

GUJARAT TECHNOLOGICAL UNIVERSITY
B. PHARM SEMESTER-II EXAMINATION –WINTER-2024

Subject Code: BP201TP**Date: 20/12/2024****Subject Name: Human Anatomy and Physiology II****Time: 10:30AM TO 01:30PM****Total Marks: 80****Instructions:**

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

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| Q.1 | (a) Define tidal volume, residual volume, expiratory reserve volume, inspiratory capacity and vital capacity. | 06 |
| | (b) Draw the neat clean diagram of structure of nephrons and associated blood vessels. | 05 |
| | (c) Describe the neural and hormonal mechanisms regulate the gastric phase of digestion. | 05 |
| Q.2 | (a) Describe the regulation of secretion and actions of thyroid hormones. | 06 |
| | (b) Define graded potentials and action potentials. List the sequence of events that generate a nerve action potential. | 05 |
| | (c) Describe the location and functions of the ductus epididymis, ductus (vas) deferens, and ejaculatory duct. | 05 |
| Q.3 | (a) Write differences between pulmonary ventilation, external respiration, and internal respiration. | 06 |
| | (b) Describe the digestion and absorption lipid in the Small Intestine | 05 |
| | (c) Enlist the hormone-secreting cells within the pancreatic islets List the hormones they produce, along with the functions of each hormone. | 05 |
| Q.4 | (a) Briefly outline the major events of each phase of female reproductive cycle. | 06 |
| | (b) Describe the functional components of a reflex arc. | 05 |
| | (c) Describe the principal events of spermatogenesis. | 05 |
| Q.5 | (a) Explain the formation, circulation and functions of cerebrospinal fluid | 06 |
| | (b) Classify the hormones based on their solubility and write their examples. | 05 |
| | (c) Discuss the role of the kidneys in regulating blood volume and acid-base balance. | 05 |
| Q. 6 | (a) Explain the anatomy of stomach. | 06 |
| | (b) Describe the microscopic structure of an ovary. | 05 |
| | (c) Enlist the functions of the reticular formation, cerebellum and hypothalamus. | 05 |
| Q.7 | (a) Enlist the hormones produced by adrenal glands with their functions | 06 |
| | (b) Explain the regulation of respiration by respiratory center. | 05 |
| | (c) Describe the parts of a neuron and the functions of each. | 05 |
