



Question Bank – Unit I (HAP-I)

Introduction to Human Body: definition, scope, levels of organization, body systems, basic life processes, homeostasis, anatomical terminology.

Cellular Level: structure & functions, transport across membrane, cell division, cell junctions, communication & signaling (contact-dependent, paracrine, synaptic, endocrine).

Tissue Level: classification, structure, location & functions of epithelial, muscular, nervous, connective tissues.

Part A – 2 Marks

1. Define Anatomy and Physiology. GPAT: 2015, 2020; NIPER: 2016
2. List any four levels of structural organization in the human body. GPAT: 2017, 2022; TNMGRMU: 2018
3. Name two basic life processes essential for survival. GPAT: 2016; NIPER: 2019
4. Define the term homeostasis. GPAT: 2018, 2021; NIPER: 2020, 2023
5. Give two examples of positive and negative feedback. GPAT: 2019, 2024; TNMGRMU: 2022
6. What is meant by anatomical position? GPAT: 2014; NIPER: 2017
7. Define cell junctions. Name two types. GPAT: 2020; NIPER: 2019
8. Name any two organelles involved in protein synthesis. TNMGRMU: 2016, 2021; NIPER: 2018
9. Define osmosis. GPAT: 2017; NIPER: 2021
10. Differentiate between passive and active transport. GPAT: 2019, 2022; NIPER: 2020
11. Write any two functions of the plasma membrane. TNMGRMU: 2015; NIPER: 2016
12. Define mitosis. GPAT: 2017, 2020; TNMGRMU: 2019
13. Define meiosis. GPAT: 2018; NIPER: 2022
14. What is intracellular signaling? GPAT: 2020, 2023; NIPER: 2021
15. Name the four types of intracellular signaling. GPAT: 2021; NIPER: 2020
16. Write the function of tight junctions. GPAT: 2019; NIPER: 2018
17. Name two types of epithelial tissue. GPAT: 2016, 2024; NIPER: 2017
18. Give one function of connective tissue. GPAT: 2015, 2022; NIPER: 2019

19. Define neuron. GPAT: 2015, 2022; NIPER: 2019

20. Write one function of muscular tissue. TNMGRMU: 2016, 2024; NIPER: 2017

Part B – 5 Marks

1. Explain the levels of structural organization in the human body. GPAT: 2016, 2021; NIPER: 2018

2. Describe the basic life processes. GPAT: 2015; NIPER: 2017

3. Explain homeostatic regulation with suitable examples. GPAT: 2018, 2022; NIPER: 2020, 2024

4. Describe the structure and functions of a typical cell. TNMGRMU: 2019, 2023; NIPER: 2019

5. Explain the different types of transport mechanisms across the cell membrane. GPAT: 2020, 2022; NIPER: 2021

6. Write short notes on cell division (mitosis and meiosis). GPAT: 2017, 2020; NIPER: 2018, 2022

7. Explain the types of cell junctions with functions. GPAT: 2019; NIPER: 2020

8. Write the general principles of cell communication and signaling pathways. GPAT: 2021, 2023; TNMGRMU: 2019, 2024

9. Classify epithelial tissues with examples and functions. GPAT: 2016, 2024; NIPER: 2017

10. Describe the types of connective tissue with location and function. GPAT: 2019, 2023; NIPER: 2019

Part C – 10 Marks

1. Discuss in detail the concept of homeostasis. Add a note on feedback mechanisms. GPAT: 2018, 2021; NIPER: 2020, 2023

2. Describe the structure of cell membrane and explain different transport processes across it. GPAT: 2019, 2022; NIPER: 2021

3. Write an essay on cell communication and intracellular signaling pathways. GPAT: 2020, 2023; NIPER: 2019, 2024

4. Classify and explain the different types of tissues in the human body with examples. GPAT: 2016, 2024; NIPER: 2017, 2022

5. Describe in detail cell division processes (mitosis and meiosis) and their significance. GPAT: 2017, 2020; TNMGRMU: 2018