

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321]

MARCH 2021

Sub. Code: 1246

(AUGUST 2020 EXAM SESSION)

B.Sc. CRITICAL CARE TECHNOLOGY

SECOND YEAR (From 2018-2019 onwards)

PAPER I – ANATOMY+APPLIED ANATOMY AND PHYSIOLOGY

Q.P. Code : 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe Anatomy of Lungs, Root of Lungs, Pleura and Blood supply.
2. Describe the Structure, Anatomy and relations of Urinary Bladder. Write a note on Micturition.
3. Define Blood Pressure. Mention its normal values. Add a note on factors regulating it.

II. Write notes on:

(8 x 5 = 40)

1. Homeostasis.
2. Diaphragm.
3. Functions of Liver.
4. Mechanism of hypoxia.
5. Artificial Airway.
6. Abnormal Hemoglobins.
7. Describe anatomy of Spinal cord.
8. Bronchoscopy.

III. Short answers on:

(10 x 3 = 30)

1. Nose.
2. Parathyroid Gland.
3. Neural centers of respiration.
4. Ureter.
5. Muscle spindle.
6. Oxygen uptake by tissue.
7. Sternum.
8. Pleural Effusion.
9. Light Reflex.
10. Respiratory Rate.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0222]

**FEBRUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 1246

**B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (From 2018-2019 onwards)
PAPER I – ANATOMY+APPLIED ANATOMY AND PHYSIOLOGY
*Q.P. Code : 801246***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe Pneumonia types, clinical features and their management.
2. Describe various activities take place in cardiac cycle.
3. Write in detail about Acid Base Balance.

II. Write notes on:

(8 x 5 = 40)

1. Cranial Nerves.
2. Pancreas.
3. Bronchopulmonary Segments.
4. Pulmonary oedema.
5. Neural regulation of Respiration.
6. Urethra.
7. Autonomic Nervous System.
8. Intubation.

III. Short answers on:

(10 x 3 = 30)

1. Oral Cavity
2. Pericardium.
3. Nephrons
4. External features of Liver.
5. Acute Respiratory Distress Syndrome (ARDS).
6. Heart Sounds.
7. Nasogastric tube.
8. Haemothorax.
9. Blood Pressure.
10. Clubbing and its causes.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1246

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation from 2018-2019)
PAPER I – ANATOMY + APPLIED ANATOMY & PHYSIOLOGY
Q.P. Code : 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the heart under the following headings with suitable diagrams:
a) Anatomical location b) External features c) Surface marking of cardiac valves and auscultatory areas d) Pericardium and its sinuses.
2. Define cardiac output. Mention its normal value. Add a note on factors regulating it.
3. Write in detail about Bronchopulmonary segments with a neat labelled diagram. Add a note on its applied anatomy.

II. Write notes on:

(8 x 5 = 40)

1. Indications for Artificial airways.
2. Pleura.
3. Autonomic nervous system.
4. Applied anatomy of Thyroid gland.
5. Homeostasis.
6. Extubation.
7. Circle of Willis.
8. Cerebral autoregulation.

III. Short answers on:

(10 x 3 = 30)

1. Anatomy of laryngopharynx.
2. Cardinal Anatomical planes.
3. Pain pathway.
4. Lung volume.
5. Hazards of oxygen.
6. Parts of excretory system.
7. Normal Blood pressure.
8. Cuff care.
9. Spinal Cord.
10. Arch of Aorta.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423]

APRIL 2023

Sub. Code: 1246

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY & PHYSIOLOGY
Q.P. Code: 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe Coronary Circulation. Add a note on its Applied Anatomy.
2. Describe about Structure of Thyroid gland and its functions.
3. Discuss in detail about Oxygen therapy.

II. Write notes on:

(8 x 5 = 40)

1. Indications for artificial airways.
2. Factors affecting Cardiac output.
3. ECG.
4. Pleura and Pleural Effusion.
5. Pain pathway.
6. Diaphragm.
7. How to maintain a normal blood pressure? Explain.
8. Circle of Willis.

III. Short answers on:

(10 x 3 = 30)

1. Accommodation reflex.
2. Suprarenal gland.
3. Gag reflex.
4. Brain death.
5. V/Q mismatch
6. Laryngopharynx.
7. Ureters.
8. Stroke volume
9. Explain the terms : Medial, Lateral and Symmetrical.
10. Cerebrospinal fluid.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1246

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY & PHYSIOLOGY
Q.P. Code: 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain anatomy of Liver and add a note on its Applied Anatomy.
2. Describe the heart under the following headings:
(a) Location (b) External features
(c) Internal features (d) Blood supply (e) Applied anatomy.
3. Explain in detail about Muscles of Respiration and Regulation of Respiration.

II. Write notes on:

(8 x 5 = 40)

1. Nephron.
2. Anatomical planes.
3. Oxygen dissociation Curve.
4. Circle of Willis.
5. Cerebrospinal Fluid.
6. Mediastinum.
7. Renal mechanism in Blood Pressure.
8. Homeostasis.

III. Short answers on:

(10 x 3 = 30)

1. Hemoglobin.
2. Pharynx.
3. Carpal and tarsal bones.
4. Sources of Oxygen therapy.
5. Cranial nerves.
6. Spleen.
7. Types of Artificial airways.
8. Aorta.
9. Ureter.
10. Pleura.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0424]

APRIL 2024

Sub. Code: 1246

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY & PHYSIOLOGY
Q.P. Code: 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe Heart under the following headings: External features, Chambers, Valves and Blood supply. Add a note on Clinical Anatomy.
2. Describe about Structure of Thyroid gland and its functions.
3. Write the classification of Enzymes and Factors affecting enzyme activity.

II. Write notes on:

(8 x 5 = 40)

1. Tracheobronchial tree.
2. Functions of Vitamin D.
3. Diaphragm.
4. Anatomy of spinal cord.
5. Circle of Willis.
6. Mechanics of Respiration.
7. Hematocrit Value.
8. Plasma proteins and their functions.

III. Short answers on:

(10 x 3 = 30)

1. Tonsils.
2. Blood groups.
3. Functions of Bile.
4. Neuromuscular junction.
5. Coverings of Kidney.
6. Deficiency of Thiamine.
7. Blood supply of Long bone.
8. Sternum.
9. Pericardium.
10. Basal Metabolic Rate.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1246

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY & PHYSIOLOGY
Q.P. Code: 801246

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Write in detail about the structure of Kidney and mechanism of formation of Urine.
2. Describe the Anatomy of Pancreas under following headings
 - a) Location
 - b) Structure
 - c) Blood supply
 - d) Functions
 - e) Applied Anatomy.
3. Mention the muscles of Respiration and discuss the mechanism of Breathing.

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

1. Right atrium.
2. Increased intracranial pressure.
3. Coronary circulation.
4. Vertebral column.
5. Planes and regions of Abdomen.
6. Hypertension.
7. Hypoxia and its types.
8. Carbon dioxide transport.

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

1. Larynx.
2. Aorta.
3. Anaemia.
4. Draw the thyroid gland and name its parts.
5. What is mean arterial blood pressure?
6. Subdivisions of Nervous System.
7. Nerve supply of Tongue.
8. Arterial pulse.
9. Injury to Chest cavity.
10. Endotracheal tube.
