

Seat No. _____

Enrolment No. _____

THE CHARUTAR VIDYA MANDAL (CVM) UNIVERSITY

BACHELOR OF PHYSIOTHERAPY – 1ST SEMESTER

APR-2026 EXAMINATION

Course Name: Human Physiology-1

Course Code: BPT-102

Total Printed Page: 03

Date: 08/04/2026

Time: 10:00 AM – 01:00PM

Maximum Marks: 80

Instructions:

1. There are total 4 Questions given in this paper.
2. All the answer should be written in the answer book.
3. Marks on the right side suggest the total marks of that question.
4. Draw the figure where necessary.

Q.1 Multiple Choice Questions: (MCQs)

(15 × 1 = 15)

1. The pacemaker of the heart is:

- a) AV node
- b) Purkinje fibers
- c) Bundle of His
- d) SA node

2. Oxygen is mainly transported in blood as:

- a) Dissolved oxygen
- b) Bicarbonate
- c) Carbamino compounds
- d) Oxyhemoglobin

3. Structural and Functional unit of skeletal muscle is:

- a) Myofibril
- b) Sarcomere
- c) Actin
- d) Myosin

4. Peristalsis is:

- a) Digestion
- b) Absorption
- c) Movement of food
- d) Secretion

5. The P wave represents:

- a) Ventricular depolarization
- b) Atrial repolarization
- c) Atrial depolarization
- d) Ventricular repolarization

6. Thalassemia is a disorder of:

- a) WBC
- b) Platelets
- c) Hemoglobin
- d) Plasma

7. The respiratory center is located in:

- a) Cerebrum
- b) Cerebellum
- c) Hypothalamus
- d) Medulla oblongata

8. Resting membrane potential of a neuron is approximately:

- a) +70 mV
- b) -70 mV
- c) +90 mV
- d) +30 mV

9. Lysosomes are known as:

- a) Powerhouse
- b) Control center
- c) Suicide bags
- d) Transport system

10. Hormones are secreted by:

- a) Exocrine glands
- b) Endocrine glands
- c) Sweat glands
- d) Sebaceous glands

11. Universal donor blood group is:

- a) A
- b) O
- c) B
- d) AB

12. Diabetes mellitus is due to:

- a) Increased insulin
- b) Decreased insulin
- c) Increased glucagon
- d) Increased cortisol

13. The cell membrane is mainly composed of:

- a) Proteins only
- b) Lipids only
- c) Lipid bilayer with proteins
- d) Carbohydrates only

14. Erythropoiesis is stimulated by:

- a) Insulin
- b) Erythropoietin
- c) Thyroxin
- d) Cortisol

15. Fainting (syncope) is commonly due to:

- a) Increased BP
- b) Reduced cerebral blood flow
- c) Increased CO
- d) Increased oxygen

Q. 2. Short answers (5 out of 7) (Answer not exceeding 50 words) (5 × 2 = 10)

- a. Name any two Blood indices.
- b. Write the Normal Value of Hemoglobin and Plasma Proteins.
- c. Define the Action potential.
- d. Write two functions of neuron.
- e. Name any four clotting factors?
- f. Define & Normal value of Arterial Blood Pressures.
- g. Write about the composition of Bile juice.

Q. 3. Short Notes (5 out of 6) (Answer not exceeding 150 words) (5 × 5 = 25)

- a. Classify white blood cells and explain their functions.
- b. Explain the Cell mediated immunity.
- c. Describe skeletal muscle Contraction.
- d. Analyze shock and evaluate its types and causes.
- e. Describe the transport of respiratory gases.
- f. Enlist all hormones of anterior pituitary gland and Any 3 function of Thyroid Gland.

Q. 4. Essay (3 out of 4) (3 × 10 = 30)

- a. Describe the phases of the cardiac cycle with pressure and volume changes and heart sounds with appropriate diagram.
- b. Describe the composition, functions, and the neural and hormonal Regulation of Gastric Secretion, including the different phases of secretion.
- c. Describe RBCs in detail – count, variations, erythropoiesis, hemoglobin, and applied aspects of anemia.
- d. Define a cell. Describe and illustrate the structure of a typical cell with a neat labeled diagram. Analyze the functions of any four cell organelles.