



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 3rd Semester Examination, 2022

CC7-PHYSIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Answer any **five** questions from the following: 1×5 = 5
- (a) Define a Reflex Arc.
 - (b) Define what is a Clonus.
 - (c) Define Kinesthetic Sensation. Mention its types.
 - (d) Name the pathways of pain sensation in the human body.
 - (e) Write down two functions of the Red Nucleus.
 - (f) What is astereognosis?
 - (g) Mention the disorders of the hypothalamus.
 - (h) Name the neurotransmitters responsible for / associated with the interneuronal activities in the cerebellum.
 - (i) Mention the functions of the Basal Ganglia.
 - (j) What are Cholinergic Receptors? Classify them with examples.

GROUP-B

Answer any three questions from the following 5×3 = 15

- 2. Write short note on the histology of the Cerebellar Cortex with diagram. 5
- 3. What is Parkinson's disease? Mention the pathogenesis, causes and clinical features of the disease. 1+4
- 4. Discuss the role of hypothalamus in regulation of water balance in the body. 5
- 5. Write down any five properties of Reflexes. 5
- 6. What is clasp-knife reflex? Write short notes on the withdrawal response. 2+3
- 7. What are Static Reflexes? Classify them. What is the papez circuit of Emotions? 1+1+3

GROUP-C

Answer any *two* questions from the following

10×2 = 20

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| 8. | Describe the physiology of motivation. Discuss the mechanism of control of the sleep-wake cycle. Define REM and Non-REM sleep. | 5+3+2 |
| 9. | What are proprioceptors? Discuss the physiological basis of Memory. Discuss the stages of development of Speech. | 2+3+5 |
| 10. | Describe the structure of the blood-brain barrier and write down its functions. What is Rage? Discuss the neural basis of Rage. | 5+5 |
| 11. | Describe the histological structure of the Neocortex. Discuss the gate control hypothesis of pain suppression with suitable flow diagram. | 5+5 |

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