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SARDAR PATEL UNIVERSITY

Bachelor of Science (Semester 5) Examination Oct- 2025

Subject Code: US05CBCH54 Biochemistry

Subject Title: Human Physiology

Date: 08/10/2025, Wednesday

Time: 10:00 am to 01:00pm

Total Marks: 70

Note:

1. Figures to the right indicate full marks of the questions.
2. Draw figures when necessary.

Q-1 MULTIPLE CHOICE QUESTIONS

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- The _____ system removes waste products from the body.
a) Digestive
b) Reproductive
c) Nervous
d) All of these
- Fats are stored in human body as _____.
a) bones
b) adipose tissue
c) cartilage
d) cuboidal epithelium
- What is the result of a failure in homeostasis?
a) Disease
b) Evolution
c) You cannot deviate from homeostasis because the body will always adjust
d) Adaptation to environment
- The primary gas exchange in the lungs occurs in _____.
a) Alveoli
b) Bronchioles
c) Alveolar ducts
d) Bronchi
- _____ is a layer that covers the lung
a) Pericardium
b) Fibrous pericardium
c) Pleura
d) Heart
- Which of the following indicates atrial depolarization in an electrocardiograms:
a) T wave
b) QRS complex
c) QT interval
d) P wave
- _____ are the hydrolytic enzymes which can act in low pH.
a) Peroxidases
b) Proteases
c) Amylases
d) None of the above
- Which of the following portion of the stomach opens into the small intestine?
a) Pyloric portion
b) Cardiac portion
c) Body portion
d) none of the above
- The basic functional unit of the kidney is known as _____.
a) Nephron
b) Glomerulus
c) Bowmanns capsule
d) Collecting duct
- _____ is the structure which encloses glomerulus?
a) Medullary pyramids
b) Renal capsule
c) Cortex
d) Bowman's capsule

[P.T.O.]

(1)

Q-2 Answer the following questions in short (Attempt any Ten)

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1. Explain: Sign and symptoms in brief.
2. Write a brief note on epithelial tissue.
3. What do you mean by Feedback system and stimulus?
4. Define: Hypoxia and enlist types of hypoxia.
5. What do you mean by Internal and External respiration?
6. Name the components of upper and lower respiratory system.
7. Enlist major and accessory organs of digestive system.
8. Explain: Why heart is known as double pump system?
9. Write functions of AV valves.
10. Write functions of kidney.
11. Explain: GFR.
12. Write functional classification of neurons.



Q-3 Answer the following:

- A) Write a note on positive feedback system. 05
B) Write a note on components and functions of 11 systems of the human body. 05

OR

- A) Discuss in detail: common feedback system. 05
B) Give an account on structural organization of human body in detail. 05

Q-4 Answer the following:

- A) Write a note on transport of O₂. 05
B) Enlist and explain all the factors affecting the affinity of Hb for oxygen. 05

OR

- A) Give an account on components and functions of upper and lower respiratory system. 05
B) Describe in detail: Phases of respiration. 05

Q-5 Answer the following:

- A) Describe in detail: layers of the heart wall. 05
B) Explain in detail: Digestion of protein. 05

OR

- A) Write a note on four chambers of the heart. 05
B) Explain in detail: Absorption of carbohydrate. 05

Q-6 Answer the following:

- A) Give an account on organization of nervous system. 05
B) Describe in detail: Glomerular Filtration. 05

OR

- A) Write a note on chemical signal transmission at synapse. 05
B) Explain in detail: structure of nephron. 05

—X—

(2)