

093/20

**The West Bengal University of Health Sciences**  
**M.D. (Physiology) March-April 2020 Examination**

Paper: III

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Explain the molecular basis of diabetic microvascular complications . 10
2. Describe the nuclei, connectios and functions of the Basal Ganglia . Add a note on Parkinsonism with physiological principles of treatment .  
7 + 3
3. Elaborate on Autonomic function tests. What happens in autonomic insufficiency ?  
8 + 2
4. Explain in brief “skin as a neuroendocrine organ”.  
10
5. Write a note on phototransduction and processing of visual information in the retina .  
10
6. Describe in detail signal transduction pathways. Give examples of GPCR drug targets .  
8 + 2
7. Briefly describe the disorders of sex differentiation .  
10
8. Give an account of the neurological changes that occur following hemisection of the spinal cord. Why urinary catheterization is required in spinal cord injuries ?  
10
9. List and explain theories of hearing . What is impedance matching ?  
6 + 4
10. Discuss the role of vestibular system in maintenance of posture and equilibrium .  
10