



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Sc.(CCT)-2021/B.Sc.(CCT)-2022/B.Sc.(CCT)-2023/B.Sc.(CCT)-2024

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. What does "P" wave represent in ecg.
 - a) Ventricular depolarisation
 - b) Atrial depolarisation
 - c) Sinoatrial node
 - d) None of these
- (ii) Choose the correct statement.
 - a) "a" waveform in CVP represent atrial contraction.
 - b) "y" descent represents early systole
 - c) "h" wave represents systolic plateau.
 - d) None of these
- (iii) Choose the false statement about CVP.
 - a) CVP decreases in spontaneous inspiration.
 - b) CVP should be measured at end expiration.
 - c) PEEP during mechanical ventilation causes lowering of CVP.
 - d) None of these
- (iv) Choose the factor that does not influence BP measurement.
 - a) Cuff size
 - b) Patient posture
 - c) Limb size
 - d) Make of sphygmomanometer
- (v) Choose the true statement about capnography.
 - a) Colorimetric EtCO₂ monitoring can give a fair idea about placement of ET tube.
 - b) It is one of the fastest indicators of ventilatory compromise.
 - c) Both 1 & 2
 - d) None of these
- (vi) Explain the correct statement about supraventricular tachycardia.
 - a) Upper chambers of heart are usually involved
 - b) Sawtooth pattern seen in ecg
 - c) Heart rate is usually slow.
 - d) None of these
- (vii) Discover the statement that Halothane is hepatotoxic.
 - a) Can cause obstructive jaundice
 - b) Causes free radical mediated hepatitis.

- c) Both 1 & 2
d) None of these
- (viii) Identify Which of the following adjunctive medications is commonly used for its anticholinergic properties to reduce salivation and respiratory secretions during anesthesia.
- a) Glycopyrrolate
b) Neostigmine
c) Atropine
d) Succinylcholine
- (ix) Explain the primary advantage of using total intravenous anesthesia (TIVA) over inhalational agents.
- a) Reduced risk of postoperative nausea and vomiting
b) Faster induction of anesthesia
c) Lower cost
d) Longer duration of action
- (x) Express the primary mechanism of action of local anesthetics.
- a) Inhibition of acetylcholinesterase
b) Blockade of sodium channels
c) Activation of GABA receptors
d) Inhibition of glutamate release
- (xi) Identify the uncommon side effect of local anesthetics.
- a) Bradycardia
b) Hypotension
c) Hypertension
d) Tachycardia
- (xii) Apply the primary purpose of the scavenging system in an anesthesia workstation.
- a) To deliver anesthetic gases to the patient
b) To remove excess gas from the breathing circuit
c) To monitor the patient's vital signs
d) To control the depth of anesthesia
- (xiii) Apply The primary goal of aspiration prophylaxis in anesthesia is to:
- a) Completely eliminate the risk of aspiration
b) Reduce the acidity of gastric contents
c) Decrease gastric volume
d) Minimize the consequences of aspiration
- (xiv) Choose the most serious complication of aspiration.
- a) Laryngospasm
b) Pneumonia
c) Bronchitis
d) Cough reflex suppression
- (xv) Identify the purpose of a CO₂ absorber in a closed system:
- a) Eliminate waste anesthetic gases
b) Maintain oxygen levels
c) Absorb exhaled carbon dioxide
d) Deliver fresh anesthetic agents

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Discuss the primary functions of the nasal airway. (3)
3. Classify the breathing circuits used in anesthesia machines. (3)
4. Write the common routes of administration for lignocaine. (3)
5. Explain the indications for intubation. (3)
6. Write about aspiration prophylaxis and explain its importance in preventing complications during medical procedures. (3)

OR

Explain rapid sequence intubation (RSI) techniques, and how do they help reduce the risk of aspiration during anesthesia induction. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the role of safety features in anesthesia machines and how they contribute to preventing adverse events during anesthesia administration. (5)
8. Describe the indications and contraindications for endotracheal intubation (5)
9. Express the potential complications and adverse reactions associated with local anesthesia. (5)

10. Discuss the use of inhalational agents, such as sevoflurane and desflurane, for anesthesia induction. (5)
11. Tell the potential side effects and adverse reactions associated with the use of muscle relaxants. (5)
12. Evaluate the primary goals of premedication. (5)

OR

Devise the role of analgesic medications in preoperative pain management. (5)

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