

SEPTEMBER 2002

[KH 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

First Year

Paper I — HUMAN BIOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Draw a neat diagram illustrating the cross section of a human heart and label the various parts. Describe in detail about the pulmonary circulation. (25)

2. Draw a neat sketch of the cross section of the human kidney and label the various parts. Define a nephron. Add a note on the formation of urine. (25)

3. Write short notes on : (5 × 10 = 50)

(a) Functions of thyroid gland.

(b) Various types and functions of epithelial tissue

(c) HLA system and its functions

(d) Circulation of cerebro spinal fluid

(e) Menstrual cycle.

APRIL 2003

[KI 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION:**

Paper I — HUMAN BIOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Draw and label the various parts of the human brain. Describe in detail about the production, circulation and functions of cerebro spinal fluid. (25)
 2. Draw a neat diagram of the human digestive system and label the various parts. Describe the various functions of bile with a special emphasis on its digestive function. How is carbohydrate digested in the small intestines? (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Haemopoiesis.
 - (b) Thymus.
 - (c) Functions of skin.
 - (d) Gene and allele.
 - (e) Cartilage.
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NOVEMBER 2003

[KJ 871]

Sub. Code : 5001

B.Sc. (MEDICAL LABORATORY TECHNOLOGY)
DEGREE EXAMINATION.

Paper I — HUMAN BIOLOGY

Time : Three hours

Maximum : 100 marks

Two hours and Forty minutes
for Sec. A & Sec. B

Sec. A & Sec. B : 80 marks

Twenty minutes for Sec. C

Section C : 20 marks

Answer Sections A and B in SAME Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. Describe the anatomy of the heart. Detail the physiology of the systemic and pulmonary circulations.

(15)

2. Define the terms 'hormone' and 'endocrine'. Name the endocrine glands in your body and the hormones secreted by each. Elucidate the actions of adrenal hormones.

(2 + 6 + 7)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on :

- (a) Bone tissue
- (b) HLA system
- (c) Location and functions of lymph nodes
- (d) Functions of liver
- (e) Disaccharidase enzymes
- (f) Malpighian corpuscle of nephron
- (g) Mechanics of ventilating the lungs
- (h) Ovulation, fertilisation and conception
- (i) Regulation of body temperature
- (j) Parts of brain stem.

AUGUST 2004

[KL 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

Paper I — HUMAN BIOLOGY

Time : Three hours

Maximum : 100 marks

**Sec. A & B : Two hours and
forty minutes**

Sec. A & B : 80 marks

Sec. C : Twenty minutes

Sec. C : 20 marks

Answer Sections A and B in the SAME answer book.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. What is the composition of saliva? What are its functions and how is it regulated. (15)

2. What are the hormones of the posterior pituitary? What are their functions. (15)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on :

- (a) Blood groups.
- (b) Cardiac output.
- (c) Taste sensation.
- (d) Vital capacity.

(e) Diabetes Mellitus.

(f) Functions of PCT (Proximal Convoluted Tubule).

(g) Functions of Thalamus.

(h) Spermatogenesis.

(i) CSF.

(j) Functions of skin.

AUGUST 2005

[KN 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

Paper I — HUMAN BIOLOGY

Time : Three hours Maximum : 100 marks

**Sec. A & B : Two hours and Sec. A & B : 80 marks
forty minutes**

Sec. C : Twenty minutes Sec. C : 20 marks

Answer Sections A and B in the SAME answer book.

Answer Section C in the answer sheet provided.

Answer ALL questions.

SECTION A — (2 × 15 = 30 marks)

- 1. What is the normal arterial blood pressure? How is it regulated? Mention the physiological variations.**
- 2. Draw a diagram of the nephron. Write in detail how urine is formed.**

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on :

- (a) Heart-sounds**
 - (b) Smell**
 - (c) Erythroblastosis foetalis**
 - (d) Respiratory centres**
 - (e) Oxytocin**
 - (f) Contraceptives**
 - (g) Cartilage**
 - (h) Gigantism**
 - (i) Functions of hypothalamus**
 - (j) Insulin.**
-

AUGUST 2006

[KP 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

First Year

Paper I — HUMAN BIOLOGY

Time : Three hours	Maximum : 100 marks
Descriptive : Two hours and forty minutes	Descriptive : 80 marks
Objective : Twenty minutes	Objective : 20 marks

Answer ALL questions.

Write Essays on :

1. (a) Draw a neat sketch of Human Brain with spinal cord and label the parts.

(b) Describe the functions of Pituitary Gland.
(20)
2. Draw and label different parts of digestive system. Give an account of digestion of Carbohydrates.
(5 + 2 + 8)
3. Mention the parts of Respiratory system. Describe the regulation of respiration.
(5 + 10)

4. Write short notes on : (6 × 5 = 30)
- (a) Functions of Blood.
 - (b) Location and functions of Spleen.
 - (c) Functions of skin.
 - (d) Functions of Thyroid gland.
 - (e) Structure and function of Nephron.
 - (f) Functions of Cerebrum.

[KR 871]

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

Paper I — HUMAN BIOLOGY

Maximum : 100 marks

Descriptive : 80 marks

Objective : 20 marks

I. Write Essay on:

(2 × 15 = 30)

(2) Describe in detail the physiology of Respiration.

(10 × 5 = 50)

(a) **Functions of Bile.**

(b) **Physiology of digestion in stomach.**

(c) The chambers of heart.

(d) **Pulmonary Circulation.**

(e) **Spermatogenesis.**

(f) **Location and structure of spleen.**

(g) **Functions of skin.**

(h) **Structure of Spinal cord.**

(i) **Composition and functions of blood.**

(j) Name the hormones of Adrenal Cortex and one important function of each.

August-2008

[KT 871]

Sub. Code : 5001

**B.Sc. (Medical Laboratory Technology) DEGREE
EXAMINATION.**

First Year

Paper I — HUMAN BIOLOGY

Q. P. Code : 725001

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Essays : (2 × 15 = 30)

(1) Describe in detail the location, structure, hormones secreted by the thyroid gland and their functions. Add a note on Cretinism. (2 + 2 + 1 + 5 + 5)

(2) Describe structure of the heart and the origin and conduction of heart beat. (8 + 7)

II. Write short notes on : (10 × 5 = 50)

(1) Structure of nephron

(2) Menstrual cycle

(3) Rh factor

August-2008

- (4) Mendel's theory of inheritance
- (5) Functions of cerebrum
- (6) Formation and functions of lymph
- (7) Name the hormones secreted by Anterior and posterior pituitary gland
- (8) Physiology of digestion in stomach
- (9) Mechanism of inspiration
- (10) Functions of WBC.

III. Short answer questions : (10 × 2 = 20)

- (1) Mention the functions of mitochondria?
- (2) Mention the different types of muscles
- (3) List the exocrine secretions of the stomach?
- (4) What is the composition of saliva?
- (5) Name the enzymes present in pancreatic juice that helps protein digestion.
- (6) List any four functions of liver.
- (7) Enumerate the functions of bile
- (8) Name the respiratory centres.

(9) Mention the names of the four valves of the heart.

(10) Tell two special features of pulmonary circulation.

August - 2009

[KV 871]

Sub. Code: 5001

B.Sc. (Medical Laboratory Technology) DEGREE EXAMINATION

FIRST YEAR

Paper I – HUMAN BIOLOGY

Q.P. Code : 725001

Time : Three hours

Maximum : 100 marks

Answer All questions.

I. Essays :

(2X15=30)

1. Draw the digestive system and label the parts. Explain the composition, function and secretion of gastric juice. **(4+3+8)**
2. What is Haemopoiesis? Describe the stages in Erythropoiesis. **(5+10)**

II. Write Short Notes on :

(10X5=50)

1. Types of Cartilage.
2. Functions of saliva.
3. Blood groups.
4. Heart and its chamber.
5. Hormones secreted by anterior pituitary.
6. Name the parts of the Brain.
7. Spermatogenesis.
8. Structure and functions of skin.
9. Nephron and its functions.
10. Write about respiratory passage, draw and label the diagram.

III. Short Answer Questions:

(10X2=20)

1. What is lysosome and enumerate two of its functions.
2. Name two functions of cell membrane.
3. Mention two mechanisms by which heat loss takes from the body.
4. Name the types of lymphocytes. What are the two types of immunity produced by them?
5. What are anticoagulants? Mention two of their uses?
6. Define Landsteiner's law?
7. What is erythroblastosis foetalis?
8. What is meant by polycythemia? Name the types of polycythemia.
9. What is Leucocytosis? Give two physiological conditions where leucocytosis is found.
10. Define erythrocyte sedimentation rate and its normal value. Name two conditions where ESR is increased.

[KX 871]

AUGUST 2010

Sub. Code: 5001

B.Sc. (MEDICAL LABORATORY TECHNOLOGY) DEGREE EXAMINATION

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Essays:

(2 x 15 = 30)

1. Classify Blood groups. Describe the ABO and Rh blood group systems.
What are the uses of blood grouping? Enumerate the effects of mismatched transfusion.
2. Draw and locate the Respiratory centres. Describe the Neural and chemical regulation of respiration.

II. Write Short notes on:

(10 x 5 = 50)

1. ESR.
2. Juxta Glomerular apparatus.
3. Vital capacity.
4. Functions of liver.
5. Acromegaly.
6. Movements of small intestine.
7. Artificial respiration.
8. Functions of Bone.
9. Functions of CSF.
10. Classify autosomes and sex chromosomes.

III. Short Answers on:

(10 x 2 = 20)

1. Renal threshold for glucose.
2. Hormones of adrenal cortex.
3. Digestive enzymes secreted by salivary gland.
4. Pace maker of heart.
5. Chief cells of stomach.
6. Beta cells of pancreas.
7. Normal respiratory rate and its control.
8. Oxytocin.
9. Myxoedema.
10. Anti diuretic hormone.

[KZ 0811]

AUGUST 2011

Sub. Code: 5001

B.Sc. (MEDICAL LABORATORY TECHNOLOGY) DEGREE EXAMINATION

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Name the posterior pituitary hormones. What are their functions?
Add a note on diabetes Insipidus?
2. Describe in detail the various steps in formation of urine.
3. Describe the composition, functions and regulation of salivary secretion.

II. Write notes on:

(8 x 5 = 40)

1. What is Anaemia? What are the various types of Anaemia?
2. Types of Immunity.
3. Which is the pacemaker of the heart? Why?
4. What is cardiac output? What are the factors determining cardiac output?
5. What are the functions of Thyroxine?
6. Write a short note on spermatogenesis.
7. Composition and function of gastric juice.
8. Artificial respiration.

III. Short Answers on:

(10 x 3 = 30)

1. Tetany.
2. Name the hormones of Placenta.
3. Define systolic and diastolic blood pressure.
4. Glomerular filtration rate.
5. Tidal volume.
6. ECG.
7. Name any one ascending and descending tract in spinal cord.
8. Functions of Cerebellum.
9. Functions of Bile.
10. Name the muscles of Inspiration.

[LB 0212]

AUGUST 2012

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code : 725001

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. Composition of blood and its functions. | 7 | 20 | 10 |
| 2. Describe the anatomy of the kidney and mechanism of urine formation. | 7 | 20 | 10 |
| 3. Describe the anatomy of the stomach and its functions. | 7 | 20 | 10 |

II. Write notes on:

- | | | | |
|--|---|----|---|
| 1. Menstrual cycle. | 4 | 10 | 5 |
| 2. Functions of bile. | 4 | 10 | 5 |
| 3. Describe in brief the anatomy of the lung. | 4 | 10 | 5 |
| 4. Write briefly about formation and circulation of Cerebrospinal fluid. | 4 | 10 | 5 |
| 5. Pulmonary function tests. | 4 | 10 | 5 |
| 6. Hormones secreted by the pituitary gland. | 4 | 10 | 5 |
| 7. Micturition reflex. | 4 | 10 | 5 |
| 8. Functions of skin. | 4 | 10 | 5 |

III. Short answers on:

- | | | | |
|--|---|---|---|
| 1. Diabetes mellitus. | 2 | 4 | 3 |
| 2. Describe three functions of the cerebellum. | 2 | 4 | 3 |
| 3. Mention three conditions where Erythrocyte sedimentation rate is increased. | 2 | 4 | 3 |
| 4. Name the chambers and valves of heart. | 2 | 4 | 3 |
| 5. Jaundice. | 2 | 4 | 3 |
| 6. What is the normal heart rate and mention any two conditions where heart rate is increased. | 2 | 4 | 3 |
| 7. Functions of mitochondria. | 2 | 4 | 3 |
| 8. Types of bones. | 2 | 4 | 3 |
| 9. Blood brain barrier. | 2 | 4 | 3 |
| 10. Diaphragm. | 2 | 4 | 3 |

[LC 0212]

FEBRUARY 2013

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three hours

Maximum: 100 marks

Answer ALL questions.

I. Elaborate on:

(3x10 = 30)

1. Name the hormones which maintain calcium metabolism and their actions.
2. Write in detail the structure of ventricular system, the brain and formation of cerebrospinal fluid.
3. Draw structure of nephron .Explain in detail the steps involved in formation of urine.

II .Write Notes on:

(8x5 = 40)

1. HLA system and its applications
2. Production and storage of bile
3. Pulmonary circulation
4. Spermatogenesis
5. Types of tissue and their functions
6. Stages of erythropoeisis
7. Neuromuscular junction
8. Functions of saliva

III. Short Answers on:

(10x3 = 30)

1. Phases of menstrual cycle
2. Muscles of inspiration
3. Functions of thymus gland
4. Parts of male genital system
5. Small intestinal movements
6. Heart sounds
7. Location of lymph nodes
8. Functions of bile
9. List the number of chromosomes
10. Diabetes mellitus

[LD 0212]

AUGUST 2013

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Elaborate on:

(3x10 = 30)

1. Name the parts of brain, spinal cord and meninges. Add a note on formation of cerebrospinal fluid.
2. What is haemopoiesis? Enumerate the steps involved in erythropoiesis. Name the factors regulating it.
3. Name the adrenal cortical and adrenal medullary hormones. Elaborate on their functions.

II .Write Notes on:

(8x5 = 40)

1. Classify chromosomes into autosomes and sex chromosomes
2. Bone marrow
3. Menstrual cycle
4. Structure and functions of nephron
5. Physiology of respiration
6. Types of tissues and its functions
7. Absorption of foods
8. Spermatogenesis

III. Short Answers on:

(10x3 = 30)

1. Mendel's theory of inheritance
2. Define allele and gene
3. Heart chambers
4. List any three functions of liver
5. Name three steps in formation of urine
6. Cell division
7. Name the parts of brain
8. Diabetes mellitus
9. Bone
10. Structure of skin

[LE 0212]

FEBRUARY 2014

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Elaborate on:

(3x10 = 30)

1. Describe the structure of the cell. Mention the differences between mitosis and meiosis?
2. Name the parts of G. I. tract. Briefly describe the physiology of digestion in different parts?
3. Mention the different parts of Respiratory system? Briefly describe the physiology of respiration?

II .Write Notes on:

(8x5 = 40)

1. Describe the production and storage of bile?
2. Broncho pulmonary segment.
3. Name the coverings, chambers and valves of the heart?
4. Structure of the nephron.
5. Spermatogenesis.
6. Chromosome.
7. Haemopoiesis.
8. Hormones, functions & applied aspects of pituitary gland?

III. Short Answers on:

(10x3 = 30)

1. Name the basic tissues of our body.
2. Mention the types of muscles with examples.
3. Gastric juice.
4. Parts of the brain.
5. Mention any four functions of the skin.
6. Name the different phases of menstrual cycle.
7. Cretinism.
8. Applied aspects of cerebellum
9. Functions of Thalamus.
10. Name any two ascending & descending tracts of the spinal cord.

[LF 0212]

AUGUST 2014

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Describe the types of tissues and their functions.
2. State the location and structure of spleen, bone marrow and lymph nodes.
3. Draw structure of skin and their functions.

II. Write Notes on:

(8 x 5 = 40)

1. Mendel's theory of inheritance.
2. Physiology of digestion in mouth and stomach.
3. Erythropoiesis.
4. Formation of cerebrospinal fluid.
5. Pulmonary circulation.
6. Structure of ventricular system, the brain.
7. Hypothyroidism.
8. Menstrual cycle.

III. Short Answers on:

(10 x 3 = 30)

1. Cell division.
2. Define locus and gene.
3. Muscle and its types.
4. Name the parts of urinary system.
5. Structure of sperm.
6. Physiology of respiration.
7. HLA system and its applications.
8. Name the chambers of heart.
9. Excretion of bile.
10. List the number of chromosomes.

[LG 0215]

FEBRUARY 2015

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Describe in detail absorption of foods.
2. Brief review of pulmonary and systemic circulation.
3. Brief account of menstrual cycle and normal pregnancy.

II. Write Notes on:

(8 x 5 = 40)

1. Pituitary hormones.
2. Structure of ventricular system, the brain.
3. Leucopoiesis.
4. Structure and functions of skin.
5. Spermatogenesis.
6. Functions of various cell organelles.
7. HLA system and its applications.
8. Define Allele and gene.

III. Short Answers on:

(10 x 3 = 30)

1. Heart valves.
2. Diabetes mellitus.
3. Types of tissues.
4. Location of lymph nodes.
5. Structure of neuron.
6. Mendel's theory of inheritance.
7. Role of bile in digestion.
8. Thymus gland.
9. Three steps in formation of urine.
10. Striated muscles.

[LH 0815]

AUGUST 2015

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. State the location of adrenals and its functions.
2. Discuss in detail the events of menstrual cycle.
3. Discuss in detail the process of urine formation.

II. Write Notes on:

(8 x 5 = 40)

1. Salivary glands and their secretion.
2. Pulmonary circulation.
3. Structure of sperm.
4. Structure of lymph gland.
5. Ventricles of brain.
6. Thyroid hormones and their role in body.
7. Structure of skin.
8. Types of epithelia.

III. Short Answers on:

(10 x 3 = 30)

1. List membranous organelles of cells.
2. Phases of Meiosis.
3. Classification of bones.
4. Types of Muscle tissue.
5. Name meningeal layers.
6. Name three exocrine glands.
7. Constituents of plasma.
8. Components of biliary system.
9. Name respiratory organs leading to lung.
10. Name the valves of heart.

[LI 0216]

FEBRUARY 2016

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. What is haemopoiesis? Enumerate the steps involved in erythropoiesis. Name the factors regulating it.
2. Describe the regulation of respiration.
3. Formation, circulation and drainage of cerebrospinal fluid.

II. Write Notes on:

(8 x 5 = 40)

1. Cartilage.
2. Location and functions of lymph glands.
3. Mechanism of ventilation of lungs.
4. Functions of liver.
5. Brain stem.
6. Regulation of body temperature.
7. Pancreatic hormones.
8. Structure and function of nephrons.

III. Short Answers on:

(10 x 3 = 30)

1. Glands.
2. Name the organs of female reproductive system.
3. Functions of urinary system.
4. Phases of gastric secretion.
5. Layers of epidermis.
6. Stages in mitosis.
7. Name parts of brain.
8. Classification of spinal nerves.
9. Anterior pituitary hormones.
10. Heart chambers.

[LJ 0816]

AUGUST 2016

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. What are blood groups? Describe any two types of bloods groups you know. Add a note on transfusion reactions.
2. Draw a neat labelled diagram of the heart. Describe the blood supply to the heart (Coronary circulation).
3. Name the hormones secreted by the pituitary gland. What are their functions?

II. Write Notes on:

(8 x 5 = 40)

1. Explain about Juxtaglomerular apparatus.
2. Write in detail about white blood cells.
3. Explain about synovial joint.
4. What are bronchopulmonary segments? Explain.
5. Write about ESR – Erythrocyte sedimentation rate.
6. What are the physical changes that take place in males and females during puberty?
7. Write about medulla oblongata.
8. Explain about osmosis.

III. Short Answers on:

(10 x 3 = 30)

1. What are the functions of pharynx?
2. Name the accessory muscles of respiration.
3. List the parts of nephron.
4. Explain about Tidal volume.
5. Write the various functions of liver.
6. Name the parts of small intestine.
7. What is gigantism?
8. Name the layers of the blood vessel.
9. What is neuromuscular junction?
10. Name the parts of brain.

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR
PAPER I – HUMAN BIOLOGY**

Q.P. Code : 725001

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Describe the composition and functions of blood.
2. Name the parts of central nervous system. Explain the formation and function of cerebrospinal fluid (CSF).
3. What are the parts of the digestion system? Describe the digestion and absorption of nutrients from the small intestine.

II. Write Notes on:

(8 x 5 = 40)

1. Regulation of oxytocin secretion from the posterior pituitary gland.
2. Explain about external respiration.
3. Draw a diagram of an animal cell and label its parts.
4. Name the cranial nerves. Write two functions of the facial nerve.
5. Write about the conducting system of the heart.
6. Explain about Diaphragm and its functions.
7. List the functions of the autonomic nervous system.
8. Mechanism of transport of substances across cell membranes.

III. Short Answers on:

(10 x 3 = 30)

1. Name the movements that occur in a synovial joint.
2. List the functions of connective tissue.
3. Name the hormones secreted by the pancreas.
4. Write the functions of lymphatic system.
5. What is pH scale?
6. Define Vital capacity.
7. Define cardiac output.
8. Write the major functions of the kidney.
9. List the various functions of the skin.
10. Factors affecting heart rate.

[LL 0817]

AUGUST 2017

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Draw structure of skin. Explain detail about the layers and functions of skin.
2. Describe about biliary system.
3. Write in detail about adrenal cortex and adrenal medulla.

II. Write notes on:

(8 x 5 = 40)

1. Blood groups.
2. Functions of gastric juice.
3. Movements of small intestine.
4. Dialysis.
5. ADH.
6. Insulin.
7. Cushing's syndrome.
8. Draw a section of the heart and write about valves.

III. Short answers on:

(10 x 3 = 30)

1. Difference between liver bile and gall bladder bile.
2. Cretinism.
3. Carpopedal spasm.
4. Thymus.
5. Pacemaker.
6. Cardiac output.
7. Draw structure and write about respiratory unit.
8. Lung capacities.
9. Respiratory center.
10. Functions of mitochondria.

[LM 0218]

FEBRUARY 2018

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Write briefly about lymphatic system, lymph and lymph nodes.
2. Draw structure of kidney and nephron. Brief about urine formation.
3. Write about menstrual cycle and hormones involved in regulation.

II. Write notes on:

(8 x 5 = 40)

1. HLA system.
2. Functions of liver.
3. Jaundice.
4. Micturition reflex.
5. Oxytocin.
6. Diabetes insipidus.
7. Draw male reproductive system and write detail about spermatogenesis.
8. Anatomy of skin with suitable diagram.

III. Short answers on:

(10 x 3 = 30)

1. Functions of large intestine.
2. Name the anterior and posterior pituitary hormones.
3. Tetany.
4. Seminal vesicles.
5. How many heart sounds are produced during each cardiac cycle? Describe.
6. Heart rate – normal and abnormal. Mention examples.
7. Spirometer.
8. Define ventilation and types of ventilation.
9. Artificial respiration.
10. Functions of nucleus.

[LN 0818]

AUGUST 2018

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Name the parts of brain, spinal cord and meninges. Explain the formation of cerebro spinal fluid.
2. Write briefly about major and minor salivary glands. What are the functions of saliva?
3. Write detail about thyroid gland and its functions.

II. Write notes on:

(8 x 5 = 40)

1. Mendel theory of inheritance.
2. Formation and function of bile salts and pigments.
3. Functions of small intestine.
4. Concentration of urine.
5. Classify hormones depending upon chemical nature.
6. Acromegaly.
7. Insulin.
8. Process of ovulation.

III. Short answers on:

(10 x 3 = 30)

1. Properties and composition of pancreatic juice.
2. Gastrointestinal hormones.
3. Myxedema.
4. Factors regulating bone remodeling.
5. Structure of sperm.
6. ECG.
7. Arterial blood pressure.
8. Lung volumes.
9. Dead space.
10. What are the sites for erythropoiesis?

[LO 0219]

FEBRUARY 2019

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Draw structure of kidney and nephron. Brief about urine formation.
2. Write detail about thyroid gland and its functions.
3. Draw structure of skin. Explain detail about the layers and functions of skin.

II. Write notes on:

(8 x 5 = 40)

1. Movements of small intestine.
2. Micturition reflex.
3. Draw male reproductive system and write detail about spermatogenesis.
4. Formation and function of bile salts and pigments.
5. Concentration of urine.
6. What are the functions of saliva?
7. Functions of thyroid gland.
8. Write about adrenal cortex.

III. Short answers on:

(10 x 3 = 30)

1. Acromegaly.
2. Gastrointestinal hormones.
3. Structure of sperm.
4. Lung volumes.
5. What is neuromuscular junction?
6. Constituents of plasma.
7. Types of epithelia.
8. List the muscles of Inspiration.
9. Arterial blood pressure.
10. Cerebrospinal Fluid.

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. What are the parts of the digestion system? Describe the digestion and absorption of nutrients from the small intestine.
2. Write about menstrual cycle and hormones involved in regulation.
3. Describe the composition and functions of blood.

II. Write notes on:

(8 x 5 = 40)

1. Regulation of body temperature
2. Structure and function of nephrons.
3. Write about ESR – Erythrocyte sedimentation rate.
4. Write about the conducting system of the heart.
5. Explain in detail about the layers and functions of skin.
6. List the parts of central nervous system.
7. Explain about Diaphragm and its functions.
8. Write about medulla oblongata.

III. Short answers on:

(10 x 3 = 30)

1. Ventricles of brain.
2. Parts of male genital system.
3. Write about synovial joint.
4. What is osmosis? Explain.
5. What is gigantism?
6. Role of bile in digestion.
7. Muscle and its types.
8. Mendel's theory of inheritance.
9. Blood brain barrier.
10. Name the chambers and valves of heart.

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Draw a diagram of the heart and describe the cardiac cycle.
2. What are blood groups? Describe any two types of bloods groups you know.
Add a note on transfusion reactions.
3. Discuss in detail the process of urine formation.

II. Write notes on:

(8 x 5 = 40)

1. What is haemopoiesis? List the steps involved in erythropoiesis.
2. Functions of liver.
3. Draw a section of the heart and write about valves.
4. Cushing's syndrome.
5. Anatomy of skin with suitable diagram.
6. Parts of female reproductive system.
7. Respiration and respiratory cycle.
8. Structure of a chromosome.

III. Short answers on:

(10 x 3 = 30)

1. Ball and socket joint and give two examples.
2. Name the layers of the blood vessel.
3. Ventricles of brain.
4. Define allele and gene
5. Functions of mitochondria.
6. Parts of male genital system.
7. Types of bones.
8. Tidal volume.
9. Define ventilation and list the types of ventilation.
10. Write the major functions of the kidney.

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

[AHS 0321]

MARCH 2021

Sub. Code: 5001

(AUGUST 2020 EXAM SESSION)

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR (From 2010-2011 onwards)

PAPER I – HUMAN BIOLOGY

Q.P. Code : 725001

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Draw a neat diagram of Brain and spinal cord and label its parts. Add a note on Meninges and its functions.
2. Define Haemopoiesis and explain in detail about Erythropoiesis.
3. Explain about the anatomy of Heart and physiology of systemic circulation and Cardiac output.

II. Write notes on:

(8 x 5 = 40)

1. Types of Joints.
2. Mitosis.
3. Pacemaker of the Heart and Functional Syncytium.
4. Anaemia and its types.
5. Micturition reflex.
6. Chromosome and its classification.
7. Types of Epithelium and its functions.
8. Thymus.

III. Short answers on:

(10 x 3 = 30)

1. Heart sounds.
2. Thermogenesis.
3. Erythroblastosis Fetalis.
4. Hormones of Placenta.
5. Glomerular Filtration rate.
6. Tidal Volume.
7. Functions of cerebellum.
8. Parts of Male Genital system.
9. Types of bones.
10. Cretinism.

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

[AHS 0422]

APRIL 2022

Sub. Code: 5001

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR (From 2010-2011 onwards)

PAPER I – HUMAN BIOLOGY

Q.P. Code: 725001

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on :

(3X10=30)

1. Draw and label the structure of nephron and explain in the functions of it in detail.
2. Name the hormones secreted by pituitary gland. Explain hypothalamic control of pituitary gland.
3. Write about the anatomy of the heart, genesis and conduction of cardiac impulse.

II. Write Notes on :

(8X5=40)

1. Rh isoimmunization.
2. Liver function test.
3. Glucocorticoids.
4. Spermatogenesis.
5. Functions of cell organelle.
6. Blood brain barrier.
7. Exocrine pancreas.
8. Physiology of respiration.

III. Short Answers on :

(10X3=30)

1. Difference between mitosis and meiosis.
2. Different types of muscles.
3. Spinal reflex.
4. Monoclonal Antibody.
5. Vestibular apparatus.
6. Enzymes present in saliva.
7. Cell membrane.
8. Features of pulmonary circulation.
9. Buffy Coat.
10. Diabetes Insipidus.

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR (Regulation 2010-2011)

PAPER I – HUMAN BIOLOGY

Q. P. Code: 725001

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(3 x 10 = 30)

1. Draw Human cell structure, name its organelles and explain briefly about the functions of Mitochondria.
2. Explain the Physiology of respiration.
3. Name the chambers of the heart and valves. Explain in brief about Systemic and Pulmonary Circulation.

II. Write notes on:

(8 x 5 = 40)

1. Thyroid gland-structure and functions.
2. Phases of Menstrual cycle.
3. Gene, allele and locus.
4. Structure of Nephron.
5. HLA system and its significance.
6. Functions of skin.
7. Physiology of ovulation and conception.
8. Functions of Kidney.

III. Short answers on:

(10 x 3 = 30)

1. What are Blood Groups?
2. Mention the types of tissues and their functions.
3. Erythrocyte Sedimentation rate.
4. Functions of Pharynx.
5. Neuromuscular junction.
6. Name the hormones secreted from Posterior Pituitary gland.
7. Classification of joints.
8. Structure of Endoplasmic reticulum.
9. Composition of bile.
10. Layers of Meninges.

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

[AHS 0423]

APRIL 2023

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR (Regulations 2010-2011 & 2018-2019 onwards)**

PAPER I – HUMAN BIOLOGY

Q. P. Code: 725001

Time: Three Hours

Maximum : 100 Marks

Answer All questions

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

1. Draw and label the Thyroid Gland, explain about the functions of Thyroid Hormones.
2. Explain the physiology of maintenance of Arterial Blood Pressure.
3. Anatomy and functions of Pancreas.

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

1. Pluripotent stem cells.
2. Cerebellum.
3. Electrocardiogram.
4. Mineralocorticoids.
5. Structure and functions of nephron.
6. Types of antibodies and its functions.
7. Liver function tests.
8. Vital capacity of lungs.

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

1. Types of cartilage.
2. Characteristics of skeletal muscles.
3. Structure of sperm.
4. Acquired immunity.
5. Composition of bile.
6. Glomerular filtration rate.
7. Acromegaly.
8. Meninges of brain.
9. Name three major salivary glands.
10. Define: Gene, Allele and Locus.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR (Regulations 2010-2011 & 2018-2019 onwards)
PAPER I – HUMAN BIOLOGY
Q. P. Code: 725001**

Time: Three hours

Maximum: 100 Marks

Answer ALL Questions

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

1. Draw a neat labelled diagram of a human cell. Write in detail about the structure and functions of Mitochondria.
2. What are the different types of Blood group systems? Write in detail about any two Blood group systems.
3. Draw a neat labelled diagram of Nephron. Explain in detail the formation of Urine.

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

1. Define Immunity and explain humoral immunity.
2. Explain briefly anatomy of Heart with a suitable diagram.
3. Explain Lung volumes and capacities with its normal value.
4. Write note on Formation and storage of bile.
5. Describe the Digestion and absorption of food in small intestine.
6. Draw a neat labelled diagram of structure of skin.
7. Explain the functions of Thyroid gland.
8. Explain the phases of menstrual cycle.

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

1. Cell membrane.
2. Squamous epithelium.
3. Name the different types of muscle and write one characteristic feature for each.
4. Different types of bone with example for each.
5. What are the layers seen in walls of arteries and veins?
6. Name the parts of the Respiratory tract.
7. Tests for pregnancy.
8. Draw a neat labelled diagram of Neuron.
9. List out any four properties of synapse.
10. Gene.

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

[AHS 0424]

APRIL 2024

Sub. Code: 5001

**B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR (Regulations 2010-2011 & 2018-2019 onwards)
PAPER I – HUMAN BIOLOGY
Q. P. Code: 725001**

Time: Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the types of Tissues and their functions.
2. Draw and label the parts of Hepatobiliary system and list the functions of Liver.
3. Name the parts of Pituitary Gland and explain its functions.

II. Write notes on:

(8 x 5 = 40)

1. Physiology of digestion in Stomach.
2. Types of muscles and their features.
3. Structure of Nephron.
4. Types and functions of White Blood Cells.
5. Anatomy of Spleen and its functions.
6. Adrenal gland – Parts and its functions.
7. Functions of Skin.
8. Mendel's theory of Inheritance.

III. Short answers on:

(10 x 3 = 30)

1. Lysosomes.
2. Composition of Saliva.
3. Accessory muscles of Respiration.
4. Electrocardiogram (ECG).
5. Blood pressure and types.
6. Parts of Male genital system.
7. Anticoagulants and its uses.
8. Polycythemia and types.
9. Antidiuretic Hormone.
10. Blood brain barrier.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 5001

B.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR (Regulations 2010-2011 & 2018-2019 onwards)
PAPER I – HUMAN BIOLOGY
Q. P. Code: 725001

Time: Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Name the phases of Menstrual cycle and write in detail about Menstrual cycle.
2. Draw a neat labelled diagram of the Respiratory tract. Explain physiology of Respiration.
3. Write in detail about the structure and functions of Nephron with a neatly labelled diagram.

II. Write Notes on:

(8 x 5 = 40)

1. Functions of Blood.
2. Blood grouping and cross matching.
3. Function of Liver.
4. Write briefly about Heart chambers and valves.
5. Spermatogenesis.
6. Diabetes mellitus.
7. Cell membrane.
8. Thyroid gland.

III. Short Answers on:

(10 x 3 = 30)

1. Chromosome.
2. Glandular epithelium.
3. Different types of joints with example for each.
4. Ovulation.
5. Functions of Salivary gland.
6. Jaundice.
7. Neat labelled diagram of Nephron.
8. Layers of Meninges.
9. Function of Prostate gland.
10. Structure of Sperm.
