

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PHARM.D YEAR-1 EXAMINATION – SUMMER - 2025**

**Subject Code: 818801****Date: 29-05-2025****Subject Name: Human Anatomy and Physiology****Time: 10 : 30 AM TO 1 : 30 PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|---|-----------|
| <b>Q.1</b>  | (a) What is cardiac cycle? Describe various events of cardiac cycle.  | <b>06</b> |
|             | (b) Write a note on Renin- Angiotensin-aldosterone system   | <b>04</b> |
|             | (c) Explain the gross anatomy of heart.   | <b>04</b> |
| <b>Q.2</b>  | (a) Draw neat and clean labeled diagram of female reproductive system. Explain physiology of menstruation.    | <b>06</b> |
|             | (b) Write about the physiology of skeletal muscle contraction. Write a note on neuromuscular junction.        | <b>04</b> |
|             | (c) Explain the steps involved in the process of spermatogenesis.   | <b>04</b> |
| <b>Q.3</b>  | (a) Write in detail mechanism of clotting. Enlist clotting factors.   | <b>06</b> |
|             | (b) Describe the process of Erythropoiesis and factors required or influencing erythropoiesis.                | <b>04</b> |
|             | (c) Describe the ABO system of blood grouping.  | <b>04</b> |
| <b>Q.4</b>  | (a) Draw a labeled diagram of human digestive system. Discuss the function of liver.                          | <b>06</b> |
|             | (b) Write composition and functions of gastric juice.   | <b>04</b> |
|             | (c) Describe the anatomy and function of spleen.  | <b>04</b> |
| <b>Q.5</b>  | (a) Write a neat, labeled diagram of eye and explain the physiology of vision.                                | <b>06</b> |
|             | (b) What is respiration. Explain in detail internal respiration.  | <b>04</b> |
|             | (c) Name salivary glands and discuss the composition and functions of saliva.                                 | <b>04</b> |
| <b>Q. 6</b> | (a) Write the synthesis, storage, release and functions of thyroid hormones.                                  | <b>06</b> |
|             | (b) What is synovial joint? Explain its types with examples.  | <b>04</b> |
|             | (c) Write a short note on artificial respiration.   | <b>04</b> |
| <b>Q.7</b>  | (a) Define Sympathetic and Parasympathetic system and discuss their anatomical and physiological differences. | <b>06</b> |
|             | (b) What are the functions of cerebellum?   | <b>04</b> |
|             | (c) Write the effects of exercise on respiration.   | <b>04</b> |

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