

B.Sc. CRITICAL CARE TECHNOLOGY
(New syllabus 2018-2019)

FIRST YEAR

PAPER I – ANATOMY, APPLIED ANATOMY & BIOCHEMISTRY

Q.P. Code: 801241

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe about Fat soluble vitamins with Sources and Deficiency.
2. Write the classification of Bones with Example.
3. Circle of Willis.

II. Write notes on:

(8 x 5 = 40)

1. Describe the lobes of the Lung with diagram.
2. Muscles of respiration.
3. Dietary fibre.
4. Classification of Tissues.
5. Humerus.
6. Pain Pathway.
7. Trigone of Bladder.
8. Difference between Small Intestine and Large Intestine.

III. Short answers on:

(10 x 3 = 30)

1. Colle's Fracture.
2. Name the lobes of liver.
3. Essential fatty acids.
4. Liver function test.
5. List the enzymes secreted in pancreatic juice.
6. Erb's Point.
7. Parts of stomach.
8. List the ear ossicles.
9. Cyanosis.
10. Openings of the Diaphragm.

B.Sc. CRITICAL CARE TECHNOLOGY
(New syllabus 2018-2019)

FIRST YEAR

PAPER I – ANATOMY, APPLIED ANATOMY & BIOCHEMISTRY

Q.P. Code: 801241

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the chemistry, biochemical functions, daily requirement, sources and deficiency manifestations of Vitamin D.
2. With a neat labeled diagram, describe the structure of a Nephron.
3. Name the types of circulation. Describe about the blood supply of heart.

II. Write notes on:

(8 x 5 = 40)

1. Draw a neat labelled diagram of the animal cell.
2. Write briefly on protein-energy malnutrition in children.
3. Classification of Joints.
4. Diaphragm.
5. Biceps Brachii.
6. Factors affecting Enzyme activity.
7. Bony Thorax.
8. Cranial Nerves.

III. Short answers on:

(10 x 3 = 30)

1. Sesamoid bone.
2. Liver function test.
3. Scurvy.
4. Folic Acid.
5. Basal Metabolic Rate.
6. Define pH, molarity and molality.
7. Electrolytes.
8. Hypertension.
9. Diabetes Mellitus.
10. Benedict's Test.

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

[AHS 0321]

MARCH 2021

Sub. Code: 1241

(AUGUST 2020 EXAM SESSION)

B.Sc. CRITICAL CARE TECHNOLOGY

FIRST YEAR (From 2018-2019 onwards)

PAPER I – ANATOMY, APPLIED ANATOMY & BIOCHEMISTRY

Q.P. Code : 801241

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classification of Carbohydrates with Examples.
2. Describe the structure and functions of various cell organelles.
3. Describe the kidney under the following headings:
(a) Location (b) External features (c) Internal features,
(d) Blood supply (e) Applied anatomy.

II. Write notes on:

(8 x 5 = 40)

1. Define Intercostal space and structures related to it.
2. Deltoid.
3. Classifications of Protein.
4. Chambers of the Heart.
5. Bronchial Tree.
6. Vitamin C.
7. Clavicle.
8. Neuron.

III. Short answers on:

(10 x 3 = 30)

1. Kwashiorkor.
2. Difference between the cervical vertebrae and thoracic vertebrae.
3. Write down the function of sodium.
4. Hydrocephalus.
5. Pneumatic Bones.
6. Jaundice.
7. Benedict's Test.
8. Osteoporosis.
9. Define pH, molarity and molality.
10. Balanced Diet.

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

[AHS 0422]

APRIL 2022

Sub. Code: 1241

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

B.Sc. CRITICAL CARE TECHNOLOGY

FIRST YEAR (Regulations 2018-2019)

PAPER I – ANATOMY, APPLIED ANATOMY & BIOCHEMISTRY

Q.P. Code: 801241

Time: Three hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: (3X10=30)

1. Explain the Structure of Nephron with a diagram.
2. Describe the structure and functions of various cell organelles.
3. Classify vitamins. Explain its functions.

II. Write Notes on: (8X5=40)

1. Dietary fibre.
2. Pain Pathway.
3. Distinguish small and large intestine.
4. Liver function tests.
5. Factors affecting enzyme activity.
6. Bony Thorax.
7. Trigone of Bladder.
8. Cranial nerves.

III. Write Short notes on: (10X3=30)

1. Define pH and molarity.
2. Valves of heart.
3. Scurvy.
4. Diabetes Mellitus.
5. What is Hypertension?
6. Vitamin A deficiency disorders.
7. Cephalic vein.
8. Pneumatic bones.
9. Folic acid.
10. Osteoporosis.

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 1241

B.Sc. CRITICAL CARE TECHNOLOGY

FIRST YEAR (Regulation 2018-2019)

PAPER I – ANATOMY + APPLIED ANATOMY + BIOCHEMISTRY

Q. P. Code: 801241

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the Gross Anatomy of Liver in detail.
2. Describe Kidney under the following headings:
 - a) Location
 - b) Coverings
 - c) Relations
 - d) Blood supply.
3. Enumerate the energetics and regulation of Glycolysis.

II. Write notes on:

(8 x 5 = 40)

1. Bronchopulmonary segments.
2. Spinal Cord.
3. Coronary circulation.
4. Muscles of Respiration.
5. Deltoid Muscle.
6. Anatomical Planes.
7. Pleural recesses.
8. Basal Metabolic Rate.

III. Short answers on:

(10 x 3 = 30)

1. Contents of Cubital Fossa.
2. Winging of Scapula.
3. What are Surfactants? Give its functions.
4. Saturday Night Palsy.
5. Types of Tissues.
6. Normal Anatomical Position.
7. Deficiency of Vitamin A.
8. What is Pellagra?
9. Acid Base Balance.
10. Parts of vertebral column.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1241

**B.Sc. CRITICAL CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY + BIOCHEMISTRY
Q.P. Code: 801241**

Time: Three hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: (3 X 10 = 30)

1. Anatomy of Thyroid Gland.
2. Enzymes and factors affecting Enzyme Activity.
3. Major Vessels of Circulatory System.

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

1. Vertebral column.
2. Fat soluble vitamins.
3. Sympathetic Nervous system.
4. Classify tissues.
5. Pain pathway.
6. Anatomy of Kidney.
7. Pharynx.
8. Anatomy of pancreas.

III. Write Short notes on: (10 X 3 = 30)

1. Circulation of CSF.
2. Circle of Willis.
3. Pleura.
4. Pulmonary vessels.
5. Humerus.
6. Molality.
7. Define BMR.
8. Cartilages of Larynx.
9. Henderson-Hasselbalch equation.
10. Classification of Lipids.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1241

B.Sc. CRITICAL CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY + BIOCHEMISTRY
Q.P. Code: 801241

Time: Three hours

Maximum: 100 Marks

Answer all questions

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

1. Write the classification of Lipids and its functions.
2. Draw a neat diagram of Animal Cell and explain the Organelles with its functions.
3. Explain the Heart under the following headings:
(a) Valves (b) Chambers (c) Blood supply (d) Covering.

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

1. B-Complex Vitamins.
2. Bronchopulmonary segments.
3. Thyroid gland.
4. Openings of Diaphragm.
5. Pharynx.
6. Lobes of Cerebrum with function.
7. Pain pathway.
8. Relations of the Kidney.

III. Write Short notes on **(10 X 3 = 30)**

1. Contents of Inter Costal Space.
2. Ear Ossicles.
3. CSF circulation.
4. Name any two functions of Protein.
5. Balanced diet.
6. Draw the diagram of Neuron.
7. Phrenic nerve.
8. Beriberi.
9. Name two Salivary glands.
10. Carpal bones.

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

[AHS 0424]

APRIL 2024

Sub. Code: 1241

**B.Sc. CRITICAL CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY + BIOCHEMISTRY
Q.P. Code: 801241**

Time: Three hours

Answer all questions

Maximum: 100 Marks

I. Elaborate on:

(3 X 10 = 30)

1. Describe the parts of Skeletal System in Upper Limb and Lower Limb. Draw a neat labeled diagram.
2. Describe in detail about Coronary circulation. Add a note on its Applied Anatomy.
3. Classify Carbohydrates with examples.

II. Write Notes on:

(8 X 5 = 40)

1. Diaphragm.
2. Biceps Brachii.
3. Sources and Biochemical actions of Vitamin D.
4. Boundaries of Intercostal space and its contents.
5. Chambers of Heart.
6. Protein Energy Malnutrition in Children.
7. Circle of Willis.
8. Coverings of Kidney.

III. Write Short notes on:

(10 X 3 = 30)

1. Fissures of Lungs.
2. Define Bronchial circulation.
3. Mention the Major Vessels of Circulatory System.
4. Distinguish between Sympathetic and Parasympathetic system.
5. Pleura.
6. Define Balanced diet.
7. Circulation of CSF.
8. Coenzyme and its function.
9. Oropharynx.
10. Pancreas.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1241

B.Sc. CRITICAL CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – ANATOMY + APPLIED ANATOMY + BIOCHEMISTRY
Q.P. Code: 801241

Time: Three hours

Answer all questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain in detail about the classification and functions of Lipids.
2. Name the chambers and valves of the Heart. Briefly describe the blood supply of the heart with the help of a diagram.
3. Discuss Lungs under the following headings:
 - a) Location and Dimension
 - b) External features
 - c) Blood supply
 - d) Relations to Mediastinal surface of Left Lung
 - e) Nerve supply.

II. Write Notes on:

(8 x 5 = 40)

1. Cerebral circulation.
2. Gross anatomy of the pancreas.
3. Acid base disorders.
4. Types of Tissues and its functions.
5. Vitamin D.
6. Isoenzymes.
7. Balanced diet.
8. Tracheobronchial tree.

III. Write Short notes on:

(10 x 3 = 30)

1. Basal metabolic rate.
2. Factors affecting enzymes activity.
3. Classification of Proteins.
4. Buffers.
5. Anion gap.
6. Mitochondria.
7. Mediastinum.
8. Parts of pharynx.
9. Pellagra.
10. Hypokalemia.
