DEPARTMENT OF ANAESTHESIA

PG COURSE MD ANAESTHESIA

Programme outcome				Programme specific outcome	Course Outcome
Medical Knowledge	Congnitive	At the end of PG Training A PG student should have fair knowleddge of basic sciences as applied to his speciality	A student should have fair knowledge of basic sciences as applied to specialty. **Anatomy:** • Diaphragm, upper and lower airway. • Related to field block, central neuraxial block, nerve plexus block & blocks for chronic pain, chemical neurolysis . • arterial and venous cannulations etc **Physiology**: • Various organ system & cellular component related to anesthesia; Respiratory, CVS, hepatobiliary, renal and endocrine, pregnancy, blood , muscle & N-M-Junction. • Regulation of temperature & metabolism, stress response, cerebral blood flow and ICP • Central, autonomic and peripheral nervous systems **Biochemistry:**	**PG should develop expertise in –** • Good history taking, physical examination, advice the required investigation to evaluate patients & give clear advice for optimization before anesthesia. • Acceptance for anesthesia with Stratification in ASA grading • Pharmaco-kinetics of drugs , purpose & route & time of administration of premedication. • Giving advice & documentation of the premedications **Premedication** • Deciding, planning and conduct of general /regional anesthesia – principles & techniques. • Operating different equipments used by anesthetist.	**GOAL** The goal of PG course in Anesthesiology is to produce a competent specialist doctor and / or Medical teachers who should :- i. recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy ii. have mastered most of the competencies, pertaining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system; iii. be aware of the contemporary advance and developments in the discipline concerned; iv. have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and

			• **F**luid Balance & Blood transfusion, perioperative fluid therapy, acid base homeostasis. • Interpretation of blood gases and other relevant biochemical values **Pathology:** Pathophysiology of various diseases including disorders of CVS, RS, neurological, hepatobiliary , renal & immune systems. **Pharmacology:** • General principles, concepts of pharmacokinetics and pharmaco dynamics. • Drug interactions in anesthesiology • Drugs used for Premedication, general anesthetics- intravenous and inhalational, neuromuscular block and reversal • Drugs used in cardiovascular, respsi ratory, endocrine, renal diseases and CNS disorders. **Medicine** : as applied to practice of anesthesia including diagnosis & management of diabetes, hypertension, bronchial Asthma, COPD, CAD, shock,	**Airway management** • Assessment of adequacy of airway by examination & anticipate difficulty • Organizing the equipments & drugs required for intubation. • Performing various steps & methods of intubation • Assess the correct placement & fix the ETT . • Learn failed Intubation • Practice topical anaesthesia of airway and technique of awake intubation **Ventilation** • doing bag & mask ventilation • Giving ventilation by using Bains & JR circuit during GA. • Use of anesthetic ventilator • Knowledge about application of various modes of mechanical ventilation , setting of ventilator, care & monitoring of ventilating patient in Recovery / ICU **O_2 Therapy** • Assessment of the need of O2, decide flow, fiO2 & technique. **CPR:** • Providing basic life support and advanced cardiac life support & trauma support (OT, recovery , EM & ICU) **Intraoperative Monitoring:** • Monitoring intra operative vital parameters &	epidemiology; and v. have acquired the basic skills in teaching of the medical and paramedical professionals;

			acute respiratory failure, ARDS, renal failure, endocrine disorders. ECG. **Physics** related to • Anesthesia machine , Airway equipment including laryngoscopes • Breathing systems • Gas laws, medical gas supply system , Oxygen therapy • Electricity and diathermy • Ventilators , vaporizers, & Laser • Pacemaker and defibrillator • Monitoring equipment used for assessment of cardiac functions, temperature, respiratory functions, blood gases , ICP, depth of anesthesia and neuromuscular block. • Computers in anesthesia **Knowledge of Subject -Anesthesia :** • Should know commonly used anesthetic techniques , principles of pre anesthetic assessment and premedication, monitoring, effects of positioning during	assessment of the depth of anesthesia. • Assessing volume status and replacement of fluid and blood loss and appropriate use of blood and blood products • Interpretation & analysis of - ➢ ECG ST – segment analysis ➢ NIBP . ➢ Pulse oximetry: values and changes ➢ Capnograph: values and waveform ➢ Neuromuscular blockade monitoring ➢ Central venous pressure: values and waveform ➢ Pulmonary artery pressure: Values and waveforms, pulmonary capillary wedge tracing • Cannulation of central and peripheral veins & arteries. • Pulmonary artery catheter **Sterilization methods** Knowledge of the principles of sterilization & Selection, maintenance and sterilization of anesthesia equipment	

			anesthesia , recovery from anesthesia and post operative care. • should acquire in-depth knowledge of anesthesia including recent advances. • Should have knowledge of the medical diseases modifying technique of anesthesia **Knowledge of Subspecialties of Anesthesia:** • Should know the Principles of anesthetic management of Neuro / Thoracic / vascular / transplantation /oncology, burns and plastic & pediatric surgery Should know the Principles of Anesthesia for the patients with severe cardiac, respiratory, renal and hepatobiliary disorders posted for unrelated surgery.		

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DEPARTMENT OF ANAESTHESIA

UG COURSE MBBS

Programme outcome	Programme specific outcome	Course Outcome
Aquire knowledge of Basics of Anaesthesia which include history, boyle's machine, instrument's (Laryngoscope, Endotracheal tube, Ambu bag, Spinal Needle, IV Cannula etc.), Drugs (Propofol, Ketamine, Fentanyl etc.), General Anaesthesia, Spinal Anaesthesia, Nerve blocks.	(1) Perform pre-anaesthetic check up and prescribe pre-anaesthetic medications; (2) Perform venepuncture and set up intravenous drip; (3) Perform laryngoscopy and endotracheal intubation; (4) Perform lumbar puncture, spinal anaesthesia and simple nerve blocks; (5) Conduct simple general anaesthetic procedures under supervision; (6) Monitor patients during anaesthesia and post operative period; (7) Recognise and manage problems associated with emergency anaesthesia; (8) Maintain anaesthetic records; (9) Recognize and treat complication in post operative period; (10) Perform cardio-pulmonary brain resuscitation (C.P.B.R.) Currectly, including recognition of cardiac arrest.	To develop competent doctor's having comprehensive knowledge and Skill of Anaesthesia.

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