24829-27183-33571-42889

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 – Clinical Scenario for Critical Care Technology

Course Code - BCCTC403

(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) Select the most diagnostic investigation for acute pancreatitis

a) Serum LDH b) Serum amylase
c) Serum Lipase d) Serum P-isoamylase

(ii) Select the appropriate medicine use to trat Acute hyperglycemia

a) antibiotics b) insulin
c) H2 blocker d) diuretics

(iii) Select the right symptoms of stroke.

a) Sudden severe headache with no cause. b) Sudden weakness in an arm and leg.
c) Vomiting. d) All of these.

(iv) Select type of medicine is given to help prevent a ischemic stroke.

a) Blood thinner medicine. b) Diabetic medicines
c) H2 blocker d) Steroids

(v) Name the primary surgical intervention considered for severe COPD with bullae formation.

a) Lung resection b) Lung transplantation
c) Bullectomy d) Lobectomy

(vi) Identify the primary cause of hypovolemic shock in patients with diabetic ketoacidosis (DKA).

a) Dehydration b) Excessive fluid intake
c) Insulin overdose d) Hyperglycemia

(vii) Identify the primary cause of coagulopathy in septic shock.

a) Thrombocytopenia b) Disseminated intravascular coagulation (DIC)
c) Impaired liver function d) Platelet dysfunction

(viii) Identify the renal response during the initiation phase of AKI:

a) Decreased urine output b) Maintenance of GFR

c) Oliguria d) Increased urine osmolality

(ix) Write laboratory test is most commonly used to estimate GFR?

a) Serum creatinine b) Blood urea nitrogen (BUN)
c) Serum electrolytes d) Urine protein-creatinine ratio

(x) Tell part of the brain is responsible for controlling balance and coordination and can be affected by strokes?

a) Cerebrum b) Cerebellum
c) Brainstem d) Hypothalamus

(xi) Select the recommended treatment for severe hypoglycemia:

a) Drinking sugary beverages b) Reducing insulin dose
c) Intravenous dextrose or glucagon injection d) Increasing physical activity

(xii) Identify the causative agent of tuberculosis.

a) Bacillus anthracis b) Mycobacterium tuberculosis
c) Escherichia coli d) Streptococcus pneumoniae

(xiii) Identify the term used to describe drug-resistant tuberculosis.

a) Multi-Drug Resistant Tuberculosis (MDR-TB) b) Ultra-Drug Resistant Tuberculosis (UDR-TB)
c) Super-Drug Resistant Tuberculosis (SDR-TB) d) Hyper-Drug Resistant Tuberculosis (HDR-TB)

(xiv) Identify the first-line treatment for cardiogenic shock due to acute myocardial infarction.

a) Percutaneous coronary intervention (PCI) b) Thrombolytic therapy
c) Coronary artery bypass graft (CABG) surgery d) Antiarrhythmic drugs

(xv) Tell the characteristic blood gas values associated with acute respiratory failure.

a) pH < 7.35, PaCO2 > 45 mmHg, PaO2 < 60 mmHg b) pH > 7.45, PaCO2 < 35 mmHg, PaO2 > 80 mmHg
c) pH < 7.35, PaCO2 < 35 mmHg, PaO2 > 80 mmHg d) pH > 7.45, PaCO2 > 45 mmHg, PaO2 < 60 mmHg

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Explain how hemorrhagic hypovolemic shock differ from non-hemorrhagic causes. (3)
3. Write the most common types of venomous snakes, and how do their bites differ in terms of symptoms and treatment. (3)
4. Choose the common signs and symptoms of AKI (3)
5. Describe the management strategies for a patient with acute respiratory failure. (3)
6. Classify poisoning (3)

OR

Prioritize the immediate management of acute poisoning (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain Tuberculosis in details. (5)
8. Distiinguish between Brain Death and Coma (5)
9. Explain Hepatic Coma (5)
10. Write the management of chronic renal failure. Write the possible diagnostic approaches. (5)
11. Write the clinical presentation of Myasthenia Gravis, including common signs and symptoms. (5)
12. Explain the pathophysiology of pulmonary hypertension. (5)

OR

Focus on lung abscess, and its common causes? (5)