

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answers may be given either in **English** or in **Bengali** but all answers must be in one and same language.

GROUP - A

Answer any six questions :-

1. (a) Discuss the origin, course, termination, functions of tract of Goll & Burdach. 10
(b) Discuss the molecular basis of synaptic transmission. 10
2. (a) Discuss the excitation-contraction coupling of skeletal muscle. 10
(b) Draw, label, discuss the histological structure and functions of cerebellum. 10
3. (a) Discuss the different types of GABA receptors and their mode of actions. 10
(b) Discuss the effects of lesion of upper and lower motor neurons. 10
4. (a) Discuss the physiological basis of REM sleep. 10
(b) Discuss with diagram the origin, course, termination of auditory pathway. 10
5. (a) Draw, label and discuss the visual pathway. 10
(b) Discuss the neurophysiology of learning and memory. 10
6. (a) Draw, label and discuss the nervous pathway of taste sensation. 10
(b) Draw, label and discuss the functions of vestibular apparatus and cochlea. 10
7. (a) Discuss the body temperature regulation mechanism in human. 10
(b) Discuss the physiological changes that occur in humans in extreme hot and cold climate. 10
8. Short notes (any four) :-
 - (a) Webner Flechner Law
 - (b) Cerebro spinal fluid
 - (c) Electro retinogram (ERG)
 - (d) Argyll-Robertson Pupil
 - (e) Triple response
 - (f) Parkinson's disease. 5 x 4

P.T.O.

-: 2 :-

GROUP - BAnswer any four questions :-

9. (a) Discuss the synthesis, storage and release of insulin from pancreas. 10
(b) Discuss the metabolic basis of diabetes mellitus. 10
10. (a) Discuss the structure and functions of parathormone. 10
(b) Compare the structure-functions of estrogen and progesterone. 10
11. (a) Compare the active principles, functions of adrenal cortex and adrenal medulla. 10
(b) Discuss the role of hormones in breast development and in lactation. 10
12. (a) Discuss the role of hormones in pregnancy. 10
(b) Discuss the peculiarities of foetal circulation. 10
13. (a) Define static and dynamic work and mention the muscles involved in it. 10
(b) Discuss the detail the Harvard step test to determine PFI. 10
14. (a) Discuss the major steps to control air, water, sound pollution. 10
(b) Discuss the major steps taken by the Govt. of India to control goitre. 10

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