

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 the same language.

Group A

Answer any six questions:

1. a) Explain with physiological reasons why we sweat during hot humid conditions?
b) What are the physiological systems involved for sweating?
c) What are the different glands of the skin?
10+5+5
2. a) Briefly mention the major functions of Human Hypothalamus.
b) What major physiological roles are performed by cranial nerves?
c) Briefly describe the anatomical divisions of human cerebellum?
9+6+5
3. a) What is the Oxygen Debt? What is the metabolic reason of oxygen debt?
b) What is Oxygen deficit?
c) What do you mean by static work? What is Dynamic Work? What different muscles are involved in these two types?
(2+3)+2+(4+4+5)
4. a) What is short sightedness? Explain with a diagram. What is its Physiological/clinical term? How it is rectified?
b) Which part of eye is affected in astigmatism? How it is rectified?
c) What are major components of Human Taste Buds? Draw a labeled schematic diagram of taste bud.
(2+2+2+2)+(2+2)+(3+5)
5. a) What are major objectives of universal immunization programme (UIP) adopted by Government of India? Mention the schedules and vaccines currently being practiced in this UIP?
b) Mention four major objectives why Indian citizens should have safe drinking water. Name the ministry who governs and monitors the availability of safe drinking water for citizens.
c) What is the full form of ORS and what are the components of ORS?
(5+5)+(5+1)+4
6. a) What do you mean by second messenger? What is Master Gland? State two reasons why it is called so?
b) Mention the hormones secreted by Pancreas and their source cells. State their functions.
c) Mention the hormones secreted by adrenal cortex and medulla.
(2+2+3)+(2+2+5)+4
7. a) Draw a labeled diagram of histological section of human testis.
b) Mention the major indications of ovulation? What the major factors responsible for Ovulation? Mention major phases of menstrual cycle? Explain what is called fertile period in ovarian cycle?
6+ (3+3+4+4)
8. a) What is Sarcolemma? What is its role?
b) What is synaptic delay? Mention the major steps of synaptic transmission with suitable illustration.
c) What is Aphasia? What major areas of human brain are involved in aphasia?
(2+3)+ (2+6)+(2+5)

P.T.O.

Group B

Answer any four questions:

9. a) Mention some mechanisms of body cooling.
b) What are the major functions of Skin?
c) What do you mean by heat stroke? 8+8+4
10. a) Draw a labeled diagram of reflex arc.
b) Mention the components of inner ear involved in hearing and balance maintenance. What is the role of middle ear in hearing? 8+(4+4)+4
11. Write short note on any four of the following: 4x5
a) Measures of noise pollution
b) Thyroid hormones
c) Sleep cycles
d) Saltatory Conduction
e) Sertoli Cells
12. a) What do you mean by explicit memory? Mention its physiological basis.
b) Mention what do you mean by Parasympathetic, sympathetic and ganglionic neurotransmission? (4+4)+(4+4+4)
13. a) What are different hormones that regulate the spermatogenesis? What are their sites of actions?
b) What are the physiological significances of studying nerve conduction velocity?
c) Mention the major steps of peripheral nerve regeneration? What is synaptic cleft? (3+3)+6+5+3
14. a) Identify some major indoor air pollutants? What are immediate health effects of indoor air pollution?
b) What are immediate measures of air pollution and water pollution? (4+4)+(6+6)
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