

[LH 0815]

AUGUST 2015

Sub. Code: 1006

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
(New Syllabus 2014-2015)

FIRST YEAR

PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Give an account of breast under the following headings. Location, boundaries, contents and lymphatic drainage.
2. Define erythropoiesis. Discuss its various stages of development. Add a note on anaemia.
3. Define glycolysis. Explain the steps involved in glycolysis, its energetics and regulation.

II. Write notes on:

(8 x 5 = 40)

1. Types of nervous system with their components. Enumerate the cranial nerves in order.
2. External features of Right lung.
3. Functions of platelet.
4. Normal ECG.
5. Micturition reflex.
6. Deglutition.
7. Importance of balanced diet and associated disorders.
8. Vitamin C- its importance and deficiency disease.

III. Short Answers on:

(10 x 3 = 30)

1. Name the parts of liver.
2. Name the types of muscles with examples.
3. Name the parts of cerebral cortex.
4. Palatine tonsil.
5. Define GFR and its normal value.
6. Cell organelles.
7. Functions of CSF.
8. Active site of an enzyme.
9. Essential fatty acids.
10. Essential amino acids.

[LI 0216]

FEBRUARY 2016

Sub. Code: 1006

**B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
(New Syllabus 2014-2015)**

FIRST YEAR

PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Give an account of femoral triangle under the following headings. Location, boundaries and contents. Write in detail about femoral artery.
2. Define menstrual cycle. Name the different phases of menstrual cycle and discuss the hormonal changes during menstrual cycle.
3. Describe the chemistry, biochemical functions, daily requirement, sources and deficiency manifestations of Vitamin D.

II. Write notes on:

(8 x 5 = 40)

1. Classification of joints with examples.
2. External features of heart.
3. Name the different types of blood groups and its significance.
4. Sarcomere.
5. Functions of lung.
6. Phospholipids and their significance.
7. Biochemical significance of blood buffers.
8. Diabetes mellitus.

III. Short Answers on:

(10 x 3 = 30)

1. Name the ear ossicles.
2. Name the parts of urinary system.
3. Name the respiratory organs.
4. Name the types of hypoxia.
5. Functions of gastric juice.
6. Stroke volume.
7. Name the hormones of anterior pituitary.
8. Beri –Beri.
9. Reducing sugars.
10. Enzyme inhibition.

[LJ 0816]

AUGUST 2016

Sub. Code: 1006

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. With a neat labeled diagram, describe the structure of a Nephron.
2. Describe the structure and functions of various cell organelles.
3. Describe the dietary sources, coenzyme forms, biochemical functions, deficiency manifestations and daily requirements of Thiamine.

II. Write notes on:

(8 x 5 = 40)

1. Enumerate the muscles of the forearm- their nerve supply and actions.
2. Blood supply of the heart.
3. Differences between Sympathetic and Parasympathetic nervous system.
4. Phases of Menstrual cycle.
5. Heart sounds.
6. Pernicious anaemia.
7. Glycolysis.
8. Structural organization of proteins.

III. Short answers on:

(10 x 3 = 30)

1. What is a Compound fracture?
2. Pivot joint.
3. Name the layers of the skin.
4. Define Cardiac output. Mention the normal value.
5. Mention any 3 functions of Plasma proteins.
6. Actions of Insulin.
7. Role of bile in digestion.
8. Mention any 3 functions of Magnesium.
9. Define buffer. Give examples.
10. Kwashiorkor.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Classify Epithelial tissues and describe each one of them with diagrams.
2. Describe in detail the composition and functions of blood. Add a note on Anaemia.
3. Describe the dietary sources, biochemical functions, deficiency manifestation and daily requirements of vitamin C.

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

1. Enumerate the muscles of the arm-their nerve supply and main actions.
2. Differences between arteries and veins.
3. Describe the innervation of the Urinary bladder.
4. Spermatogenesis.
5. Define Blood pressure. Mention the factors regulating it.
6. Functions of Thyroid hormones.
7. Night blindness.
8. Glucose tolerance test.

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

1. What is a Comminuted fracture?
2. Hinge joint.
3. Name any 3 flat bones.
4. Define Cardiac cycle. Mention the normal value.
5. Draw and label the parts of a Neuron.
6. What is Exocytosis and Endocytosis?
7. Define Tidal volume. Mention the normal value.
8. Mention any 3 functions of Calcium.
9. Name 3 essential fatty acids.
10. Mention the 3 types of Enzyme inhibition.

[LL 0817]

AUGUST 2017

Sub. Code: 1006

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Describe in detail about the Brachial plexus with neat diagram. Add a note on applied aspect.
2. Describe in detail about the menstrual cycle and regulation of menstrual cycle with applied aspect.
3. Describe in detail about the Fat soluble Vitamins.

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

1. Thiamine.
2. Kwashiorkor.
3. Coronary arteries.
4. Deltoid.
5. Pelvic part of ureter.
6. Cranial Nerves.
7. Hypertension.
8. Spermatogenesis.

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

1. Reflexes.
2. Functions of Platelets.
3. Graafian follicle.
4. Forced vital capacity.
5. Enzyme inhibition.
6. Buffer.
7. Balanced Diet.
8. Anatomical position.
9. Sinus of pericardium.
10. Name the muscles in the Anterior compartment of Arm.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Describe in detail about the Right atrium with neat diagram.
2. Define Blood pressure. Explain about the physiological variation, pathological variation and Regulation of Blood pressure. Add a note on hypertension.
3. Definition, classification and function of the enzyme. Factors affecting the enzyme activity.

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

1. Basal metabolic rate.
2. Marasmus.
3. Glycolysis.
4. Renal function Test.
5. Endocytosis and Exocytosis.
6. Degeneration and regeneration of nerve fibers.
7. Explain the covering of the lung.
8. Muscles of Anterior compartment of Arm.

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

1. Simple cuboidal epithelium.
2. Difference between the cervical vertebrae and thoracic vertebrae.
3. Nerve supply and Action of Diaphragm.
4. Trigone of the urinary bladder.
5. Name the cranial nerves.
6. Functions of Cerebro spinal fluid.
7. Auscultatory Area.
8. Functions of Haemoglobin.
9. pH values.
10. Co-enzyme.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Explain in detail about origin, course, termination and function of pyramidal tract with neat diagram.
2. Describe in detail about the external features of heart? And explain about the blood supply of the heart.
3. Describe the chemistry, sources, Daily requirement, Biochemical functions and deficiency manifestations of Vitamin-D.

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

1. Classification and structure of glands.
2. Cubital Fossa.
3. Pericardium.
4. Functions of Protein.
5. Glycolysis.
6. Transport of carbon dioxide.
7. Regulation of blood pressure (short term regulation).
8. Hypertension.

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

1. Pleural recess.
2. Name the muscles in the Anterior compartment of thigh.
3. Name the carpal bones.
4. Oxygen dissociation curve.
5. Winging of scapula.
6. Functions of cerebrospinal Fluid.
7. Hormonal regulation of menstrual cycle.
8. Vital capacity.
9. Write any two function of sodium.
10. Renal function test.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Describe in detail about the external features of heart? And explain about the blood supply of the heart.
2. Describe the structure and functions of various cell organelles.
3. Describe the dietary sources, biochemical functions, deficiency manifestation and daily requirements of vitamin C.

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

1. Urinary bladder.
2. Balanced diet.
3. Difference Between Small and Large Intestine
4. Micturition reflex.
5. Night blindness
6. Normal ECG.
7. Clavicle.
8. Valves of Heart.

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

1. Biceps Brachii.
2. Name the hormones secreted from Anterior pituitary.
3. Name the types of muscles with examples.
4. Functions of ribosomes.
5. Name the bones of upper limbs.
6. Iron deficiency anemia.
7. Oogenesis.
8. Henderson – Hasselbalch equation.
9. Pleura.
10. Essential amino acids.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY

FIRST YEAR

PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Give an account of femoral triangle under the following headings.
Location, boundaries and contents. Write in detail about femoral artery.
2. Define erythropoiesis. Discuss its various stages of development. Add a note on anaemia.
3. Describe the dietary sources, coenzyme forms, biochemical functions, deficiency manifestations and daily requirements of Thiamine.

II. Write notes on:

(8 x 5 = 40)

1. Synovial joint.
2. Grave's disease.
3. Muscles of Anterior compartment of Fore Arm.
4. Circulation of CSF.
5. Peritoneum.
6. Kwashiorkor.
7. Cardiac output.
8. Glucose tolerance test.

III. Short answers on:

(10 x 3 = 30)

1. Name the different auscultation areas.
2. Protein energy malnutrition.
3. Name the hormones secreted by pancreas.
4. Surface anatomy of heart.
5. Acidosis and Alkalosis.
6. Structure of neuron.
7. Thoracic vertebrae.
8. External features of Right lung.
9. Name the parts of cerebral cortex.
10. Intercostal space.

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code: 801006

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Define JOINTS. Classify the Joints with Examples.
2. Define Cardiac cycle. Write in detail about the events taking place during Cardiac cycle. Add a note on Electrocardiogram.
3. Define carbohydrates. Classify carbohydrates with suitable examples.

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

1. Thoracic cage.
2. Explain the role of bile in digestion.
3. Draw and label the parts of GIT.
4. Classification of proteins.
5. Cranial nerves.
6. Blood groups.
7. Coronary arteries.
8. Differences between Sympathetic and Parasympathetic nervous system.

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

1. Bones forming Lower limb.
2. Name the hormones secreted from Posterior pituitary.
3. Name the ear ossicles.
4. Spermatogenesis
5. Name the parts of liver.
6. Deglutition.
7. Muscles of thorax.
8. Catabolism.
9. Artificial Respiration.
10. Enzymes in Myocardial infarction.

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

[AHS 0321]

MARCH 2021

Sub. Code: 1006

(AUGUST 2020 EXAM SESSION)

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY

FIRST YEAR (From 2014-2015 onwards)

PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code : 801006

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define Cardiac cycle. Write in detail about the events that takes place during Cardiac cycle.
2. Describe in detail about the brachial plexus with neat diagram. Add a note on applied aspect.
3. What are Fat soluble Vitamins? Write in detail about the Source, Daily allowance, Functions and Deficiency and Manifestation of Vitamin A.

II. Write notes on:

(8 x 5 = 40)

1. Importance of Balanced Diet and associated Disorders.
2. Glucose Homeostasis.
3. Conducting system of Heart.
4. Spermatogenesis.
5. Blood Groups.
6. Explain the role of Bile in Digestion.
7. Pupillary Light Reflex.
8. Glomerular Filtration Rate.

III. Short answers on:

(10 x 3 = 30)

1. Hinge Joint.
2. Name the Layers of Skin.
3. Define Stroke Volume.
4. Active Transport.
5. Emulsification of Fat.
6. Name any three Function of Plasma protein.
7. Name the Lung Volumes and Capacities.
8. Actions of Insulin.
9. Write any two Renal Function tests.
10. Mention the muscles of Inspiration and Expiration.

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

[AHS 0422]

APRIL 2022

Sub. Code: 1006

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY

FIRST YEAR (Regulations 2018-2019)

PAPER I- ANATOMY, PHYSIOLOGY AND BIO-CHEMISTRY

Q.P NO. 801006

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on : (3X10=30)

1. Describe the Right Kidney under the following headings:
a) Location b) External features c) Relations d) Coverings.
2. Define Cardiac cycle. Describe in detail about the events occur during Cardiac cycle.
3. Describe in detail the fat-soluble vitamins.

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

1. Thrombopoiesis.
2. Hypothyroidism.
3. External features of liver.
4. Potassium.
5. Enumerate the difference between arteries and veins.
6. Gluconeogenesis.
7. Intercoastal space.
8. Glomerular filtration rate.

III. Short Answers on : (10X3=30)

1. Parts of Humerus.
2. Adrenocortical hormones.
3. What is serum?
4. Location and functions of spleen.
5. Benedict's test.
6. What is subluxation of shoulder joints?
7. Pellagra.
8. Define the following terms: Proximal, Ventral, Medial, Sagittal plane.
9. What is alkalosis?
10. Parts of Nervous system.

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 1006

**B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019)
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY
Q.P NO. 801006**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on : (3X10=30)

1. Describe the external features of Heart with neat labeled diagram.
2. Explain in detail the synthesis, secretion and functions of Thyroid Hormones. Add a note on hypothyroidism.
3. Describe in detail the classification and metabolism of Lipids. Add a note on its functions.

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

1. Muscles of flexor component of forearm and its nerve supply.
2. Name the principle elements. Write a note on Sodium.
3. Explain the waves in Electrocardiogram.
4. With a neat diagram, explain the structure and functions of Urinary Bladder.
5. Lung volumes and capacities.
6. Vitamin B12.
7. Circle of Willis.
8. Withdrawal reflex.

III. Short Answers on : (10X3=30)

1. What is Marasmus?
2. Normal constrictions of Ureter.
3. Name the polyunsaturated fatty acids.
4. Movements of hip joint.
5. Lumbar Puncture.
6. What is Acidosis?
7. Draw a neat labeled diagram of structure of Neuron.
8. Name the hormones of Pancreas.
9. Henderson-Hasselbalch Equation.
10. Name the lymphoid organs.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1006

**B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR (Regulations 2010-2011, 2014-2015 & 2018-2019 onwards)
PAPER I– ANATOMY, PHYSIOLOGY AND BIO-CHEMISTRY
Q.P. Code: 801006**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

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

1. Describe in detail about the external features, chambers and blood supply of the Heart.
2. Classify Carbohydrates with suitable examples. Write briefly the functions of Carbohydrates.
3. Define Blood Pressure. Explain about the types and regulation of blood pressure. Add a note on Hypertension.

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

1. Muscles of lower limb.
2. Cubital fossa.
3. Deltoid.
4. Pernicious anaemia.
5. Functions of thyroid hormones.
6. Degeneration and regeneration of nerve fibers.
7. Basal metabolic rate.
8. Kwashiorkor.

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

1. Functions of Platelets.
2. Define Cardiac cycle. Mention the normal values.
3. What is Exocytosis and Endocytosis?
4. What is a Commuted fracture?
5. Pivot joint.
6. Name the bones of upper limbs.
7. Mention any three functions of magnesium.
8. Beriberi.
9. Define Enzyme and classify it.
10. Henderson – Hasselbalch equation.

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

[AHS 1123]

NOVEMBER 2023**Sub. Code: 1006**

B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR (Regulations 2010-2011, 2014-2015 & 2018-2019 onwards)
PAPER I– ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY
Q.P. Code: 801006

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on:

(3 X 10 = 30)

1. Define Erythropoiesis. Discuss the various stages of Erythropoiesis. Add a note on Anaemia.
2. Give an account of Femoral Triangle under the following headings:
 - a) Location
 - b) Boundaries and ContentsWrite in detail about Femoral Artery.
3. Describe in detail about the Fat Soluble Vitamins.

II. Write Notes on:

(8 X 5 = 40)

1. Spermatogenesis.
2. Erythroblastosis Fetalis.
3. Structure of Neuron.
4. Blood supply of the Heart.
5. External features of Lung.
6. Muscles of the arm, their Nerve supply and actions.
7. Vitamin C its importance and deficiency disease.
8. Phospholipids and their significance.

III. Short Answers on:

(10 X 3 = 30)

1. Define Buffer. Give examples.
2. Mention any three functions of Calcium.
3. Balanced diet.
4. pH values.
5. Trigone of the Urinary bladder.
6. Synovial joint.
7. Name the Respiratory organs.
8. Forced Vital capacity.
9. Parts of Long bone.
10. Mention any three functions of Plasma protein.

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

[AHS 0424]

APRIL 2024

Sub. Code: 1006

**B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR (Regulations 2010-2011, 2014-2015 & 2018-2019 onwards)
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY**

Q.P. Code: 801006

Time: Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Name the Organs of Respiratory system. Explain in detail the coverings, surface and Blood supply of Lungs.
2. Define Blood Pressure. Explain in detail the short term regulation of Blood Pressure. Add a note on Hypertension.
3. Explain in detail the Metabolism of Glucose and its Regulation.

II. Write notes on:

(8 x 5 = 40)

1. Classification of Joints with examples.
2. Vitamin B Complex deficiency disorders.
3. Blood supply of Heart.
4. Phases of Menstrual Cycle.
5. Functions of Thyroid Hormone.
6. Artificial Respiration.
7. Digestion and Absorption of Lipids.
8. Functions of Cerebrospinal fluid.

III. Short answers on:

(10 x 3 = 30)

1. Draw and label the parts of Neuron.
2. Enumerate the Bones of Lower limb.
3. Name the hormones of Pancreas.
4. Hyperlipidemia.
5. Endocytosis and Exocytosis.
6. What is a Synapse? Classify it.
7. Protein Energy Malnutrition.
8. Mention any three functions of Calcium.
9. Electrocardiogram.
10. Define Dead space.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1006

**B.Sc. ACCIDENT AND EMERGENCY CARE TECHNOLOGY
FIRST YEAR (Regulations 2010-2011, 2014-2015 & 2018-2019 onwards)
PAPER I – ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY
Q.P. Code: 801006**

Time: Three hours

Answer ALL Questions

Maximum : 100 Marks

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

1. Discuss in detail the classification of Bones. Explain with a neat diagram, the parts and blood supply of Long bones.
2. Define Erythropoiesis. Describe in detail the stages of Erythropoiesis and the factors regulating it.
3. Define Glycolysis. Describe in detail the steps involved in Glycolytic pathway.

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

1. Classification of Glands.
2. Counter Current Multipliers.
3. Types of Neuroglia and its functions.
4. What are Trace elements? Write a note on functions of Zinc.
5. Structure and functions of a Monocyte.
6. Enumerate the differences between skeletal muscle and cardiac muscle.
7. Acid-Base balance.
8. Pericardium.

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

1. Enumerate the movements of Shoulder joints.
2. What is Goiter?
3. Spermatogenesis.
4. What are the dietary sources of Vitamin A?
5. Hilum of Right Lung.
6. Name the extrapyramidal tracts.
7. Greater Omentum.
8. Name the Auscultatory areas of Heart.
9. Functions of bile.
10. Enumerate the Subcellular organelles.
