



Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Final Examination Summer 2026

Course Code: 0512- 1305

Level and Term: L-1, T-3

Time: 02 Hours

Section: 253 (A+B)

Course Title: Animal and Human Physiology

Course Teacher Initials: DZI

Total Marks: 40

Answer the following questions:

- | | | Marks |
|---|---|-------|
| 1 | (a) Define Digestion. Illustrate the processes of the digestive system. [CLO1, PLO1, C1] | 2.0 |
| | (b) Explain the swallowing mechanism of the digestive system. [CLO3, PLO1, C1] | 3.0 |
| | (c) How do hormone regulators control the digestive process? [CLO1, PLO1, C1] | 3.0 |
| 2 | (a) Define the reproductive system. State the functions of the male reproductive organs. [CLO2, PLO1, C1] | 2.0 |
| | (b) State the essential steps of spermatogenesis. [CLO1, PLO1, C1] | 3.0 |
| | (c) Explain the structure of the ovary and the ovulation process. [CLO3, PLO1, C2] | 3.0 |
| 3 | (a) Show the major events in the female reproductive cycle. [CLO1, PLO1, C2] | 3.0 |
| | (b) What is gonadotropic hormone? Outline the functions of Follicle-stimulating hormone (FSH)? [CLO2, PLO1, C2] | 2.5 |
| | (c) Elaborate the functions of testosterone. Explain the disorder due to low and high production of the testosterone hormone [CLO2, PLO1, C2] | 2.5 |
| 4 | (a) Explain the term hormone. Discuss the functions of the endocrine system. [CLO1, PLO1, C3] | 2.0 |
| | (b) Write the mechanisms of the control system of hormonal secretions. [CLO1, PLO1, C3] | 3.0 |
| | (c) Compare between exocrine and endocrine glands. [CLO1, PLO1, C4] | 3.0 |
| 5 | (a) List the functions of the human skin. [CLO2, PLO1, C4] | 2.5 |
| | (b) Write about the electrical synapse and the features of electrical synapses. [CLO1, PLO1, C5] | 3.0 |
| | (c) Justify why action potentials travel faster on myelinated axons than on unmyelinated ones? [CLO3, PLO1, C6] | 2.5 |