



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

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

Course Name – Procedural Skills for Critical Care Technology

Course Code - BCCTC602

(Semester VI)

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) Select the correct action when managing a choking adult who becomes unconscious
 - a) Begin CPR immediately
 - b) Perform a finger sweep to remove the obstruction
 - c) Start back blows and abdominal thrusts
 - d) Wait for the person to regain consciousness
- (ii) Choose the correct action if a patient in cardiac arrest has a pulse but is not breathing adequately
 - a) Administer rescue breaths only
 - b) Begin CPR immediately
 - c) Place the patient in the recovery position
 - d) Give oxygen therapy using a non-rebreather mask
- (iii) Select the correct statement regarding defibrillator use
 - a) Defibrillation is used to treat asystole.
 - b) Automated External Defibrillators (AEDs) are only used by medical professionals.
 - c) Defibrillation is the first-line treatment for ventricular fibrillation.
 - d) Defibrillation is not effective in treating ventricular tachycardia.
- (iv) Choose the correct action for managing traumatic injuries
 - a) Apply direct pressure to control severe bleeding
 - b) Immobilize a fractured limb immediately
 - c) Perform a tracheostomy for airway obstruction
 - d) Administer fluids aggressively to hypovolemic shock patients
- (v) Predict the consequence of a malfunctioning sphincter muscle in the gastrointestinal tract
 - a) Decreased absorption of nutrients
 - b) Increased risk of kidney stones
 - c) Acid reflux
 - d) Difficulty controlling bowel movements
- (vi) Choose the function of the colon in the gastrointestinal system
 - a) Absorption of water and electrolytes
 - b) Secretion of digestive enzymes
 - c) Storage of bile
 - d) Production of urine

- (vii) Select the correct statement regarding NG tubes
- a) NG tubes are primarily used for urinary catheterization
 - b) NG tubes are inserted through the nose and reach the stomach or intestines
 - c) NG tubes are exclusively utilized for administering intravenous medications
 - d) NG tubes are only suitable for short-term usage in medical procedures
- (viii) Predict the effect of a malfunctioning enteral feeding tube pump
- a) Decreased risk of aspiration
 - b) Slower delivery of nutrients
 - c) Enhanced patient comfort
 - d) Improved bowel motility
- (ix) Predict the outcome of not using cervical neck collar in suspected cervical spine injury
- a) Increased risk of further spinal damage
 - b) Improved mobility of the neck
 - c) Decreased risk of neurological deficits
 - d) Faster recovery time
- (x) Select the recommended approach for applying a cervical neck collar
- a) Loosely around the neck to allow movement
 - b) Tight enough to impair breathing
 - c) Snugly but comfortably to immobilize the cervical spine
 - d) Around the chest area
- (xi) Identify the primary purpose of using a lumbar puncture
- a) To diagnose gastrointestinal disorders
 - b) To assess cardiac function
 - c) To evaluate cerebrospinal fluid for abnormalities
 - d) To measure lung capacity
- (xii) Define the purpose of C-spine protection in a trauma patient
- a) To facilitate neck movement
 - b) To prevent abdominal injuries
 - c) To minimize the risk of spinal cord damage
 - d) To promote early mobilization
- (xiii) Write a consideration when selecting the site for epidural catheter insertion
- a) Avoiding sterile technique
 - b) Selecting any site on the body
 - c) Considering patient's preference
 - d) Choosing the site randomly
- (xiv) Define patient-controlled analgesia (PCA)
- a) Administration of medication by healthcare provider
 - b) Patient self-administration of pain medication within limits
 - c) Automatic administration of pain medication
 - d) Non-pharmacological pain management
- (xv) identify the common complication immediately after burn
- a) Hypertension
 - b) electrolytes abnormality
 - c) infection
 - d) drowsiness

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Discuss the significance of rescue breaths in BLS and when they are necessary (3)
3. Define Advanced Cardiac Life Support (ACLS) and its purpose in emergency medicine (3)
4. Define procedure and clinical applications of Sengstaken-Blakemore tube. (3)
5. Visualize the anatomical landmarks used to identify the appropriate puncture site for lumbar puncture. (3)
6. Write about the steps involved in applying a cervical neck collar correctly. (3)

OR

Write the different types of toxins based on their mechanisms of action. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Summarize the indications for urinary catheterization and potential complications associated with its use (5)
8. Analyze the potential benefits and limitations of using cervical neck collars in the prehospital setting for suspected cervical spine injuries. (5)

9. Justify the use of online immobilization techniques in the management of suspected cervical spine injuries in trauma patients (5)
10. Define the difference between analgesia and sedation, and how are they utilized in pain management and procedural comfort? (5)
11. Can you summarize the indications and process of exchange transfusion in the management of various medical conditions, such as severe hemolytic disease or neonatal jaundice? (5)
12. Explain the importance of defibrillation in cardiac arrest management. (5)

OR

Analyze the role of teamwork in effective ACLS implementation (5)

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