

**Pokhara University Teaching Hospital**  
**Curriculum for Anesthesia Assistant (Assistant) Level Examination**

For Written Examination  
Full Marks: 65

**There shall be 3 hrs. written examination based on the following syllabus:**

**Group A: Written Examination**

**65 Marks**

**Section I: 25**

1. Basics of Anesthesia: Definition and types of anesthesia, importance and uses of anesthesia and ten golden rules of anesthesia.
2. Anesthesia Machines: Basic principles, Major parts of the machine, Breathing circuits, Vaporizers, Reservoir bag and flow meters, Expiratory and inspiratory valves and Safety devices.
3. Gas supply: Central supply of oxygen and pressure, Central supply of other gases and pressure and Cylinder supply of oxygen and other gases and pressure.
4. Basics of Anatomy and physiology of respiratory system: Respiratory cycle, Tidal volume, Minute volume, FRC (Functional Residual Capacity) and Basic anatomy of respiratory system.
5. Basics of anatomy and physiology of Cardiovascular System: Cardiac cycle, Heart rate, Stroke volume, Cardiac output, Blood pressure and Basic of anatomy of CVS.
6. Preanesthetic Assessment: Anesthetic plan, Fasting and Premedication.

**Section II: 25**

7. Intravenous Fluids: Types, Requirements and Fluid calculation.
8. General Anesthesia and Anesthetic Agents: Basic equipment for general anesthesia, Drugs used for premedication, Analgesic agents: opioids and non-opioids, Induction agents, Inhalation agents, Muscle relaxants and Reversal agents for neuromuscular blockade.
9. Regional Anesthesia: Definition, Types and Local anesthetic agents and adjuncts.
10. Spinal Anesthesia: Definition, Indication and contraindication, Different types of local anesthetics and needle and Complications and management.
11. Patient Monitoring Equipment: Noninvasive blood pressure, Pulse Oximeter and ECG.
12. Basics of Emergency Drugs: Atropine, Adrenaline, Mephenteramine (Termin) and Xylocard.
13. Basic and Advanced Airway Management: Airway obstruction and signs of airway obstruction, Airway devices and application, Laryngoscope and Laryngoscopy,

Complications of endotracheal intubation, Endotracheal intubation, Types of Endotracheal tubes and Sizes of adult and paediatric endotracheal tubes.

**Section III: 15**

14. Cardiopulmonary Resuscitation: Basic Life Support, Advanced Life Support, Advanced Trauma Life Support and ABC Resuscitation.
15. Basics of Drug Reaction and Anaphylaxis: Definition, Types, Severity and Management.
16. Blood and Blood Product Transfusion: Indications, Blood cross match and Blood bag checking and Complications.
17. Shock: Definition and types and Its Management.

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For Practical Examination  
Full Marks: 35

**Practical examination based on the following syllabus:**

**Group B: Practical Examination**

**35 Marks**

- 1. Basics of Anesthesia.**
- 2. Anesthesia Machines:** how to operate an anesthesia machine and workstation.
- 3. Pre-anesthesia Evaluation and preparation:** how to assess a patient planned for surgery, planning for anesthesia, fasting, pre-anesthetic medication. How to prepare for general, regional and local anesthesia.
- 4. Anesthesia equipment:** how to use equipment and gadgets for general, regional and local anesthesia.
- 5. Anesthesia Gas supply:** how the anesthesia gas supply and vacuum system work and knowledge of different gas cylinder.
- 6. Blood pressure and vitals:** assessment of vitals and BP and analyze the vital signs. Technical knowledge on Resuscitation.
- 7. Bleeding, clotting and prothrombin time:** determination of bleeding, clotting and Prothrombin Time.
- 8. Recent updates:** knowledge regarding recent updates in anesthesiology.
- 9. Technical knowledge and experience:**
  - Preparing supplies for intubation, central breathing lines and oxygen measurement tools.
  - Breaking down equipments in OT after surgery.
  - Checking, calibrating and testing medical equipments.
  - Keeping daily records of inspections.

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