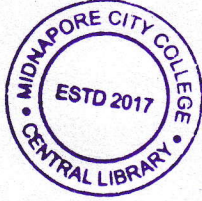


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**The West Bengal University of Health Sciences
M.Sc. in Medical Microbiology Part-I February-March, 2023
Examination**



Time : 3 hrs.

Subject : Basics of Physiology

Full Marks : 100

Attempt all questions

1. Compare between ECF and ICF. Discuss the secondary active transport with examples. Write a brief note on facilitated diffusion. 2+4+4
2. Mention the components of neuromuscular junction with illustration. Describe the saltatory conduction. 6+4
3. Describe the cellular developmental stages in erythropoiesis. Classify anemia. 7+3
4. Describe the electrical conduction system of heart. Write a short note on ECG. 6+4
5. What are cardiac output and cardiac index? Describe the intrinsic autoregulation of cardiac output by Frank-Starling mechanism. Mention the significance of Korotkoff sounds. (2+2)+4+2
6. What is Vital capacity? State the physiological significance of functional residual capacity (FRC). Discuss the Chloride shift mechanism of CO₂ gas transport. 2+2+6
7. Write the compare between peristalsis and segmentation. Name the cells and their secretion in gastric gland. Mention the regulation of gastric secretion. 2+5+3
8. What do you mean by menopause? What is the role of Prolactin in menopause? Discuss the stages of ovarian cycle and its hormonal regulation. 2+2+6
9. Mention the primary taste modalities. What is Ear Ossicles? Compare between structural and functional aspects of Rod and Cone cells. 2+3+5
10. Describe the somatic motor reflex. What is circadian rhythm? Discuss the importance of Renin angiotensin system. 4+2+4