced Life Support:

### **BVOTTP 404 PRACTICAL OT TECHNIQUES IN EYE AND E.N.T**

- Clinical practice in eye and ent department
- safety in icu
- mangment in ot

## **BVOTTP 406 Practical Medical Ethics and Patient Care**

- law and liability and duties of staff
- Workplace issues
- Bioethical issue
- Care and handling of patient
- Medico legal cases
- emergency care and life support skills
- CPR
- Vital signs and primary assessment
- bag-valve-masks

## **Year 3 (DEGREE)**

### **Semester V**

#### **BVOTT -501 BASICS OF SURGERY**

##### **UNIT-1**

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

##### **UNIT-2**

Hemorrhage: signs and symptoms of internal and external; classification and management, identification of types of tourniquets, reasons for use and duration of application, dangers of use.

##### **UNIT-3**

Wounds: types of wounds, process of healing, treatment and complications; inflammation; wound infections-causes and treatment; incision and drainage of abscesses; importance of personal cleanliness and aseptic techniques.

##### **UNIT-4**

Pre-operative and post-operative care of the surgical patient, Emergency procedures, Knowledge of surgical asepsis, skin preparation for invasive procedures.

## **BVOTT -502 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 and 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. H2O2 gas plasma vapo sterlization.

## **BVOTT -503 REGIONAL ANESTHETIC TECHNIQUE**

- a. Local anesthetic technique
- b. Nerve blocks
- c. Spinal Anesthesia
- d. Epidural anesthesia

## **BVOTT -504 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.**

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

### **3.FLUID BALANCE AND PARENTERAL NUTRITION**

### **4. INFECTIOUS DISEASES IN I.C.U.**

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

### **5. ACID - BASE DISORDERS**

### **6. CARDIOVASCULAR FAILURE**

- o Inotropic support
- o Vaso dilator drugs.

### **7. RENAL FAILURE & LIVER FAILURE**

### **8. HEAD INJURY**

### **9. PRINCIPLES OF TRANSFUSION THERAPY**

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

# **BVOTT-505-Digital Literacy & Account Literacy**

## **Unit 1:**

Review of MS office

Advance options in MS excel

Excel

Power point

Introduction to internet learning platform

Using internet-based learning platform

Using google and you tube for learning

Using smart phone to become smart

## **UNIT-2**

Benefits of digital learning

Using internet for personal requirement

Online payments method

Use of social media for advisement

Digital security and privacy

Various cybercrime and their safety guideline

Best practice for securing online and network transaction

Managing privacy and security and social media accounts

## **UNIT-3**

Introduction and basic of financial planning

Concept of time and value of money

Risk and return

Myths about easy money

Financial planning with examples

Introduction to financial market and institution investment option in post office

Sources of finance

Capital market basics

Basic of money market

Mutual funds

## **UNIT-4**

Life insurance

General insurance

Types of banks

KYC

Function of commercial banks and RBI and its function

Deposit accounts-understanding of operation

Retail finance

Personal loan

Corporate banking

Cheque collecting services

Payments modes in banking system

# **BVOTT-506-Introduction to National Healthcare System**

## **Unit-1**

### **1. Introduction to healthcare delivery system**

- a. Healthcare delivery system in India at primary, secondary and tertiary care
- b. Community participation in healthcare delivery system
- c. Health system in developed countries.
- d. Private Sector
- e. National Health Mission
- f. National Health Policy
- g. Issues in Health Care Delivery System in India

## **UNIT-2**

- 2. National Health Programme- Background objectives, action plan, targets, operations, achievements and constraints in various National Health Programme.

## **UNIT-3**

- 3. Introduction to AYUSH system of medicine
  - a. Introduction to Ayurveda.
  - b. Yoga and Naturopathy
  - c. Unani
  - d. Siddha
  - e. Homeopathy
  - f. Need for integration of various system of medicine

## **UNIT-4**

- 4. Health scenario of India- past, present and future

### **Demography & Vital Statistics-**

- a. Demography – its concept
- b. Vital events of life & its impact on demography
- c. Significance and recording of vital statistics
- d. Census & its impact on health policy

### **6. Epidemiology**

- a. Principles of Epidemiology

- b. Natural History of disease
- c. Methods of Epidemiological studies
- d. Epidemiology of communicable & non-communicable diseases, disease transmission, host defense immunizing agents, cold chain, immunization, disease monitoring and surveillance.

## **PRACTICALS:**

### **BVOTTP -501 PRACTICAL BASICS OF SURGERY**

- Management of Wounds in hospital
- Pre-operative and post-operative care of the surgical patient,
- Emergency procedures

### **BVOTTP -502 PRACTICAL CSSD PROCEDURES**

- use of disinfectants ,
- cleaning process
- Materials used for wrapping and packing
- General observations principles of sterilization

### **BVOTTP -503 PRACTICAL REGIONAL ANESTHETIC TECHNIQUE**

- exposure to anesthetic technique

### **BVOTTP-504 PRACTICAL BASIC INTENSIVE CARE**

- MONITORING AND DIAGNOSTIC PROCEDURES IN I.C.U.
- GENERAL CARE OF PATIENT IN I.C.U.
- PRINCIPLES OF TRANSFUSION THERAPY

### **505-BVOTT-Practical Digital Literacy and Financial Literacy**

- Uses Advance options in MS excel
- Excel
- Power point
- Using internet-based learning platform
- Using google and you tube for learning
- Using smart phone to become smart
- Using internet for personal requirement
- Online payments method
- Use of social media for advisement

## **Semester VI**

### **BVOTT -601 ANESTHESIA FOR SPECIAL SURGERIES**

#### **NEURO ANAESTHESIA**

- Glasgow coma scale
- Premedication
- Special investigation - CT, Angiography and MRI
- Checklist
- Induction of a patient
- Reinforced Endotracheal tubes
- Positioning 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
- Risks for anesthesia.
- Precautions to be taken
- Check list
- Regional v/s general anesthesia
- Induction / maintenance and recovery .
- Resuscitation of the new born,
- 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

Incubation - Securing the EIT

Reversal & extubation – Problems

Transferring / ICU management

Pain management

#### **ENT Anesthesia**

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

## CARDIAC ANAESTHESIA :

- NYHA classification
- Arrhythmias
- Angina
- Dyspnoea
- Special investigations
  - o echo cardiography
  - o 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 ANESTHESIA

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

## GENERIC ANASTHESIA

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

## ANESTHESIA FOR TRAUMA AND SHOCK

- Resuscitation
- Preop investigation I assessment
- Criculotomy management
- Management of anaesthesia
- Rapid sequence induction
- Other problems

## THORACIC ANESTHESIA

- Pulmonary function tests
  - o bed side
  - o 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**

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

# **BVOTT -602 HYGIENE, SANITATION, NUTRITION, DIETICS**

## **UNIT-1**

Hygiene: Definition and historical background of hygiene, Personal hygiene- Sleep, washing, eating and drinking, exercises, skin disease and their prevention, various hygiene chemical, their dosage and usage.

## **UNIT-2**

Sanitation: definition and historical background of sanitation, Water Sources - Rain, surface, underground, Purification - Reasons, principles and methods, sterilization - Physical and chemical methods, individual water sterilizing outfit and its use, Storage - Water bottle, chagul, pakhal, canvas and iron cisterns, water truck, Water borne disease, water supply, spray techniques.

## **UNIT-3**

Nutrition and dietetics1: Food and nutrition - Composition of food, common articles of diet, Principles of Nutrition and dietetics, food requirements, cookery- reasons for cooking and dietetics, effects of different methods on cooking, storage of food in ward, preparation of tray and serving of food, Preparation of - Tea, coffee, cocoa, imperial drink, barley water, lemon squash, fruit juices, lockey, junket curds, buttermilk, jelly ice cream. eggs flip, albumin water. calories, BMR and caloric requirements, common articles of diet, special diets, sick room recipes, nutritional disease.

## **PRACTICALS:**

### **BVOTTP -601 PRACTICAL ANESTHESIA FOR SPECIAL SURGERIES**

demonstration of:

- knowledgeSpecial investigation - CT, Angiography and MRI
- Positioning in neuro surgery
- I.C.P.
- Theatre setting
- Check list
- Premedication - modes
- Induction
- ENT Anesthesia
- I.C.U management.
- Chest tube management
- Physiological changes
- Diseases of aging
- Nervous system
- Geriatric pharmacodynamics / pharmacokinetics
- Postoperative nervous system dysfunction.
- Pain management
- ICU management

### **BVOTTP-602 PRACTICAL HYGIENE, SANITATION, NUTRITION, DIETICS**

demonstration of:

- Hygiene
- Sanitation

Nutrition and dietetics