



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(PA)-2021

Course Name – Principles of Basic Intensive Care

Course Code - BPAS503

( Semester V )

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 primary goal of nutritional support, including TPN?
  - a) . Treating dehydration
  - b) Reducing fluid intake
  - c) Preventing malnutrition
  - d) Weight loss
- (ii) identify the arrhythmia that is often associated with a \"sawtooth\" pattern on an ECG?
  - a) Sinus bradycardia
  - b) Ventricular tachycardia
  - c) Atrial fibrillation
  - d) Atrial flutter
- (iii) select the condition that is characterized by the heart's inability to pump blood effectively and may lead to arrhythmias?
  - a) Valvular heart disease
  - b) Hypertension
  - c) Cardiomyopathy
  - d) Heart failure
- (iv) choose the condition is characterized by a pH above 7.45 and an excess of bicarbonate in the blood?
  - a) Metabolic acidosis
  - b) Metabolic alkalosis
  - c) Respiratory acidosis
  - d) Respiratory alkalosis
- (v) select Which of the following is a buffer system in the human body that helps regulate acid-base balance?
  - a) Carbon dioxide-bicarbonate buffer
  - b) Nitrogen-oxide buffer
  - c) Calcium-phosphate buffer
  - d) Potassium-sodium buffer
- (vi) identify is the primary purpose of a ventilator
  - a) to provide oxygen to patients
  - b) to assist with mechanical ventilation
  - c) To administer nebulized medications
  - d) To maintain a patient's airway
- (vii) In addition to pH and blood gases, select a other parameter can an ABG machine measure
  - a) Blood sugar levels
  - b) Electrolyte concentrations

- c) Red blood cell count(
- d) White blood cell count
- (viii) select the correct answer -The QRS complex on an ECG represents:
  - a) Atrial repolarization
  - b) Ventricular repolarization
  - c) Atrial depolarization
  - d) Ventricular depolarization
- (ix) Choose the write answer - A 35-year-old female with severe diarrhea presents with weakness and cramps. ABG reveals pH 7.32, PaCO<sub>2</sub> 28 mm Hg, and HCO<sub>3</sub><sup>-</sup> 14 mEq/L. Write primary acid-base disturbance?
  - a) Respiratory acidosis
  - b) Respiratory alkalosis
  - c) Metabolic acidosis
  - d) Metabolic alkalosis
- (x) identify which of the following is a benefit of using a humidification system during mechanical ventilation in the ICU?
  - a) . Reducing the need for oxygen therapy
  - b) Reducing the need for frequent suctioning
  - c) Enhancing patient comfort
  - d) Preventing the formation of pulmonary emboli
- (xi) identify Normal CVP is
  - a) 7-10 cm of H<sub>2</sub>O
  - b) 3-10 cm of H<sub>2</sub>O
  - c) 6-10 cm of H<sub>2</sub>O
  - d) 5-10 cm of H<sub>2</sub>O
- (xii) identify the that complication may occur if a patient receives a unit of blood too rapidly?
  - a) Hypothermia
  - b) Hypervolemia
  - c) Hypercalcemia
  - d) Hematoma
- (xiii) Explain the term \"hypoxia.\
  - a) An excessive level of oxygen in the blood
  - b) A condition of low oxygen levels in the tissues
  - c) A condition of decreased blood pressure
  - d) A deficiency of carbon dioxide in the blood
- (xiv) identify which of the following patients is a candidate for TPN?
  - a) A patient with a high metabolic rate and caloric requirement
  - b) A patient with a functioning nasogastric tube
  - c) A patient with mild dehydration
  - d) A patient with an intact gastrointestinal tract who is fully capable of consuming food orally
- (xv) tell which of the following is an absolute contraindication for TPN administration? .
  - a) Mild dehydration
  - b) Adequate oral intake
  - c) Malabsorption syndrome
  - d) Inability to tolerate enteral nutrition

**Group-B**

(Short Answer Type Questions)

3 x 5=15

- 2. Define endotracheal intubation. (3)
- 3. describe Glasgow Coma Scale (GCS) and its significance in assessing and monitoring unconscious adult patients? (3)
- 4. write the key principles of airway management during cardiopulmonary resuscitation (3)
- 5. describe metabolic acidosis (3)
- 6. consider some examples of specific inotropic drugs and their indications? (3)
- OR**
- summarize the potential side effects and risks associated with inotropic medications? (3)

**Group-C**

(Long Answer Type Questions)

5 x 6=30

- 7. explain the potential complications associated with endotracheal intubation, (5)

8. write the importance of positioning, head tilt, and jaw thrust maneuvers in optimizing airway alignment. (5)
9. Discuss the principles of management for acute liver failure, including supportive measures, addressing underlying causes, and liver transplantation. (5)
10. Discuss the components of a standard ECG tracing, including the P-wave, QRS complex, and T-wave. (5)
11. evaluate the key parameters monitored during hemodynamic assessment of critically ill patients? (5)
12. conclude the potential complications associated with long-term oxygen therapy. (5)

**OR**

evaluate the classification of head injuries based on severity, including mild, moderate, and severe head injury. (5)

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