

[LB 0212]

AUGUST 2012

Sub. Code: 1211

**B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR**

PAPER I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P. Code : 801211

Time : Three hours

Maximum : 100 marks

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on :

**Pages Time Marks
(Max.)(Max.)(Max.)**

- | | | | |
|--|---|----|----|
| 1. Write in detail about the respiratory failure with a brief note on the treatment. | 7 | 20 | 10 |
| 2. Chemical control of breathing. | 7 | 20 | 10 |
| 3. Describe the following:
a. Pericardium
b. Right ventricle | 7 | 20 | 10 |

II. Write Notes on:

- | | | | |
|--|---|----|---|
| 1. Coronary Circulation. | 4 | 10 | 5 |
| 2. Pericardium. | 4 | 10 | 5 |
| 3. Bronchial Tree. | 4 | 10 | 5 |
| 4. Pain Pathway. | 4 | 10 | 5 |
| 5. Oxygen and Carbon-di-Oxide Transport. | 4 | 10 | 5 |
| 6. Pulmonary Function Test. | 4 | 10 | 5 |
| 7. Acid Base Balance. | 4 | 10 | 5 |
| 8. Mechanism of breathing and work of breathing. | 4 | 10 | 5 |

III. Short Answers on:

- | | | | |
|---|---|---|---|
| 1. Define vocal fremitus and tactile fremitus. | 2 | 4 | 3 |
| 2. What is clubbing? What are its causes? | 2 | 4 | 3 |
| 3. Basic ECG waves. | 2 | 4 | 3 |
| 4. What is pectus carinatum, pectus excavatum? | 2 | 4 | 3 |
| 5. What is sweat chloride? | 2 | 4 | 3 |
| 6. Name the instruments used to measure the gas volume and flow in pulmonary function test (PFT)? | 2 | 4 | 3 |
| 7. Bones of the thoracic cage? | 2 | 4 | 3 |
| 8. Respiratory muscles? | 2 | 4 | 3 |
| 9. Broncho pulmonary segment? | 2 | 4 | 3 |
| 10. Histology of trachea with a diagram. | 2 | 4 | 3 |

[LD 0212]

AUGUST 2013

Sub.Code :1211

**B.Sc CRITICAL CARE TECHNOLOGY
SECOND YEAR
Paper I – APPLIED ANATOMY AND PHYSIOLOGY**

Q.P Code : 801211

Time : Three hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on :

(3X10=30)

1. Explain semilunar valves with a neat diagram.
2. Explain in detail about the lung volumes and capacities.
3. Explain about the diffusion of gasses and its abnormalities.

II. Write Notes on:

(8x5=40)

1. Trachea, airway division and segmental anatomy.
2. Surface anatomy of the heart.
3. Pressure differences during breathing
4. Brief note on the following
 - a. Anatomical dead space
 - b. Physiological dead space
5. Pleura.
6. Pericardium
7. Right atrium
8. Blood supply and nerve supply of the heart

III. Short Answers on:

(10x3=30)

1. Osmotic pressure
2. What are Acids, Bases and Salts?
3. How do you designate acidity and alkalinity?
4. Distribution of body fluids in an adult?
5. What is Hyponatremia? What are its causes and symptoms?
6. Wheeze, stridor and rhonchi
7. Bronchial breath sounds
8. Heart sounds?
9. What are electrolytes
10. Henderson – Hasselbalch equations?

[LE 0212]

February 2014

Sub. Code: 1211

B.Sc CRITICAL CARE TECHNOLOGY

SECOND YEAR

Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time : Three hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3X10=30)

1. Explain the following:
 - a. Conducting system of the heart.
 - b. Preload and after load.
 - c. Cardiac output.
2. What is blood pressure? What is systolic and diastolic pressure? Write about the variations in the blood pressure?
3. Answer the following:
 - a. Brain Death
 - b. Coma
 - c. Sedation

II. Write Notes on:

(8x5=40)

1. Regulation of respiration
2. Mechanism of diffusion, barriers diffusion and fick's first law of diffusion
3. Heamoglobin and oxygen transport
4. Normal loading and unloading of oxygen
5. Abnormal heamoglobins
6. Lower respiratory tract
7. Normal sinus rhythm. What is sinus bradycardia? Mention its causes?
8. Sinus tachycardia and bradycardia

III. Short Answers on:

(10x3=30)

1. Apneustic center
2. Pneumotaxic center?
3. Deflation reflex?
4. Muscle spindle
5. Heeds paedoxical reflex?
6. Central chemoreceptors
7. Brief on common cardiopulmonary symptom?
8. Cough?
9. Respiratory rate
10. Hypotension

[LF 0212]

AUGUST 2014

Sub.Code :1211

B.Sc CRITICAL CARE TECHNOLOGY

SECOND YEAR

Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time: Three hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3X10=30)

1. Describe bronchial tree with a neat diagram.
2. Define lung compliance and describe the factors affecting it
3. Define cardiac output. Write the factors affecting cardiac output.

II. Write Notes on:

(8x5=40)

1. Common causes of secondary hypertension.
2. Ventilation perfusion ratio.
3. Neural regulation of respiration.
4. Pericardium.
5. Cardiac cycle.
6. Anatomy of upper respiratory tract with applied aspects.
7. Central venous pressure.
8. Mechanism of diffusion of gases.

III. Short Answers on:

(10x3=30)

1. Bronchiole.
2. Tetralogy of fallot.
3. Lung hilum.
4. Ventricular Septal defect.
5. Define tidal volume.
6. Conduction system of heart.
7. Coronary circulation.
8. Alveoli.
9. Semilunar valves.
10. Marey's law.

[LG 0215]

FEBRUARY 2015

Sub.Code :1211

B.Sc. CRITICAL CARE TECHNOLOGY

SECOND YEAR

Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time: Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe in detail about the blood supply of heart with the neat diagram.
2. Define blood pressure? Mention its normal values? Add a note on factors regulating it.
3. Describe in detail about internal features and openings of right atrium.

II. Write Notes on:

(8 x 5 = 40)

1. Waves of ECG.
2. Major openings in thoracic diaphragm.
3. Hilum of right lung.
4. Branches of arch of aorta.
5. Conducting system of heart.
6. First intercostals space.
7. Lung compliance.
8. Heart block.

III. Short Answers on:

(10 x 3 = 30)

1. Hypertension.
2. Content of superior mediastinum.
3. Inspiratory reserve volume.
4. Metabolic acidosis.
5. Hypoxia.
6. Dead space.
7. Muscles of expiration.
8. Valves of heart.
9. Treatment for respiratory failure.
10. Dead space.

[LH 0815]

AUGUST 2015

Sub.Code :1211

B.Sc. CRITICAL CARE TECHNOLOGY

SECOND YEAR

Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time: Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the Cardiac cycle in detail.
2. Describe the Anatomy and physiology of Pancreas.
3. Write in detail about Structure of kidney and formation of urine.

II. Write Notes on:

(8 x 5 = 40)

1. Homeostasis.
2. Hypoxia.
3. Intubation.
4. Artificial airways.
5. Aspiration Pneumonia.
6. Carbon-di-oxide Transport.
7. Cranial Nerves.
8. Conducting system of Heart.

III. Short Answers on:

(10 x 3 = 30)

1. Intercostal spaces.
2. Covering of the Heart.
3. Pain pathway.
4. Hazards of oxygen.
5. Prevention of Nosocomial Infection.
6. Inferior vena cava.
7. Airway suctioning.
8. Pulmonary Circulation.
9. Ureter.
10. Cell Divisions.

[LI 0216]

FEBRUARY 2016

Sub.Code :1211

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR
Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time: Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the muscles of Respiration and its mechanism.
2. Describe the planes and regions of the abdomen and the organs present in each quadrants.
3. Describe in detail about peripheral nervous system.

II. Write Notes on:

(8 x 5 = 40)

1. Types of glands.
2. Acid – Base Balance.
3. Extubation.
4. Oxygen delivery system.
5. Cardiac output.
6. Brain Death.
7. Electrocardiogram.
8. Chest Cavity.

III. Short Answers on:

(10 x 3 = 30)

1. Nose.
2. Coronary circulation.
3. Nephron.
4. Parathyroid.
5. Endotracheal tube.
6. Central line.
7. Pericardium.
8. Pulmonary odema.
9. Homeostasis.
10. Sternum.

[LJ 0816]

AUGUST 2016

Sub.Code :1211

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR
Paper I – APPLIED ANATOMY AND PHYSIOLOGY

Q.P Code : 801211

Time: Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain the anatomy of Lungs in detail with the bronchopulmonary segments.
2. Write in detail about the physiology of breathing.
3. Describe the Cardiac cycle in detail.

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

1. Diaphragm.
2. Write in detail about the anatomy of Pleura.
3. Aorta.
4. Circle of Willis.
5. Explain about the Pneumonia.
6. Cerebrospinal fluid.
7. Bronchoscopy.
8. Write in detail about the storage of Oxygen.

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

1. Enumerate the intercostal muscles and their nerve supply.
2. Explain the valves of heart.
3. Describe the external features of liver.
4. Draw the thyroid gland and label the parts.
5. Nerve supply of tongue.
6. What is mean arterial pressure?
7. What are the factors affecting the oxygen transport?
8. Write about the features of normal X-Ray.
9. What is gag reflex?
10. What are the steps to minimize the nosocomial infections?
