

**UKA TARSADIA UNIVERSITY**

B.Pharm. (1st Semester)

**Subject :**030020106 - Human Anatomy Physiology and Health Education I

**Duration: 3 Hours**

**Max. Marks: 70.**

**Instructions:**

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

**Section-1**

**Q-1 (A) Do as directed.**

**[07]**

- I) Which is the largest bone of the body?
- II) What is normal range of erythrocytes?
- III) Which organelle is known as "power house of cell"?
- IV) What do you mean by endocytosis?
- V) Define transcription.
- VI) Define serum and plasma.
- VII) Explain term myopathy.

**Q-1 (B) Answer the following in brief. (Any 4)**

**[08]**

- I) Define and classify tissues.
- II) Write note on blood groups.
- III) Enlist different types of anemia.
- IV) Differentiate passive and active diffusion.
- V) Write function of osteoclast and osteoblast.
- VI) Draw labeled diagram of nervous tissue.

**Q-2 Answer the following.**

**[10]**

- A) Describe physiology of muscle contraction.

OR

- A) Describe structures and functions of synovial joints.  
B) Classify Leukocyte. Describe functions of leukocytes in detail.

OR

- B) Describe life cycle of erythrocytes.

**Q-3 Answer the following in detail. (Any 2)**

**[10]**

- A) Define Homeostasis. Explain the negative feedback mechanism with example.
- B) Draw labeled diagram of cell. Describe composition and functions of plasma membrane.
- C) What is hemostasis? Explain the mechanism of blood clotting.

**Section-2**

**Q-4 (A) Do as directed.**

**[07]**

- I) Which valve is located between left atrium and left ventricle?
- II) Write function of parietal cells.
- III) Explain locations of coronary artery.
- IV) Write functions of B-Lymphocytes.
- V) Enlist phases of digestion.
- VI) Define allergy.
- VII) Name artery which supply blood to heart.

**Q-4 (B) Answer the following in brief. (Any 4)**

**[08]**

- I) Write functions of spleen.
- II) Name enzymes secreted by pancreas.
- III) Explain term arrhythmia.
- IV) List accessory organs of digestive system.
- V) Enlist the layers of heart wall.
- VI) Explain Electrocardiogram (ECG).

**Q-5 Answer the following.**

**[10]**

- A) Describe regulation of gastric secretion and motility.

OR

- A) Describe the composition, function and circulation of Lymph.
- B) Draw labeled diagram of heart and explain conduction of blood in heart.

OR

- B) Define systolic and diastolic blood pressure. Explain regulation of blood pressure.

**Q-6 Answer the following in detail. (Any 2)**

**[10]**

- A) Draw labeled diagram of digestive system. Give composition of gastric juice.
- B) What is cardiac output? Describe the factors affecting cardiac output.
- C) Define immunity. Explain innate and acquired immunity.