

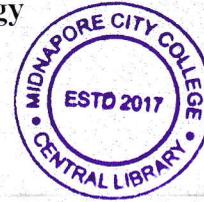
**The West Bengal University of Health Sciences**  
**M.Sc. in Medical Microbiology Part-I November, 2023 Examination**

Subject : Basics of Physiology

Time : 3 hrs.

Full Marks : 100

*Attempt all questions*



- 1) Write the structure and function of mitochondria and lysosome. 5+5
- 2) Write the difference between Red and White muscle fibre. Discuss the mechanism of contraction of skeletal muscle. 4+6
- 3) Name the electrical properties of heart with a neat labelled diagram, explain the conduction system of the heart. What is Einthoven's triangle? 3+4+3
- 4) What is Surfactant? Write its role in breathing mechanism. Explain how the chemical regulation of respiration takes place. 2+4+4
- 5) What is peristalsis? Write the mechanism of HCl secretion. Mention the stimulator and inhibitor of HCl secretion. 2+4+4
- 6) What do you mean by Micturation reflex? Explain the mechanism of concentration of urine. 4+6
- 7) With a suitable example, explain how the PNS and SNS interact to maintain a homeostatic state of an organ. What do you mean by reflex arc? 6+4
- 8) What is colour vision? How does phototransduction occur in the rod cells? 2+8
- 9) Write the example of neurohormone and mention why it is called so? Write the mechanism of action of peptide hormones. 4+6
- 10) Draw the structure of Adrenal cortex and mention the name of hormones released from each layer. What are Catecholamines? Write the biosynthesis pathway of Dopamine. 4+2+4