

[LD 0212]

AUGUST 2013
B.Sc CRITICAL CARE TECHNOLOGY
SECOND YEAR
Paper I – ICU MONITORING II
Q.P Code : 801221

Sub.Code :1221

Time : Three hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on :

(3X10=30)

1. How would you go about setting up invasive pressure monitoring? Discuss on leveling, calibration, zeroing and measuring pressures.
2. Discuss the merits and de-merits of open endotracheal suctioning when compared with closed suctioning. Describe the procedures of suctioning.
3. What is the difference between sterilization and disinfection? Discuss briefly sterilization using ethylene oxide.

II. Write Notes on:

(8x5=40)

1. Positive end-expiratory pressure(PEEP).
2. Low flow oxygen delivery devices.
3. What are the components of work of breathing? Describe them in brief.
4. Write a note on the advantages of nebulized delivery of drugs.
5. Draw a 3 bottle chest drainage system.
6. Thermodilution principle for measuring cardiac output.
7. Write a note on inventive spirometry.
8. Pressure trigger.

III. Short Answers on:

(10x3=30)

1. How would you sample an arterial blood gas?
2. List the sites of placement of a central venous catheter.
3. Write briefly about universal precautions.
4. List the indications for mechanical ventilation.
5. Write the initial non-invasive ventilation setup for COPD exacerbation.
6. Inspiratory time.
7. Draw the 2 bottle chest drainage system
8. List the placement for a 12 – lead ECG.
9. How would you level an invasive pressure device?
10. List the drugs that can be used rapid sequence induction for intubations.

[LF 0212]

AUGUST 2014
B.Sc CRITICAL CARE TECHNOLOGY
THIRD YEAR
PAPER I – ICU MONITORING - II
Q.P Code : 801221

Sub.Code : 1221

Time : Three hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3x10=30)

1. Define compliance and resistance. List some examples of disease processes that can increase the work of breathing related to problems with resistance and compliance and how you would manage these problems in a ventilated patient.
2. Define respiratory failure. List the causes of Type II respiratory failure and how you would manage a patient with Type II respiratory failure.
3. Oxygen delivery devices.

II. Write Notes on:

(8x5=40)

1. Write a note on high flow oxygen delivery devices.
2. Partial rebreather bag.
3. Assessment of endotracheal cuff pressure and what pressure to set.
4. How would you trouble shoot a low pressure alarm on a ventilator?
5. How would you assist in the drainage of a pleural effusion?
6. How will you clean and maintain ICU equipment?
7. Assessment of nutritional needs in a critically ill patient.
8. Skin integrity – assessment and care.

III. Short Answers on:

(10x3=30)

1. List the sites of placement of an arterial catheter.
2. How would you sample blood from a central venous catheter?
3. List the nebulized drugs used for bronchodilation.
4. Universal precautions.
5. List indications for oxygen therapy.
6. List drugs used for analog-sedation.
7. Endotracheal cuff pressure – measurement and target.
8. HME filters.
9. Draw a 2-bottle chest drainage system.
10. Defibrillation.

[LG 0215]

FEBRUARY 2015

Sub.Code : 1221

B.Sc. CRITICAL CARE TECHNOLOGY

THIRD YEAR

PAPER I – ICU MONITORING - II

Q.P Code : 801221

Time : Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Enumerate the etiology, diagnosis and management of the Chronic Kidney Disease.
2. Describe the etiology, diagnosis and management of the Acute Pancreatitis.
3. Discuss about the management of OPC poisoning including the Ventilatory settings.

II. Write Notes on:

(8 x 5 = 40)

1. Management of the Acute Severe Asthma.
2. Discuss the diagnosis and management of the Unstable Angina.
3. Write a note on Management of the Septic Shock.
4. Management of Major blood transfusion reaction.
5. Discuss about the Guillian Barrie Syndrome.
6. Indications, Contraindications and procedure of chest tube insertion.
7. How will you approach Hypoxia in a ventilated patient?
8. Normal ABG values and describe about metabolic acidosis.

III. Short Answers on:

(10 x 3 = 30)

1. Airway protection in an unconscious patient.
2. Write a note on Intraosseous access.
3. Enumerate the adjunctive therapies for the ventilated patients.
4. Draw the wave form of normal Electrocardiogram (ECG) and its implications.
5. APACHE Score.
6. Criteria for brain death.
7. Etiology of delirium in ICU.
8. Describe Beck's triad.
9. Emergency management of anaphylactic reaction.
10. X-Ray finding in Pleural Effusion.

[LH 0815]

AUGUST 2015

Sub.Code : 1221

B.Sc. CRITICAL CARE TECHNOLOGY

THIRD YEAR

PAPER I – ICU MONITORING - II

Q.P Code : 801221

Time : Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Define Renal Replacement Therapy. Describe in details about procedure and the Indications of Emergency Dialysis.
2. Discuss about the Pathophysiology and management of Pulmonary Embolism.
3. Mention the techniques, indications and contraindications of Gastric lavage and write a note on activated charcoal.

II. Write Notes on:

(8 x 5 = 40)

1. Write a note on Lumbar Puncture.
2. Congestive cardiac failure.
3. Classification and fluid management of Thermal Burns.
4. Secondary Survey in a polytrauma victim.
5. Post resuscitation care.
6. Polymorphic ventricular tachycardia
7. Describe the sequence of endotracheal intubation
8. Pericardiocentesis – Indications and procedure.

III. Short Answers on:

(10 x 3 = 30)

1. Different modes of Positive Pressure Ventilation.
2. Short notes on Hypoglycemia.
3. What are the important tests to monitor Coagulation?
4. Note on Anion Gap and its clinical implications.
5. List the drugs, which can be administered through endotracheal tube.
6. Write a note on exchange transfusion.
7. Indications for Intra Aortic Balloon Pump.
8. Causes of seizure in ICU patients.
9. Approach to Symptomatic Bradycardia.
10. Sellicks Maneuver.

[LI 0216]

FEBRUARY 2016

Sub.Code : 1221

B.Sc. CRITICAL CARE TECHNOLOGY

THIRD YEAR

PAPER I – ICU MONITORING - II

Q.P Code : 801221

Time : Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Define Hemothorax and describe in details about clinical features, diagnosis, and critical care management.
2. Define cardiac arrest; Discuss in details about management of Ventricular Fibrillation.
3. Define Primary Survey and discuss in details about critical care management of cervical spine injury.

II. Write Notes on:

(8 x 5 = 40)

1. Myasthenia Gravis – diagnosis and treatment.
2. Critical care management of Hepatic Encephalopathy.
3. Short notes on Non – Invasive Ventilation.
4. Approach to high pressure alarm in ventilator patient.
5. Write a note on Atrial Fibrillation.
6. Describe the various modalities of Continuous Renal Replacement Therapy.
7. Management of scorpion sting.
8. Write notes on Universal precaution.

III. Short Answers on:

(10 x 3 = 30)

1. Glasgow Coma Scale (Adult).
2. O₂ dissociation curve.
3. Types of Respiratory Failure.
4. Systemic Inflammatory Response Syndrome.
5. List the sites of central venous cannulation.
6. How will you confirm endotracheal tube placement?
7. List of the indications for bronchoscopy in ICU.
8. Intra Cranial Pressure Monitoring.
9. Difference between AC and DC power supply.
10. Classification of Hemorrhagic shock.

B.Sc. CRITICAL CARE TECHNOLOGY**THIRD YEAR****PAPER I – ICU MONITORING - II****Q.P Code : 801221****Time : Three Hours****Maximum : 100 Marks****Answer All Questions****I. Elaborate on:****(3 x 10 = 30)**

1. Describe how you will manage a patient on invasive mechanical ventilation? who is having new worsening hypoxia and the ventilator is giving high peak pressure alarm? Add a note on compliance and resistance of respiratory system.
2. List the parameters measured in a typical Arterial Blood Gas analysis. Describe the approach to diagnose acid-base abnormality. Add a note on anion gap.
3. Outline in brief the management of organophosphorus compound poisoning. How will you monitor such a patient? What steps would you take if such a patient develops hypoxia?

II. Write Notes on:**(8 x 5 = 40)**

1. PEEP (Positive End Expiratory Pressure).
2. Transport of head injury patient for CT scan.
3. Glasgow Coma Scale.
4. Draw a 3 bottled chest drainage system.
5. Low flow oxygen delivery devices.
6. Chest Physiotherapy and Postural drainage.
7. Sterilization using ethylene oxide.
8. Chest X-ray findings in Pneumothorax.

III. Short Answers on:**(10 x 3 = 30)**

1. List safety precautions while using Defibrillator.
2. List the sites of placement of a central venous catheter.
3. List the indications for mechanical ventilation.
4. Draw and label the Flow-Time trace of ventilator graphic, showing Auto-PEEP (Air trapping).
5. List the nebulized drugs used for bronchodilation.
6. List the drugs used during ACLS for ventricular Fibrillation.
7. List indications of Non-Invasive ventilation.
8. List the investigations done for assessment of Liver Function.
9. List the indications for renal replacement therapy (Dialysis).
10. List the different methods of thrombo-prophylaxis (prevention of DVT).

B.Sc. CRITICAL CARE TECHNOLOGY**THIRD YEAR****PAPER I – ICU MONITORING - II****Q.P Code : 801221****Time : Three Hours****Maximum : 100 Marks****Answer All Questions****I. Elaborate on:****(3 x 10 = 30)**

1. Draw a normal Intra-arterial pressure trace and label the parts? Describe the setting up, Zeroing, Levelling and calibration of invasive pressure monitoring system? Add a note on overdamping and underdamping?
2. List the initial ventilator settings for a patient with Chronic Obstructive Pulmonary Disease. Add a note on Auto-PEEP (air trapping). Describe the steps in troubleshooting a ventilator giving low tidal volume alarm.
3. Describe management of Airway in an unconscious patient who does not have a definitive airway. Add a note on management of airway in patient with suspected cervical spine injury.

II. Write Notes on:**(8 x 5 = 40)**

1. Post resuscitation care.
2. ETCO₂ (end tidal carbon dioxide) Monitoring.
3. Compliance and Resistance of respiratory system.
4. Principles of Pulse Oximetry and its Pitfalls.
5. Defibrillator.
6. High Flow Oxygen delivery devices.
7. Endotracheal suctioning.
8. Methods of sterilization of ventilator.

III. Short Answers on:**(10 x 3 = 30)**

1. Draw the sequence of Basic Life Support.
2. List the sites for placement of Pulse Oximeter probe, list the causes for inaccurate readings.
3. List the sites of lead placement for a 12 lead ECG.
4. Ventilator alarm limits settings for an adult patient with ARDS.
5. List the steps in extubation of a patient.
6. List the different methods of sterilization.
7. List the Investigations done to assess coagulation abnormality.
8. PO₂/FIO₂ ratio (PFR).
9. List the different types of circulatory shock.
10. List the causes for difficulty in weaning a patient on ventilator.

B.Sc. CRITICAL CARE TECHNOLOGY

THIRD YEAR

PAPER I – ICU MONITORING - II

Q.P Code : 801221

Time : Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Define Renal Replacement Therapy. Describe in details about procedure and the Indications of Emergency Dialysis.
2. Define cardiac arrest. Discuss in details about management of Ventricular Fibrillation.
3. Describe the etiology, diagnosis and management of the Acute Pancreatitis.

II. Write Notes on:

(8 x 5 = 40)

1. Congestive cardiac failure.
2. Approach to high pressure alarm in ventilator patient.
3. Management of scorpion sting.
4. Critical care management of Hepatic Encephalopathy.
5. Discuss about the Guillain Barre syndrome.
6. Discuss the diagnosis and management of the Unstable Angina.
7. Normal ABG values and describe about metabolic acidosis.
8. How will you clean and maintain ICU equipment?

III. Short Answers on:

(10 x 3 = 30)

1. Different modes of Positive Pressure Ventilation.
2. How would you sample blood from a central venous catheter?
3. List the nebulized drugs used for bronchodilation.
4. List indications for oxygen therapy.
5. HME filters.
6. Draw the wave form of normal Electrocardiogram (ECG) and its implications.
7. Draw a 2-bottle chest drainage system.
8. How would you sample an arterial blood gas?
9. Write briefly about universal precautions.
10. Write a note on Intraosseous access.