SPECTRA PRACTICE PAPER 2024-25
SUBJECT- BIOLOGY
CLASS-XI

Time-3 hrs. **M.M-70**

General Instructions:

This paper is divided into 4 sections:
Section- A (Questions of this section carries 1 marks each.)
Section- B (Questions of this section carries 2 marks each.)
Section- C (Questions of this section carries 3 marks each.)
Section- D (Questions of this section carries 4 marks each.)

SECTION – A

Questions of this section carries 1 Marks each.

Q1. Which one is hotspot area of biodiversity in India?

a. Eastern ghat b. Western ghat. c. Aravali hills. d. Indo-Gangetic plane

Q2. Corpus callosum is the connection between

a. Cerebral hemisphere b. Cerebellum. c. Midbrain and hindbrain. d. Meninges and brain

Q3. Binomial nomenclature was given by

a. R. H. Whitaker b. Linnaeus c. Aristotle d. Theophrastus

Q4. The word phylum in Taxonomy was coined by.

a. John Ray b. Linnaeus. c. G. L. Grover. d. Aristotle

Q5. The five-kingdom classification was given by.

a. R. H. Whittaker. b. Linnaeus. c. Robert. d. Virchow

Q6. Bacteria do not have

a. Ribosome b. Protein synthesizing apparatus. c. Mitochondria. d. Cell wall

Q7. Which is the here diary material in bacteria

a. Nucleic acid b. Nucleic acid and cytoplasm c. Nucleic acid and histone d. None of these

Q8. Glucagon and insulin are

(a) Secreted by same cell and are same in function

(b) Secreted by different cell but are opposite in function

(c) Antagonistic secretion action and similar function

(d) Secreted from different cells but are opposite in function

Q9. Which of the following pairs is wrong.

(a) Uricotelic —-------- birds

(b) Ureotelic —-----insects

(c) Ammonotelic—--tadpole

(d) Ureotelic—---elephant

Q10. Which is absent in dueteromycetes

a. Spore b. Sexual reproduction c. Mycelium d. Asexual reproduction

Q11. Malpighian tubul3nis found in

a. Frog. b. Rabbit c. Cockroach d. Ascaris

Q12. Zygo morphic flowers are

a. Asymmetrical b. Monosymmetrical. c. Completely symmetrical d. None

.Q13. The cardiac impulse initiated and conducted further upto ventricle. The correct sequence of conduction of impulse is

(a) SA node, AV node, purkinje fiber, AV bundle of HIS

(b) SA node, purkinje fiber, AV node, AV bundle of HIS

(c) SA node, AV node, AV bundle of HIS , purkinje

(d) SA node, purkinje, AV bundle of HIS , AV node

Q14. ABA acts antagonistic to

a. Ethylene. b. Cytokinin. c. Gibberellic acid. d. IAA

Q15. Photosystem- I receive electron from.

a. Cytoplasm-b. b. Plastocyanin. c. Ferredoxin. d. FeS

For question numbers 16, to 19, two statements are given - one labelled Assertion (A) and the other labelled Reason(R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a) Both (A) and (R) are true and (R) is correct explanation of the assertion

b) both (A) and (R) are true but (R) is not the correct explanation of the assertion

c) (A) is true but (R) is false.

d) (A) is false but (R) is true.

Q16. Assertion: Sometimes food particles enter the trachea and cause choking.

Reason: Failure of epiglottis to cover the glottis causes choking.

Q17. Assertion : leucoplasts are plastids which store starch and fats.

Reason : Centriole in plants helps in cell plate formation.

Q18. Assertion: plants also have hormone called as phytohormone

Reason . They are similar to animal hormones.

Q 19. Assertion : Apical and intercalary meristem contribute to the growth in length, while the lateral meristem causes increase in girth in maize.

Reason: Apical and intercalary meristem always increases the height of plants.

SECTION - B

Questions of this section carries 2 Marks each.

Q20. Draw well labelled diagram of female reproductive System of frog.

Q21. Draw well labelled diagram of human kidney showing it's parts.

Q22. Draw only schematic representation of double blood circulation

Q23. Write about water canal system in sponges.

Q24. Draw a well labelled diagram of TS of monocot root or TS of dicot root.

Q25. Golgi apparatus and lysosome are associated with functions.

Q26. Which one of the plant growth regulators would you use? If you are asked to :

(a) induce routing in a twig

(b) quickly ripen of fruit

(c) induced immediate stomatal closure in

(d) Bolt a rosette plant.

SECTION - C

Questions of this section carries 3 Marks each.

Q27. Give schematic representation of glycolysis.

Q28... How the glucose homeostasis in blood is maintained, explain.

Q29. Differentiate between pectoral girdle and pelvic girdle

SECTION - D

Questions of this section carries 4 Marks each.

Q30. Study the passage given below. and answer the questions that follow:

First step in urine formation is the filtration of blood, which is carried out by the glomerulus is called glomerular filtration. On an average, 1100-1200 ml of blood is filtered by the kidneys per minute which constitute roughly 1/5th of the blood pumped out by each ventricle of the heart in a minute. The glomerular capillary blood pressure causes filtration of blood through 3layers, i.e., the endothelium of glomerular blood vessels, the epithelium of Bowman's capsule and a basement membrane between these two layers. The epithelial cells of Bowman's capsule called podocytes are arranged in an intricate manner so as to leave some minute spaces called filtration slits or slit pores. Blood is filtered so finely through these membranes, that almost all the constituents of the plasma except the proteins pass into the lumen of the Bowman's capsule. Therefore, it is considered as a process of ultrafiltration.

(a) What are the constituents of the filtering membrane?

(b) Write all the steps in urine production.

(c) Why is this process of filtration given the name of "ultrafiltration"?

(d) How much blood is filtered by kidneys per minute?

Q31. Draw the diagram of internal structure of heart

Q32.How would you explain cell cycle

Q33. Draw schematic representation of photo system in plants.

Q34. Write about all plant hormones.

Q35. Write hormones of pituitary gland and their functions.

Q36. a. How would explain aerobic respiration humans and plants.

b. What physiological circumstances lead to erythroblastosis foetalis?