



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours Part-III Examination, 2022

**PHYSIOLOGY**

**PAPER-VII**

Time Allotted: 4 Hours

Full Marks: 100

*The figures in the margin indicate full marks.*

**GROUP-A**

**Answer Question No. 1 and any two from the following**

1. Attempt any *two* questions from the following: 5×2 = 10
  - (a) Describe the structure of the taste buds.
  - (b) Write short notes on Color Blindness.
  - (c) Describe the structure of the Sweat glands.
  - (d) Write short note on the pathophysiology of fever.
  
2. Describe the mechanism of transduction of stimuli from sensory receptors. 10+5+5=20  
Describe the pathway of Hearing. What is astigmatism?
  
3. Describe in brief the mechanism of Accomodation. Discuss the physiology of hyperthermia. Discuss the process of regulation of body temperature. 5+5+10=20
  
4. Discuss the role of the pituitary gland in regulation of endocrine function. 10+10=20  
Describe the chemistry, secretion and functions of the gastrointestinal hormones.
  
5. Describe the JAK-STAT Pathway with appropriate diagram. Give the histological details of the retina. Write short notes on hyper-insulinism. 10+5+5=20

**GROUP-B**

**Answer Question No. 6 and any two from the following**

6. Attempt any *two* from the following: 5×2 = 10
  - (a) What do you mean by isotonic and isometric exercise?
  - (b) Describe the Concept and process of Dopping.
  - (c) Give brief idea about the mechanism of action of Phenoxybenzamine.
  - (d) Write down the basic principles of ergonomics.

7. What are the applications of ergonomics in industry? Write down the applications of ergonomics in physiology. Describe the concept and the factors affecting athletic performance. 5+5+10=20
8. Describe the mechanism of drug action on the Cardiovascular System. What are the effects of exercise on Immune defenses? What do you mean by aerobic and anaerobic capacity? 10+5+(2 $\frac{1}{2}$ ×2)=20
9. Describe the role of the pituitary gland in regulation of endocrine functions. Describe the biosynthesis and catabolism of adrenomedullary hormones. 20
10. Describe the chemical and electrical changes in the retina on exposure to light. Discuss the role of parathormone and calcitonin in calcium and phosphorous metabolism. 10+10 = 20

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