

Model Question Paper
Structure and Functions of Human Body Organ Systems (B) - Part II

10th Standard

Science

Reg.No. :

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I. Answer all the questions.

II. Use Blue pen only.

Time : 01:30:00 Hrs

Total Marks : 45

9 x 1 = 9

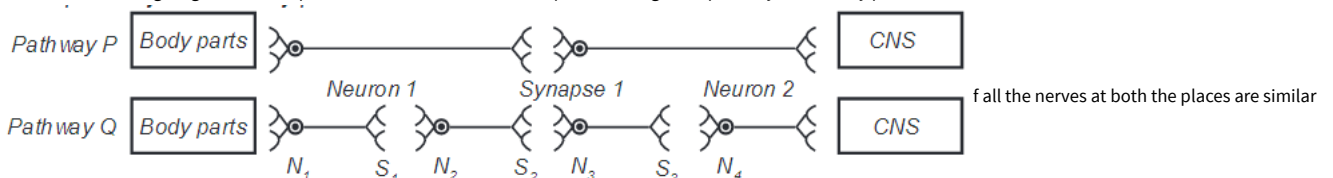
Section-A

- 1) Neurotransmitters are released at the synapse by _____.
(a) Tips of Dendrites (b) Synaptic Knobs (c) Organelles of Cyton (d) Myelin sheath of Axon
- 2) The endocrine gland related to the immune system is _____.
(a) Thyroid (b) Thymus (c) Adrenal (d) Pineal
- 3) The hormone administered by doctors to a pregnant woman to help in childbirth during the time of natural delivery is _____.
(a) Oestrogen (b) Progesterone (c) Insulin (d) Relaxin
- 4) The important event of meiosis is the crossing over. It occurs during _____.
(a) Leptotene (b) Pachytene (c) Diplotene (d) Zygotene
- 5) Reduction division is the process by which gametes are produced. The cells in which reduction division take place are _____.
(a) germinal epithelial cells (b) the sensory epithelial cells (c) cuboidal epithelial cells (d) columnar epithelial cells
- 6) In Amoeba, the cell division takes place -----
(a) involving changes in the chromatin reticulum (b) without involving changes in the chromatin reticulum (c) leading to reduction in the number of chromosomes
(d) without dividing the nucleus
- 7) Pick out the item which has sequential arrangement.
(a) zygotene -> Leptotene -> Pachytene -> Diplotene -> Diakinesis (b) Diakinesis -> zygotene -> Leptotene -> Pachytene -> Diplotene
(c) Leptotene -> zygotene -> Pachytene -> Diplotene -> Diakinesis
- 8) Polio is a viral disease and the affected child suffers from physical disability of limbs. Which system of the body is mostly affected due to this infection?
(a) Nervous system (b) Digestive system (c) Respiratory system (d) Excretory system
- 9) Blinking when a beam of light is suddenly focussed on the eyes and sudden withdrawal of hand upon touching a hot body are some of the examples of reflex actions. Which part of the central nervous system acts as the centre these actions?
(a) Forebrain (b) Spinal cord (c) Hindbrain (d) Synapse

Section-B

7 x 2 = 14

- 10) Name the two systems which help in the control and co-ordination of metabolic activities. Write any one difference between them.
- 11) Differentiate medullated neurons from non-medullated neurons. Where are they found in the nervous system?
- 12) Name the part of the brain which regulates heart beat and respiration. Where is it located in the brain?
- 13) What is corpora quadrigemina? Name the functions associated with it.
- 14) Observe the following diagrams that depict the transmission of nerve impulses through two pathways from body parts to CNS:



in thickness and structure, through which pathway will the transmission of an impulse (of same threshold) be faster and why?

- 15) Which gland is called the 'dual gland'? Why?
- 16) A 16 year old boy was brought to a doctor with a complaint of non-masculine features (lack of moustache / beard / gruff voice / broadening of shoulders etc). After keen examination, the doctor found that it was a hormonal disorder and the endocrine glands responsible were not functioning properly. Mention the glands and the hormone lacking in the boy.

Section-C

4 x 5 = 20

- 17) Describe the structure of a neuron with the help of a neat, labelled diagram,
- 18) List out the various parts of the human brain and write a note on their functions.
- 19) Name the endocrine glands and their location in the human body. Describe any two of them in detail.
- 20) Why is meiosis called reduction division? Describe the various stages with relevant diagrams. Add a note on significance of meiosis.
