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BRAINWARE UNIVERSITY

Term End Examination 2025-2026

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

Course Name – Basic Techniques of Anesthesia

Course Code - BOTTTC403

(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) Choose the correct sequence for basic life support in adults.
 - a) Airway, breathing, circulation
 - b) Circulation, airway, breathing
 - c) Breathing, circulation, airway
 - d) Airway, circulation, breathing
- (ii) Choose in which conditions laryngeal mask airway is contraindicated.
 - a) In a difficult intubation
 - b) In cardiopulmonary resuscitation
 - c) In a child undergoing an elective/routine eye surgery
 - d) In a patient with a large tumour in the oral cavity
- (iii) Choose the another name for Aerosol generator.
 - a) O₂ generator
 - b) soda lime
 - c) Humidifier
 - d) nebulizer
- (iv) Identify the medication commonly used to induce paralysis during intubation.
 - a) Propofol
 - b) Ketamine
 - c) Fentanyl
 - d) Succinylcholine
- (v) Identify the intravenous agent that is commonly used for procedural sedation and analgesia outside of the operating room:
 - a) Midazolam
 - b) Fentanyl
 - c) Propofol
 - d) Ketamine
- (vi) Choose the inhalational agent that has the most potent respiratory depressant effects:
 - a) Nitrous oxide
 - b) Sevoflurane
 - c) Desflurane
 - d) Isoflurane
- (vii) Infer the potential side effect associated with the use of inhalational agents:
 - a) Bradycardia
 - b) Hypertension
 - c) Seizures
 - d) Bronchodilation
- (viii) Identify the nerve fibers that are typically affected first by epidural anesthesia:

- a) Motor fibers
- c) Sensory fibers
- (ix) Select the type of anesthesia that can be used for postoperative pain control:
 - a) Spinal anesthesia
 - c) Epidural anesthesia
 - b) General anesthesia
 - d) Regional anesthesia
- (x) Choose the type of anesthesia that may require the patient to remain in a lateral or sitting position during administration:
 - a) Spinal anesthesia
 - c) Epidural anesthesia
 - b) General anesthesia
 - d) Regional anesthesia
- (xi) Choose the muscle blocking agent that has a rapid onset of action and short duration of action:
 - a) Rocuronium
 - c) Atracurium
 - b) Vecuronium
 - d) Succinylcholine
- (xii) Identify the potential risk associated with incorrect patient identification:
 - a) Delay in treatment
 - c) Surgical error
 - b) Administration of wrong medication
 - d) All of these
- (xiii) Choose the local anesthetic agent that is commonly used for spinal anesthesia:
 - a) Bupivacaine
 - c) Procaine
 - b) Lidocaine
 - d) Ropivacaine
- (xiv) Select the narrowest portion of the neonate's airway in Airway.
 - a) Glottis
 - c) Pharynx
 - b) Trachea
 - d) Cricoid
- (xv) Choose the feature of an AED that analyzes the patient's heart rhythm.
 - a) Shock button
 - c) Voice prompts
 - b) ECG display
 - d) Battery indicator

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Identify the safety features of modern anesthesia machines designed to prevent equipment malfunction. (3)
3. Explain the difference between spinal and epidural anesthesia, including their indications and contraindications. (3)
4. Explain the Drugs used in CPR, and mention the dosage and pharmacology of each drug. (3)
5. Define compatibility or cross matching test? How it is performed? (3)
6. Estimate the amount of fluid and electrolyte replacement needed for the patient's recovery based on their medical history and surgical procedure. Write down any two difference between Crystalloid and colloid and write the preferred fluid that used for burn patient. (3)

OR

- Generalize the guidelines for administering blood components to ensure patient safety and avoid adverse reactions. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the importance of early recognition of cardiac arrest and the initiation of basic life support, and how this can improve patient outcomes. (5)
8. Explain the steps of GA and the equipment needed to complete the procedure. (5)
9. Explain the concept of fluid replacement therapy, and discuss the role of IV fluids in the treatment of various medical conditions and 4-2-1 technique in infusion. (5)
10. Discuss on AMBU bag, oxygen cylinder and face mask in hospital sector. (5)

11. Generalize the use of lactated Ringer's solution in IV therapy, including its composition, indications, and contraindications. (5)
12. Explain defibrillator and classify it. Write the patient position , technique that we used in Shock . Draw a algorithm on non-shockable rhythm . (5)

OR

Explain advanced cardiac life support and ventricular fibrillation. (5)

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