



# BRAINWARE UNIVERSITY

**Term End Examination 2023-2024**  
**Programme – B.Sc.(CCT)-2021/B.Sc.(CCT)-2022**  
**Course Name – Basic Anaesthesia**  
**Course Code - BCCTC401**  
**( Semester IV )**

**Full Marks : 60**

**Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify the correct option. Tall "T" waves in ecg represent:
  - a) Hypokalemia
  - b) Hyperkalemia
  - c) Hypocalcemia
  - d) Hyponatremia
- (ii) Select the correct full form of "PEEP"
  - a) Positive End Expiratory Pressure.
  - b) Peak exit end pressure
  - c) Peak entry end pressure.
  - d) Peak effusion end pressure.
- (iii) Combination of leads which represent inferior wall of the heart :
  - a) I,aVL, V6
  - b) II, III ,aVF
  - c) I ,V5, V2
  - d) None of these
- (iv) Choose which of the following drug can you associate with the name "Milk Of Amnesia".
  - a) Ketamine
  - b) Lorazepam
  - c) Propofol
  - d) Midazolam
- (v) Choose the right synonym for Mapleson type F breathing circuit.
  - a) Magill system
  - b) Baine system
  - c) Ayres T piece system
  - d) Bagging system
- (vi) Choose which of the following represent an indication for central venous cannulation.
  - a) Transvenous cardiac pacing.
  - b) Temporary hemodialysis
  - c) Both 1 & 2
  - d) None of these
- (vii) Identify the one which is not an indication of endotracheal intubation.
  - a) Supply oxygen
  - b) General Anaesthesia
  - c) Secure airway
  - d) Improve consciousness
- (viii) Select the correct full form of AMBU.
  - a) Ambulatory Manual Breathing Unit
  - b) Advanced Mechanical Breathing Unit
  - c) Advanced Manual Breathing Unit
  - d) None of these
- (ix) Select the true statement about capnography.

- a) EtCO<sub>2</sub> >50 signifies respiratory depression.      b) EtCO<sub>2</sub> > 50 signifies respiratory efficiency.  
 c) EtCO<sub>2</sub> > 50 is inconclusive                                      d) None of these
- (x) Explain the statement that justify ventilation protocol in hypercarbia caused by acute exacerbation of COPD.
- a) High respiratory rate & PEEP.                                      b) Low respiratory rate and PEEP  
 c) Normal respiratory rate & no PEEP.                                      d) None of these
- (xi) Explain the primary method of elimination of non-depolarizing neuromuscular blocking agents
- a) Renal excretion                                                              b) Hepatic metabolism  
 c) Pulmonary exhalation                                                              d) Biliary excretion
- (xii) Select where local anesthetics primarily act by inhibiting the influx of which ion.
- a) Sodium                                                                              b) Potassium  
 c) Calcium                                                                              d) Chloride
- (xiii) Express the which local anesthetic drug has the longest duration of action.
- a) Lidocaine                                                                              b) Mepivacaine  
 c) Bupivacaine                                                                              d) Procaine
- (xiv) Select how do local anesthetics achieve their effects at the molecular level.
- a) By blocking voltage-gated sodium channels      b) By enhancing calcium influx into neurons  
 c) By inhibiting NMDA receptors                                      d) By activating potassium channels
- (xv) Identify how does the addition of sodium bicarbonate affect the efficacy of local anesthetics.
- a) It increases the risk of allergic reactions                                      b) It decreases the risk of toxicity  
 c) It enhances the analgesic effect                                      d) It reduces the duration of action

**Group-B**

(Short Answer Type Questions)

3 x 5=15

2. Tell the primary indications for using lignocaine. (3)  
 3. Discuss the goals and objectives of premedication (3)  
 4. Explain the role of benzodiazepines in premedication? (3)  
 5. Discuss the advantages and disadvantages of using a Mapleson circuit compared to a circle circuit. (3)  
 6. Write about aspiration prophylaxis and explain its importance in preventing complications during medical procedures. (3)

**OR**

Write about the different types of aspiration (e.g., gastric aspiration, meconium aspiration) and their potential consequences for patients. (3)

**Group-C**

(Long Answer Type Questions)

5 x 6=30

7. Define regurgitation and distinguish it from other gastrointestinal symptoms such as reflux and vomiting. (5)  
 8. Discuss the principles of gas delivery and vaporization in anesthesia machines. (5)  
 9. Explain the step-by-step process of preparing for and performing endotracheal intubation (5)  
 10. Compare and contrast the different methods of confirming endotracheal tube placement, such as auscultation, capnography, and chest X-ray (5)  
 11. Tell the potential side effects and adverse reactions associated with the use of muscle relaxants (5)  
 12. Write ACLS algorithm for airway management. (5)

**OR**

Write the purpose of preanesthetic checkup in the perioperative care process. (5)

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