## निजामती कर्मचारी अस्पताल

# प्राविधिक सेवा, एनेस्थेसियोलोजी समूह, एनेस्थेसियोलोजी उपसमूह रजिष्ट्रार पद, आठौँ (८) तहको लिखित परीक्षाको पाठ्यक्रम (करार तर्फ)

पूर्णाङ्कः १०० समयः ४५ मिनेट

उत्तीर्णाङ्गः ४० बस्तुगत प्रश्नपत्र अंकभार २ह५०

## 1. Anesthetic Physiology

- 1.1 Autonomic Nervous system
- 1.2 Cardiac physiology
- 1.3 Cerebral physiology and the effects of anesthetic drugs
- 1.4 Gastrointestinal physiology and pathophysiology
- 1.5 Hepatic physiology and pathophysiology
- 1.6 Neuromuscular physiology and pharmacology
- 1.7 Renal physiology, pathophysiology and pharmacology
- 1.8 Respiratory physiology and pathophysiology

## 2. Anesthetic Pharmacology

- 2.1 Basic Principles of Pharmacology
- 2.2 Inhaled Anesthetics: Mechanism of Action, Pharmacokinetics uptake, distribution, metabolism and toxicity
- 2.3 Inhaled Anesthetics: Pulmonary Pharmacology, Cardiovascular Pharmacology
- 2.4 Inhaled Anesthetics: Delivery system- Anesthesia machines, circuits and Physics
- 2.5 Intravenous Anesthetics
- 2.6 Opioids Analgesia and Nonopioid Pain Medication
- 2.7 Pharmacology of Neuromuscular Blocking Drugs and Antagonism of Neuromuscular Blockade
- 2.8 Local Anesthetics

#### 3. Anesthesia Management

- 3.1 Airway management
- 3.2 Preoperative Evaluation
- 3.3 Cardiovascular monitoring and management: Perioperative Echocardiography, Electrocardiography, Perioperative Ischemia and Myocardial Infarction, Implantable Cardiac Pulse Generators-Pacemakers and Cardioverter Defibrillators
- 3.4 Respiratory monitoring and management
- 3.5 Renal monitoring and management
- 3.6 Hepatic monitoring and management
- 3.7 Neurology monitoring: Monitoring Brain State During General Anesthesia and Sedation
- 3.8 Patients positioning and associated risk
- 3.9 Risk of Anesthesia
- 3.10 Perioperative Acid Base Balance
- 3.11 Perioperative Fluid and Electrolyte therapy
- 3.12 Blood management: Coagulation and Transfusion therapy
- 3.13 Depth of anesthesia monitoring: Bispectral index (BIS), EEG, Neuromuscular blockade monitor
- 3.14 Supra glottis airway devices
- 3.15 Airway algorithm

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## 4. Subspecialty Management

- 4.1 Anesthesia for Cardiac Surgical procedures -Thoracic and Vascular surgery
- 4.2 Anesthesia and ICU management for Cardiac Arrhythmias cardiovascular emergency
- 4.3 Anesthesia for Renal and Genitourinary System
- 4.4 Anesthesia for Renal Transplant and ICU management
- 4.5 Anesthesia for Hepatobiliary system, Transplant and ICU management
- 4.6 Anesthesia for Organ Procurement (Renal/Liver/Cardiac/Pancreas and other): Management of organ donors before procurement (pulmonary/ cardiovascular/ temperature/hormones/steroids/electrolytes)
  - 4.7 Donor management goals, management of donors after brain stem death
  - 4.8 Anesthesia and pre hospital emergency: BLS and ACLF (Recent Guideline)
- 4.9 ICU management- Sepsis and multisystem organ failure (Recent guideline), Post- transplant Infection, Acute Graft Rejection/Shock- cardiogenic/hypovolumic/ septic/Anaphylactic
- 4.10 ICU management ARDS, TRALI, Transfusion complication, Peumothorax / Pneumohydrothorax, Acute liver Failure, Acute Renal failure, VAP, Catheter related Bloodstream infection.
  - 4.11 Remote Anesthesia: Endoscopy, Angiogram, Radio ablation, CT.
  - 4.12 Use of Ultrasonography for: Echocardiography and Regional anesthesia

### 5. WHO surgical checklists

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