

## Course information form

**Note to applicant: This form needs to be completed, certified and uploaded as part of your online application. Please make sure you upload this form to the online portal as one document.**

The below named applicant has applied to register with the Health and Care Professions Council (HCPC), which would enable them to practise within the UK. We need to obtain details of each applicant's professional training. Please provide details on the content of each part of the programme that the applicant undertook at your institution.

We require content of academic and clinical training, including approximate numbers of hours within each part of the course and the assessment methods used. Any scores obtained under examination may also be useful. A list of procedures undertaken and departments attended during the course is valuable in the assessment process.

Please indicate the range and scope of clinical placements undertaken. It is likely that this will take up several pages. A syllabus is unlikely to provide sufficient applicant specific detail for registration purposes, but a copy may be provided in addition to the Course Information form. If part of the applicant's training took place at another institution, please indicate N in the "Undertaken at this institution" box. A Curriculum Certifying Document may be submitted if the detail below is included.

*This form must bear the stamp or seal of the university or training institution and include contact details for the course administrator or another appropriate member of staff who may be contacted as part of the verification process.*

Name of applicant:

SAYFI ABDULLA

Name of institution:

KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY

Institution address:

DR.M.H. MARIGOWDA ROAD, BANGALORE,  
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Kidwai@nic.in

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+91-080-66697999 ext 7301

Title of professional course:

BACHELOR OF SCIENCE  
ANESTHESIA TECHNOLOGY

Date course commenced:

AUG 2010

Date course completed:

AUG 2013



I certify that this is a true copy of the original document  
Seen by me Arjana Wilson  
Hcpc No: ODP 041595 Date - 25/8/13

Please input your response into the table below. The fields will grow to accommodate your answer

Course Year 1,2,3,4,	Subject, descriptive title of subject, session, theme or module name.	Content and examination method, hours studied. This may be taken from the syllabus, but must only include the components of the course undertaken by the named applicant. Optional courses not undertaken by the applicant should not be included.	Assessment Method. Verbal = V Written = W Practical = P	Undertaken at this institution Y/N
<b>FIRST YEAR</b>	<b>ANATOMY</b>	<p><b>Introduction: human body as a whole</b></p> <p><b>Theory:</b></p> <p>Definition of anatomy and its divisions</p> <p>Terms of location, positions and planes</p> <p>Cell and its organelles</p> <p>Epithelium-definition, classification, describe with examples, function</p> <p>Glands- classification, describe serous &amp; mucous glands with examples</p> <p>Basic tissues - classification with examples</p> <p>Practical: Histology of types of epithelium</p> <p>Histology of serous, mucous &amp; mixed salivary gland</p> <p><b>2. Locomotion and support</b></p> <p><b>Theory:</b></p> <p>Cartilage - types with example &amp; histology</p> <p>Bone - Classification, names of bone cells, parts of long bone, microscopy of compact bone, names of all bones, vertebral column, intervertebral disc, fontanelles of fetal skull</p> <p>Joints - Classification of joints with examples, synovial joint (in detail for radiology)</p> <p>Muscular system: Classification of muscular tissue &amp; histology</p> <p>Names of muscles of the body</p> <p>Practical: Histology of the 3 types of cartilage</p> <p>Demo of all bones showing parts, radiographs of normal bones &amp; joints</p> <p>Histology of compact bone (TS &amp; LS)</p> <p>Demonstration of all muscles of the body</p> <p>Histology of skeletal (TS &amp; LS), smooth &amp; cardiac muscle</p> <p><b>3. Cardiovascular system</b></p> <p><b>Theory:</b></p> <p>Heart-size, location, chambers, exterior &amp; interior</p> <p>Blood supply of heart</p> <p>Systemic &amp; pulmonary circulation</p> <p>Branches of aorta, common carotid artery, subclavian artery, axillary artery, brachial artery, superficial palmar arch, femoral artery, internal iliac arteryPeripheral pulse</p> <p>Inferior venacava, portal vein, portosystemic anastomosis</p> <p>Great saphenous vein</p> <p>Dural venous sinuses</p> <p>Lymphatic system- cisterna chyli &amp; thoracic duct</p> <p>Histology of lymphatic tissues</p> <p>Names of regional lymphatics, axillary and inguinal lymph nodes in brief</p> <p>Practical: Demonstration of heart and vessels in the body</p>		Y



	<p>Histology of large artery, medium sized artery &amp; vein, large vein</p> <p>Microscopic appearance of large artery, medium sized artery &amp; vein, large vein pericardium</p> <p>Histology of lymph node, spleen, tonsil &amp; thymus</p> <p>Normal chest radiograph showing heart shadows</p> <p>Normal angiograms</p> <p><b>4. Gastro-intestinal system</b></p> <p><b>Theory:</b></p> <p>Parts of GIT, Oral cavity (lip, tongue (with histology), tonsil, dentition, pharynx, salivary glands, Waldeyer's ring)</p> <p>Oesophagus, stomach, small and large intestine, liver, gall bladder, pancreas</p> <p>Radiographs of abdomen</p> <p><b>5. Respiratory system</b></p> <p>Parts of RS, nose, nasal cavity, larynx, trachea, lungs, bronchopulmonary segments</p> <p>Histology of trachea, lung and pleura</p> <p>Names of paranasal air sinuses</p> <p>Practical: Demonstration of parts of respiratory system.</p> <p>Normal radiographs of chest</p> <p>Histology of lung and trachea</p> <p><b>6. Peritoneum</b></p> <p><b>Theory:</b> Description in brief</p> <p><b>Practical:</b> Demonstration of reflections</p> <p><b>7. Urinary system</b></p> <p>Kidney, ureter, urinary bladder, male and female urethra</p> <p>Histology of kidney, ureter and urinary bladder</p> <p>Practical: demonstration of parts of urinary system</p> <p>Histology of kidney, ureter, urinary bladder</p> <p>Radiographs of abdomen-IVP, retrograde cystogram</p> <p><b>8. Reproductive system</b></p> <p><b>Theory:</b></p> <p>Parts of male reproductive system, testis, vas deferens, epididymis, prostate (gross &amp; histology)</p> <p>Parts of female reproductive system, uterus, fallopian tubes, ovary (gross &amp; histology)</p> <p>Mammary glad - gross</p> <p>Practical: demonstration of section of male and female pelvis with organs in situ</p> <p>Histology of testis, vas deferens, epididymis, prostate, uterus, fallopian tubes, ovary</p> <p>Radiographs of pelvis - hysterosalpingogram</p> <p><b>9. Endocrine glands</b></p> <p><b>Theory:</b></p> <p>Names of all endocrine glands in detail on pituitary gland, thyroid gland, parathyroid gland, suprarenal glad - (gross &amp; histology)</p> <p>Practical: Demonstration of the glands</p> <p>Histology of pituitary, thyroid, parathyroid, suprarenal glands</p> <p><b>10. Nervous system</b></p> <p><b>Theory:</b></p>		
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	<p>Neuron</p> <p>Classification of NS</p> <p>Cerebrum, cerebellum, midbrain, pons, medulla oblongata, spinal cord with spinal nerve (gross &amp; histology)</p> <p>Meninges, Ventricles &amp; cerebrospinal fluid</p> <p>Names of basal nuclei</p> <p>Blood supply of brain</p> <p>Cranial nerves</p> <p>Sympathetic trunk &amp; names of parasympathetic ganglia</p> <p>Practical: Histology of peripheral nerve &amp; optic nerve</p> <p>Demonstration of all plexuses and nerves in the body</p> <p>Demonstration of all part of brain</p> <p>Histology of cerebrum, cerebellum, spinal cord</p> <p><b>Sensory organs:</b></p> <p><b>Theory:</b></p> <p>Skin: Skin-histology</p> <p>Appendages of skin</p> <p>Eye: Parts of eye &amp; lacrimal apparatus</p> <p>Extra-ocular muscles &amp; nerve supply</p> <p>Ear: parts of ear- external, middle and inner ear and contents</p> <p>Practical: Histology of thin and thick skin</p> <p>Demonstration and histology of eyeball</p> <p>Histology of cornea &amp; retina</p> <p><b>Embryology:</b></p> <p><b>Theory:</b></p> <p>Spermatogenesis &amp; oogenesis</p> <p>Ovulation, fertilization</p> <p>Fetal circulation</p> <p>Placenta</p> <p>Internal Assessment</p> <p>Theory - Average of two exams conducted.</p> <p>Practicals: Record &amp; Lab work.</p>		
	<p><b>PHYSIOLOGY</b></p> <p>Introduction - composition and function of blood</p> <p>Red blood cells - Erythropoiesis, stages of differentiation function, count physiological Variation.</p> <p>Haemoglobin -structure, functions, concentration physiological variation Methods of Estimation of Hb</p> <p>White blood cells - Production , function, life span, count, differential count</p> <p>Platelets - Origin, normal count, morphology functions.</p> <p>Plasma Proteins - Production, concentration, types, albumin, globulin, Fibrinogen, Prothrombin functions.</p> <p>Haemostasis &amp; Blood coagulation</p> <p>Haemostasis - Definition, normal haemostasis, clotting factors, mechanism of clotting, disorders of clotting factors.</p> <p>Blood Bank</p> <p>Blood groups - ABO system, Rh system</p> <p>Blood grouping &amp; typing</p> <p>Cross matching</p> <p>Rh system - Rh factor, Rh in compatibility.</p>		Y

	<p>Blood transfusion - Indication, universal donor and recipient concept.</p> <p>Selection criteria of a blood donor. transfusion reactions</p> <p>Anticoagulants - Classification, examples and uses</p> <p>Anaemias : Classification - morphological and etiological. effects of anemia on body</p> <p>Blood indices - Colour index, MCH, MCV, MCHC</p> <p>Erythrocyte sedimentation Rate (ESR) and Packed cell volume</p> <p>Normal values, Definition, determination, Blood Volume - Normal Value, determination of blood volume and regulation of blood volume</p> <p>Body fluid - pH, normal value, regulation and variation</p> <p>Lymph - lymphoid tissue formation, circulation, composition and function of lymph</p> <p><b>Cardiovascular system</b></p> <p>Heart - Physiological Anatomy, Nerve supply</p> <p>Properties of cardiac muscle, Cardiac cycle - systole, diastole. Intraventricular pressure curves.</p> <p>Cardiac Output - only definition</p> <p>Heart sounds Normal heart sounds Areas of auscultation.</p> <p>Blood Pressure - Definition, normal value, clinical measurement of blood pressure.</p> <p>Physiological variations, regulation of heart rate, cardiac shock, hypotension, hypertension.</p> <p>Pulse - Jugular, radial pulse, Triple response</p> <p>Heart sounds - Normal heart sounds, cause characteristics and signification. Heart rate</p> <p>Electrocardiogram (ECG) -significance.</p> <p><b>Digestive System</b> - Physiological anatomy of Gastro intestinal tract, Functions of digestive system</p> <p>Salivary glands Structure and functions.</p> <p>Deglutination -stages and regulation Stomach - structure and fuctions</p> <p>Gastric secretion - Composition function regulation of gastric juice secretion</p> <p>Pancrease - structure, function, composition, regulation of pancreatic juice</p> <p>Liver - functions of liver</p> <p>Bile secretion, composition, function regulation of bile secretion .Bilirubin metabolism types of bilirubin, Vandernberg reaction, Jaundice- types, significance.</p> <p>Gall bladder - functions</p> <p>Intestine - small intestine and large intestine Small intestine -Functions- Digestive, absorption, movements.</p> <p>Large intestine - Functions, Digestion and absorption of Carbohydrates, Proteins, Fats, Lipids.</p> <p>Defecation</p> <p><b>Respiratory system</b></p> <p>Functions of Respiratory system, Physiological Anatomy of Respiratory system, Respiratory tract, Respiratory Muscles, Respiratory organ-lungs, Alveoli, Respiratory membrane, stages of</p>		
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	<p>respiration.</p> <p>Mechanism of normal and rigorous respiration. Forces opposing and favouring expansion of the lungs. Intra pulmonary pleural pressure, surface tension, recoil tendency of the wall. H</p> <p><b>Transportation of Respiratory gases:</b></p> <p>Transportation of Oxygen: Direction, pressure gradient, Forms of transportation, Oxygenation of Hb.</p> <p>Quantity of Oxygen transported.</p> <p><b>Lung volumes and capacities</b></p> <p>Regulation of respiration what? Why? How? Mechanisms of Regulation, nervous and chemical regulation. Respiratory centre. Hearing Brier, Reflexes.</p> <p><b>Applied Physiology and Respiration:</b> Hypoxia, Cyanosis, Asphyxia, Dyspnea, Dysbarism, Artificial Respiration, Apnoea.</p> <p><b>Endocrine System - Definition</b> Classification of Endocrine glands &amp; their Hormones Properties of Hormones .</p> <p><b>Thyroid gland hormone - Physiological, Anatomy,</b> Hormone secreted, Physiological function, regulation of secretion. Disorders - hypo and hyper secretion of hormone.</p> <p><b>Adrenal gland - Adrenal cortex physiologic anatomy of adrenal gland, Adrenal cortex, cortical hormones - functions and regulation</b> Adrenal medulla - Hormones , regulation and secretion.</p> <p>Functions of Adrenaline and nor adrenaline</p> <p><b>Pituitary hormones - Anterior and posterior pituitary hormones, secretion, function</b></p> <p>Pancreas - Hormones of pancreas Insulin - secretion, regulation ,function and action. Diabetes mellitus - Regulation of blood glucose level.</p> <p><b>Parathyroid gland - function, action, regulation of secretion of parathyroid hormone.</b> Calcitonin - function and action</p> <p><b>Special senses</b></p> <p>Vision - structure of eye. Function of different parts.</p> <p>Structure of retina Hearing structure and function of can mechanism of hearing</p> <p>Taste - Taste buds functions . Smell physiology, Receptors.</p> <p><b>Nervous system:</b></p> <p>Functions of Nervous system, Neurone structure, classification and properties. Neuroglia, nerve fiber, classification ,conduction of impulses continuous and saltatory. Velocity of impulse transmission and factors affecting. Synapse - structure, types, properties. Receptors - Definition, classification ,properties. Reflex action - unconditioned properties of reflex action. Babinski's sign. Spinal cord nerve tracts. Ascending tracts, Descending tracts - Pyramidal tracts -</p> <p>Extrapyramidal tracts. Functions of Medulla, pons, Hypothalamic disorders. Cerebral cortex</p>		
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	<p>lobes and functions, Sensory cortex, Motor cortex,Cerebellum functions of Cerebellum.Basal ganglion-functions. EEG.</p> <p><b>Cerebro Spinal Fluid( CSF) :</b> formation, circulation, properties, composition and functions lumbar puncture.</p> <p><b>Autonomic Nervous System:</b> Sympathetic and parasympathetic distribution and functions and comparison of functions.</p> <p><b>Excretory System</b></p> <p><b>Excretory organs</b></p> <p><b>Kidneys:</b> Functions of kidneys structural and functional unit nepron, vasarecta, cortical and juxamedullary nephrons - Comparision, Juxta Glomerular Apparatus -Structure and function. Renal circulation peculiarities.</p> <p><b>Mechanism of Urine formation:</b> Ultrafiltration criteria for filtration GFR, Plasma fraction, EFP, factors effecting EFR. Determination of GFR selective reabsorption - sites of reabsorption substance reabsorbed, mechanisms of reabsorption Glucose, urea. H + Cl aminoacids etc. TMG, Tubular lead, Renal threshold % of reabsorption of different substances, selective e secretion. Properties and composition of normal urine, urine output. Abnormal constituents in urine , Mechanism of urine concentration.</p> <p><b>Counter - Current Mechanisms :</b> Micturition, Innervation of Bladder, Cystourethrogram.</p> <p><b>Diuretics:</b> Water, Diuretics, osmotic diuretics, artificial kidney Renal function tests - plasma clearance Actions of ADH, Aldosterone and PTH on kidneys. Renal function tests</p> <p><b>Reproductive system:</b> Function of Reproductive system, Puberty, male reproductive system. Functions of testes, spermatogenesis site, stages, factors influencing semen. Endocrine functions of testes.</p> <p><b>Androgens:</b> Testosterone structure and functions. Female reproductive syustem. Ovulation, menstrual cycle. Physiological changes during pregnancy, pregnancy test.</p> <p><b>Lactation:</b> Composition of milk factors controlling lactation.</p> <p><b>Muscle nerve physiology:</b> Classification of muscle, structure of skeletal muscle, Sarcomere contractile proteins, Neuromuscular junction. Transmission across, Neuromuscular junction.</p> <p><b>Excitation contraction coupling.</b> Mechanism of muscle contraction muscle tone, fatigue Rigour mortis.</p> <p><b>Skin -structure and function</b></p> <p>Body temperature measurement, Physiological variation, Regulation of body Temperature by</p>	
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	<p>physical chemical and nervous mechanisms .Role of Hypothalamus, Hypothermia and fever.</p> <p>Practicals</p> <p>Haemoglobinometry</p> <p>White Blood Cell count</p> <p>Red Blood Cell count</p> <p>Determination of Blood Groups</p> <p>Leishman's staining and Differential WBC count</p> <p>Determination of packed cell Volume</p> <p>Erythrocyte sedimentation rate [ESR]</p> <p>Calculation of Blood indices</p> <p>Determination of Clotting Time, Bleeding Time</p> <p>Blood pressure Recording</p> <p>Auscultation for Heart Sounds</p> <p>Artificial Respiration</p> <p>Determination of vital capacity</p>		
	<p><b>BIO CHEMISTRY</b></p> <p><b>Theory:</b></p> <p><b>Specimen collection:</b></p> <p>Pre-analytical variables</p> <p>Collection of blood</p> <p>Collection of CSF &amp; other fluids</p> <p>Urine collection</p> <p>Use of preservatives</p> <p>Anticoagulants</p> <p><b>1. Introduction to Laboratory apparatus</b></p> <p>Pipettes- different types (Graduated, volumetric, Pasteur, Automatic etc.,) Calibration of glass</p> <p>pipettes Burettes, Beakers, Petri dishes, depression plates.</p> <p>Flasks - different types )Volumetric, round bottmed, Erlemeyer conical etc.,) Funnels - different types (Conical, Buchner etx.,) Bottles -</p> <p>Reagent bottles - graduated and common, Wash bottles - different type Specimen bottles etc.,</p> <p><b>2. Measuring cylinders, Porcelain dish</b></p> <p>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 holders Racks - Bottle, Test tube, Pipette Dessicator, Stop watch, rimers, scissors. Dispensers - reagent and sample Any other apparatus which is important and may have been missed should also be covered</p> <p><b>Maintenance of lab glass ware and apparatus:</b></p> <p>Glass and plastic ware in Laboratory</p> <p>* use of glass: significance of boro silicate glass ; care and cleaning of glass ware, different cleaning solutions of glass</p> <p>* care and cleaning of plastic ware, different cleaning solutions</p> <p><b>3. Instruments: (Theory and demonstration)</b> Diagrams to be drawn Water bath: Use, care and maintenance Oven &amp; Incubators: Use, care and maintenance.</p>		Y



	<p>Water Distillation plant and water deionisers. Use, care and maintenance Refrigerators, cold box, deep freezers - Use, care and maintenance Reflux condenser: Use, care and maintenance</p> <p>Centrifuges (Theory and demonstration) Diagrams to be drawn Definition, Principle, svedberg unit, centrifugal force, centrifugal field rpm, ref. Conversion of G to rpm and vice versa.</p> <p>Different types of centrifuges Use care and maintenance of a centrifuge Laboratory balances</p> <p>[Theory &amp; Practicals] Diagrams to be drawn Manual balances: Single pan, double pan, trip balance Direct read out electrical balances.</p> <p>Use care and maintenance. Guidelines to be followed and precautions to be taken while weighing</p> <p>Weighing different types of chemicals, liquids. Hygroscopic compounds etc.</p> <p>Colorimeter and spectrophotometer (Theory and Practicals) Diagrams to be drawn Principle, Parts Diagram.</p> <p>Use, care and maintenance.</p> <p>pH meter (Theory &amp; practicals) Diagrams to be drawn principle, parts, Types of electrodes, salt bridge solution. Use, care and maintenance of Ph meter and electrodes Guidelines to be followed and precautions to be taken while using pH meter</p> <p><b>4. Safety of measurements</b></p> <p><b>5. Conventional and SI units</b></p> <p><b>6. Atomic structure</b></p> <p>Dalton's theory, Properties f electrons, protons, neutrons, and nucleus, Rutherford's model of atomic structure, Bohr's model of atomic structure, orbit and orbital, Quantum numbers, Heisenberg's uncertainly principle.</p> <p>Electronic configuration - Aufbau principle, Pauli's exclusion principle, etc., m Valency and bonds - different types of strong and weak bonds in detail with examples.</p> <p>Theory &amp; Practicals for all the following under this section Molecular weight, equivalent weight of elements and compounds, normality molarity.</p> <p>Preparation of molar solutions (mole/litre solution) eg: 1 M NaCl, 0.15 M NaCL, 1 M NaOH, 0.1 M HCl, 0.1 M H<sub>2</sub>SO<sub>4</sub> etc.,</p> <p>Preparation of normal solutions. eg., 1N Na<sub>2</sub>CO<sub>3</sub>, 0.1N Oxalic acid, 0.1 N HCl, 0.1N H<sub>2</sub>SO<sub>4</sub>, 0.66 N H<sub>2</sub>SO<sub>4</sub> etc.,</p> <p>Percent solutions. Preparation of different solutions - v/v w/w (solids, liquids and acids)</p> <p>Conversion of a percent solution into a molar solution</p> <p><b>Dilutions</b></p> <p>Diluting solutions: eg. Preparation of 0.1 N NaCl from 1 N NaCl from 2 NHCl etc., Preparing working</p>	
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	<p>standard from stock standard, Body fluid dilutions, Reagent dilution techniques, calculating the dilution of a solution, body fluid reagent etc., Saturated and supersaturated solutions. Standard solutions. Technique for preparation of standard solutions. Eg., Glucose, urea, etc., Significance of volumetric flask in preparing standard solutions. Volumetric flasks of different sizes, Preparation of standard solutions of deliquescent compounds (CaCl<sub>2</sub>, potassium carbonate, sodium hydroxide etc.,) Preparation of standards using conventional and SI units Acids, bases, salts and indicators.</p> <p><b>Acids and Bases:</b> Definition, physical and chemical properties with examples. Arrhenius concept of acids and bases, Lowry - Bronsted theory of acids and bases classification of acids and bases. Different between bases and alkali, acidity and basicity, monoprotic and polyprotic acids and bases Concepts of acid base reaction, hydrogen ion concentration, Ionisation of water, buffer, Ph value of a solution, preparation of buffer solutions using Ph meter.</p> <p><b>Salts:</b> Definition, classification, water of crystallization - definition and different types, deliquescent and hygroscopic salts</p> <p><b>Acid-base indicators:</b> (Theory and Practical)</p> <p><b>Theory</b> - 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.</p> <p><b>Practical</b> - Titration of a simple acid and a base (Preparation of standard solution of oxalic acid and using this solution finding out the normality of a sodium hydroxide solution . Acid to be titrated using this base) Calculation of normality of an acid or a base after titration, measurement of hydrogen ion concentration.</p> <p><b>Quality control:</b> Accuracy</p> <p>Precision</p> <p>Specificity</p> <p>Sensitivity</p> <p>Limits of error allowable in laboratory</p> <p>Percentage error</p> <p>Normal values and Interpretations</p> <p><b>Special Investigations:</b> Serum Electrophoresis</p> <p>Immunoglobulins</p> <p><b>Drugs:</b> Digitoxin, Theophyllines</p> <p><b>Regulation of Acid Base status:</b></p> <p>Henderson Hasselbach Equations</p>		
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	<p>Buffers of the fluid      pH Regulation      Disturbance in acid Base Balance</p> <p>Anion Gap      Metabolic acidosis      Metabolic acidosis      Metabolic alkalosis      Respiratory acidosis      Respiratory alkalosis</p> <p>Basic Principles and estimation of Blood Gases and pH      Basic principles and estimation of Electrolytes      Water Balance      Sodium regulation      Bicarbonate buffers      Nutrition, Nutritional support with special emphasis on parental nutrition.      Calorific Value      Nitrogen Balance      Respiratory Quotient      Basal metabolic rate      Dietary Fibers      Nutritional importance of lipids, carbohydrates and proteins      Vitamins</p> <p><b>PRACTICALS</b></p> <p>Analysis of Normal Urine      Composition of urine      Procedure for routine screening      Urinary screening for inborn errors of metabolism      Common renal disease      Urinary calculus      Urine examination for detection of abnormal constituents      Interpretation and Diagnosis through charts      Liver Function tests      Lipid Profile      Renal Function test      Cardiac markers      Blood gas and Electrolytes      4. Estimation of Blood sugar, Blood Urea and electrolytes      5. Demonstration of Strips      Demonstration of Glucometer</p>		
	<p><b>PATHOLOGY</b></p> <p><b>HistoPathology - Theory</b></p> <ul style="list-style-type: none"> <li>- Introduction to Histo Pathology</li> <li>- Receiving of Specimen in the laboratory</li> <li>- Grossing Techniques</li> <li>- Mounting Techniques - various Mountants</li> <li>- Maintenance of records and filing of the slides.</li> <li>- Use &amp; care of Microscope</li> <li>- Various Fixatives, Mode of action, Preparation and Indication.</li> <li>- Bio-Medical waste management</li> <li>- Section Cutting</li> <li>- Tissue processing for routine paraffin sections</li> <li>- Decalcification of Tissues.</li> </ul>		Y

MICRO BIOLOGY	<ul style="list-style-type: none"> <li>- Staining of tissues - H &amp; E Staining</li> <li>- Bio-Medical waste management</li> <li>Clinical Pathology - Theory</li> <li>- Introduction to Clinical Pathology</li> <li>- Collection, Transport, Preservation, and Processing of various clinical specimens</li> <li>- Urine Examination - Collection and Preservation of urine.</li> <li>Physical, chemical, Microscopic Examination</li> <li>- Examination of body fluids.</li> <li>- Examination of cerebro spinal fluid (CSF)</li> <li>- Sputum Examination.</li> <li>- Examination of feces</li> </ul> <p><b>Haematology - Theory</b></p> <ul style="list-style-type: none"> <li>- Introduction to Haematology</li> <li>- Normal constituents of Blood, their structure and function.</li> <li>- Collection of Blood samples</li> <li>- Various Anticoagulants used in Haematology</li> <li>- Various instruments and glassware used in Haematology, Preparation and use of glassware</li> <li>- Laboratory safety guidelines</li> <li>- SI units and conventional units in Hospital Laboratory</li> <li>- Hb,PCV</li> <li>- ESR</li> <li>- Normal Haemostasis</li> <li>Bleeding Time, Clotting Time, Prothrombin Time, Activated Partial Thromboplastin Time.</li> </ul> <p><b>Blood Bank</b></p> <p>Introduction</p> <ul style="list-style-type: none"> <li>Blood grouping and Rh Types</li> <li>Cross matching</li> </ul> <p><b>PRACTICALS</b></p> <ul style="list-style-type: none"> <li>- Urine Examination.</li> <li>- Physical</li> <li>- Chemical</li> <li>- Microscopic</li> <li>- Blood Grouping Rh typing.</li> <li>- Hb Estimation,Packed Cell Volume[PCV], Erythrocyte Sedimentation rate[ESR]</li> <li>- Bleeding Time, Clotting Time.</li> <li>- Histopathology - Section cutting and H &amp; E Staining.[For BSc MLT only]</li> </ul> <p>1. Morphology 4 hours Classification of micro organisms, size, shape and structure of bacteria. Use of microscope in the study of bacteria. 2. Growth and nutrition 4 hours Nutrition, growth and multiplications of bacteria, use of culture media in diagnostic Bacteriology 3. Sterilisation and Disinfection 4 hours</p>		
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	<p>Principles and use of equipments of sterilization namely Hot Air oven, Autoclave and serum Inspissrator. Pasteurization, Anti septic and disinfectants. Antimicrobial sensitivity test.</p> <p><b>4. Immunology 6 hours</b> Immunity Vaccines, Types of Vaccine and immunization schedule Principles and interpretation of commonly done serological tests namely Widal, VDRL, ASLO, CRP, RF &amp; ELISA. Rapid tests for HIV and HbsAg (Technical details to avoid)</p> <p><b>5. Systematic Bacteriology 20 hours</b> Morphology, cultivation, diseases caused, laboratory diagnosis including specimen collection of the following bacteria( the classification, antigenic structure and pathogenicity are not to be taught) Staphylococci, Streptococci, Pneumococci, Gonococci, Menigococci, C diphtheriae, Mycobacteria, Clostridia, Bacillus, Shigella, Salmonella, Esch coli, Klebsiella, Proteus, vibrio cholerae, Pseudomonas &amp; Spirochetes</p> <p><b>6. Parasitology 10 hours</b> Morphology, life cycle, laboratory diagnosis of following parasites E. histolytica, Plasmodium, Tape worms, Intestinal nematodes</p> <p><b>7. Mycology 4 hours</b> Morphology, diseases caused and lab diagnosis of following fungi.</p> <p>Candida, Cryptococcus, Dermatophytes ,opportunistic fungi.</p> <p><b>8. Virology 10 hours</b> General properties of viruses, diseases caused, lab diagnosis and prevention of following viruses, Herpes, Hepatitis, HIV, Rabies and Poliomyelitis.</p> <p><b>9. Hospital infection</b> Causative agents, transmission methods, investigation, prevention and control Hospital infection. 4 hours</p> <p><b>10. Principles and practice Biomedical waste management</b> 4 hours</p> <p><b>Practical 20 hours</b></p> <p>Compound Microscope.</p> <p>Demonstration and sterilization of equipments - Hot Air oven, Autoclave, Bacterial filters.</p> <p>Demonstration of commonly used culture media, Nutrient broth, Nutrient agar, Blood agar, Chacolate agar, Mac conkey medium, LJ media, Robertson Cooked meat media, Potassium tellurite media with growth, Mac with LF &amp; NLF, NA with staph</p> <p>Antibiotic susceptibility test</p> <p>Demonstration of common serological tests - Widal, VRDL, ELISA.</p> <p>Grams stain</p> <p>Acid Fast staining</p>		
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		<p>Stool exam for Helminthic ova Visit to hospital for demonstration of Biomedical waste management. Anaerobic culture methods.</p>		
	<b>ENGLISH</b>	<p><b>BEHAVIOURAL OBJECTIVES:</b> The student at the end of training is able to            1. Read and comprehend english language            2. Speak and write grammatically correct english            3. Appreciates the value of English literature in personal and professional life.</p> <p><b>UNIT - I : INTRODUCTION :</b> Study Techniques Organisation of effective note taking and logical processes of analysis and synthesisUse of the dictionary Enlargement of vocabulary Effective diction</p> <p><b>UNIT - II: APPLIED GRAMMAR:</b> Correct usage The structure of sentences The structure of paragraphs Enlargements of Vocabulary</p> <p><b>UNIT - III:WRITTEN COMPOSITION:</b> Precise writing and summarising Writing of bibliography Enlargement of Vocabulary</p> <p><b>UNIT - IV: READING AND COMPREHENSION:</b> Review of selected materials and express oneself in one's words. Enlargement of Vocabulary.</p> <p><b>UNIT - V: THE STUDY OF THE VARIOUS FORMS OF COMPOSITION:</b> Paragraph, Essay, Letter, Summary, Practice in writing</p> <p><b>UNIT - VI: VERBAL COMMUNICATION:</b> Discussions and summarization, Debates, Oral reports, use in teaching</p>		Y
	<b>HEALTH CARE</b>	<p><b>Introduction to Health</b> Definition of Health, Determinants of Health, Health Indicators of India, Health Team Concept. National Health Policy National Health Programmes ( Briefly Objectives and scope)</p> <p>Population of India and Family welfare programme in India</p> <p><b>Introduction to Nursing</b> What is Nursing ? Nursing principles. Inter-Personnel relationships. Bandaging : Basic turns; Bandaging extremities; Triangular Bandages and their application.</p> <p>Nursing Position, Bed making, prone, lateral, dorsal, dorsal re-cumbent, Fowler's positions, comfort measures, Aids and rest and sleep.</p> <p>Lifting And Transporting Patients: Lifting patients up in the bed. Transferring from bed to wheel chair. Transferring from bed to stretcher.</p>		Y

	<p>Bed Side Management: Giving and taking Bed pan, Urinal: Observation of stools, urine.      Observation of sputum, Understand use and care of catheters, enema giving.      Methods Of Giving Nourishment: Feeding, Tube feeding, drips, transfusion, Care Of Rubber Goods      Recording of body temperature, respiration and pulse, Simple aseptic technique, sterilization and disinfection. Surgical Dressing: Observation of dressing procedures  <b>First Aid :</b>      Syllabus as for Certificate Course of Red Cross Society of St. John's Ambulance Brigade.</p>		
<b>APPLIED PHARMACOLOGY</b>	<p>General concepts about pharmacodynamic and Pharmacokinetic Principles involved in drug activity.</p> <p><b>I. Autonomic nerves system.</b></p> <ul style="list-style-type: none"> <li>• Anatomy &amp; functional organisation.</li> <li>• List of drugs acting an ANS including dose, route of administration, indications, contra indications and adverse effects.</li> </ul> <p><b>II. Cardiovascular drugs- Enumerate the mode of action, side effects And therapeutic uses of the following drugs.</b></p> <ol style="list-style-type: none"> <li>a. Antihypertensives             <ul style="list-style-type: none"> <li>• Beta Adrenergic antagonists</li> <li>• Alpha Adrenergic antagonists</li> <li>• Peripheral Vasodilators</li> <li>• Calcium channel blockers</li> </ul> </li> <li>b. Antiarrhythmic drugs</li> <li>c. Cardiac glycosides</li> <li>d. Sympathetic and nonsympathetic inotropic agents.</li> <li>e. Coronary vasodilators.</li> <li>f. Antianginal and anti failure agents</li> <li>g. Lipid lowering &amp; anti atherosclerotic drugs.</li> <li>h. Drugs used in Haemostasis - anticoagulants Thrombolytics and antithrombolytics.</li> <li>i. Cardioplegic drugs- History, Principles and types of cardioplagia.</li> <li>j. Primary solutions - History, principles &amp; types.</li> <li>k. Drugs used in the treatment of shock.</li> </ol> <p><b>III. Anaesthetic agents.</b></p> <ul style="list-style-type: none"> <li>• Definition of general and local anaesthetics.</li> <li>• Classification of general anaesthetics.</li> <li>• Pharmacokinetics and Pharmacodynamics of inhaled anaesthetic agents.</li> <li>• Intravenous general anaesthetic agents.</li> <li>• Local anaesthetics - classification mechanism of action, duration of action and methods to prolong the duration of action. Preparation, dose and routes of administration.</li> </ul> <p><b>IV. Analgesics</b></p> <ul style="list-style-type: none"> <li>• Definition and classification</li> <li>• Routes of administration, dose, frequency of administration,</li> </ul>	<b>Y</b>	

	<p>Side effects and management of non opioid and opioid analgesics</p> <p><b>V. Antihistamines and antiemetics-</b></p> <ul style="list-style-type: none"> <li>Classification, Mechanism of action, adverse effects, Preparations, dose &amp; routes &amp; administration.</li> </ul> <p><b>VI. CNS stimulants and depressants</b></p> <ul style="list-style-type: none"> <li>Alcohol</li> <li>Sedatives, hypnotics and narcotics</li> <li>CNS stimulants</li> <li>Neuromuscular blocking agents and muscle relaxants.</li> </ul> <p><b>VII. Pharmacological protection of organs during CPB</b></p> <p><b>VIII. Inhalational gases and emergency drugs.</b></p> <p><b>IX. Pharmacotherapy of respiratory disorders</b></p> <ul style="list-style-type: none"> <li>Introduction - Modulators of bronchial smooth muscle tone and pulmonary vascular smooth muscle tone</li> <li>Pharmacotherapy of bronchial asthma</li> <li>Pharmacotherapy of cough</li> <li>Mucokinetic and mucolytic agents</li> <li>Use of bland aerosols in respiratory care.</li> </ul> <p><b>X. Corticosteroids - Classification, mechanism of action, adverse effects and complications.</b></p> <p>Preparation, dose and routes of administration.</p> <p><b>XI. Diuretics</b></p> <ul style="list-style-type: none"> <li>Renal physiology</li> <li>Side of action of diuretics</li> <li>Adverse effects</li> <li>Preparations, dose and routes of administration.</li> </ul> <p><b>XII. Chemotherapy of infections</b></p> <ul style="list-style-type: none"> <li>Definition</li> <li>Classification and mechanism of action of antimicrobial agents</li> <li>Combination of antimicrobial agents</li> <li>Chemoprophylaxis.</li> <li>Classification, spectrum of activity, dose, routes of administration and adverse effects of penicillin, cephalosporins, aminoglycosides, tetracyclines, chloramphenicol, antitubercular drugs.</li> </ul> <p><b>XIII. Miscellaneous.</b></p> <ul style="list-style-type: none"> <li>IV fluids- various preparations and their usage.</li> <li>Electrolyte supplements</li> <li>Immunosuppressive agents</li> <li>New drugs included in perfusion technology.</li> <li>Drugs used in metabolic and electrolyte imbalance.</li> </ul> <p><b>PRACTICALS:</b></p> <ol style="list-style-type: none"> <li>Preparation and prescription of drugs of relevance.</li> <li>Experimental pharmacology directed to show the effects of commonly used drugs of relevance and interpretation of few charts.</li> </ol>		
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	<p><b>APPLIED PATHOLOGY</b></p> <p><b>I. CARDIOVASCULAR SYSTEM</b></p> <ul style="list-style-type: none"> <li>• Atherosclerosis- Definition, risk factors, briefly Pathogenesis &amp; morphology, clinical significance and prevention.</li> <li>• Hypertension- Definition, types and briefly Pathogenesis and effects of Hypertension.</li> <li>• Aneurysms - Definition, classification, Pathology and complications.</li> <li>• Pathophysiology of Heart failure.</li> <li>• Cardiac hypertrophy - causes, Pathophysiology &amp; Progression to Heart Failure.</li> <li>• Ischaemic heart diseases- Definition, Types. Briefly Pathophysiology, Pathology &amp; Complications of various types of IHD.</li> <li>• Valvular Heart diseases- causes, Pathology &amp; complication. Complications of artificial valves.</li> <li>• Cardiomyopathy - Definition, Types, causes and significance.</li> <li>• Pericardial effusion- causes, effects and diagnosis.</li> <li>• Congenital heart diseases - Basic defect and effects of important types of congenital heart diseases.</li> </ul> <p><b>II. HAEMATOLOGY</b></p> <ul style="list-style-type: none"> <li>• Anaemia - Definition, morphological types and diagnosis of anaemia.</li> <li>Brief concept about Haemolytic anaemia and polycythaemia.</li> <li>• Leukocyte disorders- Briefly leukaemia, leukocytosis, agranulocytosis etc.,</li> <li>• Bleeding disorders- Definition, classification, causes &amp; effects of important types of bleeding disorders. Briefly various laboratory tests used to diagnose bleeding disorders.</li> </ul> <p><b>III. RESPIRATORY SYSTEM</b></p> <ul style="list-style-type: none"> <li>• Chronic obstructive airway diseases - Definition and types. Briefly causes, Pathology and complications of each type of COPD.</li> <li>• Briefly concept about obstructive versus restrictive pulmonary disease.</li> <li>• Pneumoconiosis- Definition, types, Pathology and effects in brief.</li> <li>• Pulmonary congestion and edema.</li> <li>• Pleural effusion - causes, effects and diagnosis.</li> </ul> <p><b>IV. RENAL SYSTEM</b></p> <ul style="list-style-type: none"> <li>• Clinical manifestations of renal diseases. Briefly causes, mechanism, effects and laboratory diagnosis of ARF &amp; CRS. Briefly Glomerulonephritis and Pyelonephritis.</li> <li>• End stage renal disease - Definition, causes, effects and role of dialysis and renal transplantation in its management.</li> <li>• Brief concept about obstructive uropathy.</li> </ul> <p><b>PRACTICALS</b></p> <ol style="list-style-type: none"> <li>1. Description &amp; diagnosis of the following gross specimens.</li> </ol>		
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	<p>a. Atherosclerosis.      b. Aortic aneurysm.      c. Myocardial infarction.      d. Emphysema      e. Chronic glomerulonephritis.      f. Chronic pyelonephritis.</p> <p>2. Interpretation &amp; diagnosis of the following charts.</p> <p>a. hematology Chart - AML, CML, Hemophilia, neutrophilia, eosinophilia.</p> <p>b. Urine Chart - ARF, CRF, Acute glomerulonephritis.</p> <p>3. Estimation of Hemoglobin.</p> <p>4. Estimation Bleeding &amp; Clotting time.</p>		
<b>APPLIED MICRO BIOLOGY</b>	<p><b>THEORY - 40 HOURS</b></p> <p>1. Health care associated infections and Antimicrobial resistance: Infections that patients acquire during the course of receiving treatment for other 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.</p> <p>6 Hours</p> <p>2. Disease communicable to Healthcare workers in hospital set up and its preventive measure: Occupationally acquired infections in healthcare professionals by respiratory route ( tuberculosis, varicella-zoster, respiratory syncytial virus etc ), blood borne transmission ( HIV, Hepatitis B, Hepatitis C, Cytomegalovirus, Ebola virus etc ), oro faecal route ( Salmonella, Hepatitis A etc ), direct contact ( Herpes Simplex Virus etc ). Preventive measures to combat the spread of these infections by monitoring and control. 6 Hours</p> <p>3. Microbiological surveillance and sampling: Required to determine the frequency of potential bacterial pathogens including Streptococcus pneumoniae, Haemophilus influenzae, and Moraxella catarrhalis and also to assess the antimicrobial resistance.</p> <p>Sampling: rinse technique, direct surface agar plating technique. 6 Hours</p> <p>4. Importance of sterilization:</p> <p>a. Disinfection of instruments used in patient care: Classification, different methods, advantages and disadvantages of the various methods.</p> <p>b. Disinfection of the patient care unit</p> <p>c. Infection control measures for ICU's 10 Hours</p> <p>5. Sterilization:</p>		Y



	<p>a. Rooms: Gaseous sterilization, one atmosphere uniform glow discharge plasma (OAUGDP).</p> <p>b. Equipments: classification of the instruments and appropriate methods of sterilization.</p> <p>c. Central supply department: the four areas and the floor plan for instrument cleaning, high-level disinfecting and sterilizing areas. 8 Hours</p> <p>6. Preparation of materials for autoclaving: Packing of different types of materials, loading, holding time and unloading. 4 Hours</p> <p><b>PRACTICALS- 30 HOURS</b></p> <p>1. Principles of autoclaving &amp; quality control of Sterilization.</p> <p>2. Collection of specimen from outpatient units, inpatient units, minor operation theater and major</p> <p>operation theater for sterility testing.</p> <p>3. The various methods employed for sterility testing.</p> <p>4. Interpretation of results of sterility testing.</p> <p>5. Disinfection of wards, OT and Laboratory.</p>		
	<p><b>MEDICINE RELEVANT TO ANAESTHESIA TECHNOLOGY</b></p> <p>Diabetes Mellitus</p> <p>Hypertension</p> <p>Ischaemic heart disease</p> <p>Obesity</p> <p>Elderly patient</p> <p>Pregnancy</p> <p>Shock</p> <p>COPD</p> <p>Chronic renal failure</p> <p>Chronic liver disease/failure</p> <p>Anaemia</p> <p>Pediatric patient infant / neonate</p> <p>Epilepsy</p> <p>CVA</p>		Y
	<p><b>3<sup>rd</sup> YEAR</b></p> <p><b>Paper-I - Anaesthesia Technology - Clinical</b></p> <p>1. Pre operative preparation</p> <p>Pre Anaesthetic Assessment</p> <p>History of present assessment</p> <p>Past history with emphasis on previous illness and surgery</p> <p>Personal history - Smoking, alcohol</p> <p>Physical examination - General and systemic</p> <p>2. Informed consent</p> <p>3. Premedication: Aims</p> <p>a. Narcotics</p> <p>b. Antihistamines</p> <p>c. Antacids</p> <p>d. Others - NTG</p> <p>4. Investigations</p> <p>Biochemistry - Blood, glucose, Urea, Creatinine</p> <p>Haematology - Haemogram, Prothrombin Time, Partial thromboplastin time, BT, CT</p> <p>Urine- Complete urine analysis</p> <p>ECG</p> <p>Chest X-ray</p>		Y

	<p>ABG</p> <p><b>5. Criteria used for accepting the case for surgery</b></p> <p><b>6. Equipment</b></p> <p>Checking the machine, laryngoscopes, tubes, airways etc. suction apparatus, oxygen</p> <p>Cylinder, anaesthetic drugs and emergency drugs.</p> <p><b>7. Monitoring system</b></p> <p><b>8. Induction - Anaesthesia</b></p> <p>Endotracheal intubation, confirming the tube position and securing the tube</p> <p>Maintenance of anaesthesia</p> <p>Fluid / Blood and electrolyte balance</p> <p>Reversal from anaesthesia - drugs used</p> <p><b>9. Preparations</b></p> <ul style="list-style-type: none"> <li>a. Identification</li> <li>b. Consent</li> </ul> <p>Course Contents Third Year</p> <p>Main Subjects</p> <ul style="list-style-type: none"> <li>c. NPO</li> <li>d. Prostheses</li> <li>e. Lab results</li> <li>f. Consultation</li> <li>g. Blood</li> </ul> <p><b>10. Testing Machine</b></p> <ul style="list-style-type: none"> <li>a. Gas supply</li> <li>b. Flow meters</li> <li>c. O<sub>2</sub> bypass</li> <li>d. Valves</li> <li>e. Vaporisers</li> </ul> <p><b>11. Emergency Drugs</b></p> <ul style="list-style-type: none"> <li>a. Atropine</li> <li>b. Epinephrine</li> <li>c. Isoprenaline</li> <li>d. Ephedrine</li> <li>e. Aminophylline</li> <li>f. Hydrocortizone</li> <li>g. Soda Bicarb</li> <li>h. Dopamine</li> <li>i. Norepinephrine</li> <li>j. Dobutamine</li> </ul> <p><b>12. I. V. Infusion</b></p> <ul style="list-style-type: none"> <li>a. Site of cannulations</li> <li>b. Finding a vein</li> <li>c. Technique of venupuncture</li> <li>d. Special difficulty</li> </ul> <p><b>13. Protection of the Patient</b></p> <ul style="list-style-type: none"> <li>a. The eyes</li> <li>b. The ears</li> <li>c. The skin</li> <li>d. The lips, tongue, teeth</li> <li>e. Veins, arteries</li> <li>f. Peripheral nerves</li> </ul> <p><b>14. Intubation</b></p> <ul style="list-style-type: none"> <li>a. Choice of ETT</li> </ul>		
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	<ul style="list-style-type: none"> <li>b. Choice of Laryngoscope</li> <li>c. Techniques of intubation</li> <li>d. Complications</li> <li>e. Difficult intubation</li> </ul> <p><b>15. Emergence, Termination and Recovery</b></p> <ul style="list-style-type: none"> <li>1. Reversal</li> <li>2. Oropharyngeal toilet</li> <li>3. E T Suction</li> <li>4. Deflation of the cuff</li> <li>5. Removal of the tube</li> <li>6. Transfer of the patient</li> <li>7. In the recovery room</li> <li>a. Patient identification</li> <li>b. Diagnosis &amp; Surgery</li> <li>c. Type of anesthesia used</li> <li>d. Fluid balance</li> <li>e. B P</li> <li>g. Any complications</li> <li>h. Instructions about ventilation, vital signs</li> <li>8. Problems in RR</li> <li>a. B.P. hypo, hypertension</li> <li>b. HR- Tachy, bradycardia</li> <li>c. Pallor, cyanosis, dyspnea</li> <li>d. Restlessness</li> <li>e. Neurological- Seizures</li> <li>f. Sweating</li> </ul>		
	<p><b>Paper-II -</b>  <b>Anaesthesia</b>  <b>Technology -</b>  <b>Applied</b></p> <p>History of anaesthesia in detail      Methods of anaesthesia      Inhalational Anaesthesia      Minimum alveolar anaesthetic concentration      Stages of ether anaesthesia      Halothane      Isoflurane      Sevoflurane      Nitrous oxide      Narcotic drugs      Opioids analgesics      Morphine      Pethidine      Fentanyl      Buprenorphine      Tramadol      Difficult intubation      Muscle relaxants      Neuromuscular blockers      Suxamethonium      Pancuronium      Vecuronium      Atracurium      Rocuronium      Reversal agents      Intravenous anaesthetic agents      Thiopentone      Propofol</p>		Y

	<p>Ketamine</p> <p>Intraoperative management</p> <p>Confirm the identity of the patient</p> <p>Transferring the patient</p> <p>Recovery room - setup, things needed expected problems</p> <p>Post operative complications and management</p> <p>CPR</p> <p>Monitoring during anaesthesia and surgery</p> <p>Regional anaesthesia</p> <p>Spinal Anaesthesia</p> <p>Epidural Anaesthesia</p> <p>Nerve blocks</p> <p>Benzodiazapines</p> <p>Phenothiazines</p> <p>Neuromuscular transmission</p> <p>Nerve stimulators</p> <p>Reversal of neuromuscular blockage</p> <p>Drugs acting on sympathetic nervous system</p> <p>Adrenaline</p> <p>Noradrenaline</p> <p>Dopamine</p> <p>Dobutamine</p> <p>Milrinone</p> <p>Isoprenaline</p> <p>Local anaesthetic agents</p> <p>Lignocaine</p> <p>Bupivacaine</p> <p>Complications and accidents during anaesthesia</p> <p><b>Complications:</b></p> <ul style="list-style-type: none"> <li>I. Related to equipment</li> <li>1. Hypoxemia</li> <li>2. Hyercapnea</li> <li>3. Increased airway pressure</li> <li>4. Decreased airway pressure</li> <li>5. Deep anesthesia</li> <li>6. Thermal &amp; electrical injuries</li> <li>7. Monitoring instruments</li> <li>8. Presenting anesthesia equipment complications</li> <li>a. Being prepared with back up ventilation</li> <li>b. Pre-use checkout</li> <li>c. Maintenance</li> <li>d. User education</li> </ul> <p>II. Related to airway</p> <ul style="list-style-type: none"> <li>a. Difficult intubations</li> <li>b. Airway Trauma</li> </ul> <p>III. Cardiovascular System</p> <ul style="list-style-type: none"> <li>a. Hypotension</li> <li>b. Hypertension</li> <li>c. Tachycardia</li> <li>d. Bradycardia</li> <li>e. Arrhythmias</li> <li>f. Ischemia &amp; infarction</li> </ul>		
	<p><b>Paper - III -</b></p> <p><b>Anaesthesia</b></p>	<p>Anaesthesia &amp; co-existing diseases</p> <p>Ischaemic heart disease</p> <p>Hypertension</p>	



<b>Technology - Advanced</b> <ul style="list-style-type: none"> <li>Congestive cardiac failure</li> <li>Arrhythmia &amp; heart blocks</li> <li>Chronic bronchitis &amp; COPD</li> <li>Bronchial asthma</li> <li>Pediatric anaesthesia</li> <li>Liver disease and anaesthesia</li> <li>Renal disease and anaesthesia</li> <li>Obesity and anaesthesia</li> <li>Diabetes mellitus and anaesthesia</li> <li>Thyroid disease and anaesthesia</li> <li><b>Obstetric Anaesthesia:</b> <ol style="list-style-type: none"> <li>1. Epidural analgesia</li> <li>2. Anaesthesia for LSCS</li> <li>3. Special situations: pre -eclampsia</li> </ol> </li> <li>Anaesthesia for common surgical disorders</li> <li>Anaesthesia for special situations</li> <li>Shock, low cardiac output &amp; cardiac arrest</li> <li>Pulmonary function tests &amp; their significance</li> <li>Ventilators - types &amp; methods of ventilation</li> <li>Humidification</li> <li>Aerosol therapy</li> <li><b>Resuscitation of the Newborn</b> <ol style="list-style-type: none"> <li>1. Apgar scoring system</li> <li>2. Use of drugs</li> <li>3. Temperature control</li> </ol> </li> <li><b>Anaesthesia for Thoracic Surgery</b> <ol style="list-style-type: none"> <li>1. Use of double lumen tubes</li> <li>2. Anesthesia for bronchoscopy</li> <li>3. Thymectomy</li> </ol> </li> <li><b>Anaesthesia for cardiac surgery</b> <ol style="list-style-type: none"> <li>1. Preparations &amp; monitoring</li> <li>2. Heparin &amp; Protamine</li> <li>3. Care &amp; use of arterial &amp; venous lines</li> <li>4. Maintenance of body temperature</li> <li>5. Anaesthesia for open heart surgery</li> <li>6. Transport to ICU</li> </ol> </li> </ul>		<b>Y</b>
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I certify that this is a  
true copy of the original  
document seen by me  
Anjana Wilson copy.

Hcpc No: ODP 041595

Date - 25/8/23