

II - STD

QL

QUARTERLY EXAMINATION - 2024

11/11/16

Time : 3.00 Hrs

BIOLOGY (BIO - BOTANY)

Marks : 70

I **Note : i) Answer all the question. ii) Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer.**

8 X 1 = 8

1. Match the following

			A	B	C	D
A) Zygotene -	i) Terminalisation	a)	iii	iv	i	ii
B) Pachytene -	ii) Chiasmata	b)	iv	iii	ii	i
C) Diplotene -	iii) Crossing over	c)	i	ii	iv	iii
D) Diakinesis -	iv) Synapsis	d)	ii	iv	iii	i

2. Identify the incorrect statement regarding enzymes.

- a) Enzymes are highly specific b) Enzymes lower activation energy of the reaction they catalyse
 c) Enzymes are polysaccharides
 d) Enzymes have an active site where the reaction takes place

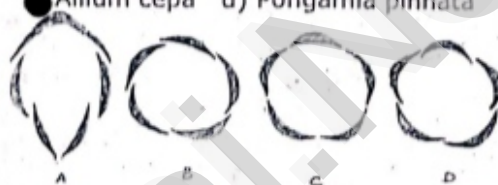
3. Many cells function properly and divide mitotically even though they do not have

- a) Plasma membrane b) Cytoskeleton c) Mitochondria d) Plastids

4. Perianth is present in

- a) Clitoria ternatea b) Datura metal c) Allium cepa d) Pongamia pinnata

5. The following diagrams represent the types of aestivation in Corolla. Identify the correct combination of labelling



- a) A - Valvate B - Twisted C - Vexillary D - Imbricate
 b) A - Vexillary B - Imbricate C - Twisted D - Valvate
 c) A - Vexillary B - Twisted C - Valvate D - Imbricate
 d) A - Valvate B - Twisted C - Imbricate D - Vexillary

6. Psidium and Quisqualis are example of phyllotaxy. a) Alternate spiral

- b) Alternate distichous c) Opposite superposed d) Opposite decussate

7. Identify the Archaeobacterium

- a) Acetobacter b) Erwinia c) Treponema d) Methanobacterium

8. In gymnosperm endosperm is formed a) At the time of fertilization

- b) Before fertilization c) After fertilization d) Along with the development of embryo

II **Note : Answer any four questions.**

4 X 2 = 8

9. Mention two characters shared by gymnosperms and angiosperms.

10. Write any two significance of mitosis.

11. Draw a labelled diagram of T₄ bacteriophage.

12. Write the properties of water.

13. What are the significance of DNA bar coding?

14. Differentiate between aggregate fruit with multiple fruit.

III **Answer any three questions. Question No. 19 is compulsory.**

3 X 3 = 9

15. Differentiate - Nucleoside and Nucleotide.

16. Do you agree that virus is living organism? If you say yes, justify your answer.

17. Write any three uses of Herbarium.

18. Write a note on breathing root with examples.

19. Describe Lampbrush chromosomes with a neat diagram.

IV **Answer all the questions.**

2 X 5 = 10

20. a) Given the outline of Bentham and Hooker system of classification. (OR)

b) i) Write the steps involves in Gram Staining procedure.

ii) Distinguish between Deoxy viruses and Ribo viruses with example.

21. a) Distinguish between prokaryotes and eukaryotes. (OR)

b) Explain the aerial modification of stem with an example. QL 11 ഉപരിയുടേ Page - 1

BIO - ZOOLOGY (Marks: 35)

I. Answer all Questions.

1. Cladogram considers the following characters

8 X 1 = 8

- a. Physiological and Biochemical
 b. Evolutionary and Phylogenetic
 c. Taxonomic and systematic
 d. None of the above

2. Match it

Column - X

Column - Y

A Pila	I	Devil fish	a	A-II	B-I	C-III	D-IV
B Dentalium	I	Chiton	b	A-III	B-IV	C-II	D-I
C Chaetopleura	II	Apple snail	c	A-II	B-IV	C-I	D-III
D Octopus	IV	Tusk shell	d	A-IV	B-III	C-I	D-II

3. The ciliated epithelium lines the a) Skin b) Digestive tract c) Gallbladder d) Trachea

4. Choose the wrong statement among the following:

- a. In earthworm, a pair of male genital pore is present. b. Setae help in locomotion of earthworms.
 c. Muscular layer in the body wall of earthworm is made up of circular muscles and longitudinal muscles. d. Typhlosole is part of the intestine of earthworms.

5. Assertion : (A) Large intestine also shows the presence of villi like small intestine.

Reason: (B) Absorption of water takes place in the large intestine.

- a. Both A and B are true and B is the correct explanation of A
 b. Both A and B are true but B is not the correct explanation of A
 c. A is true but B is false
 d. A is false but B is true

6. CO₂ is transported a. dissolved in blood plasma b. As carbonic acid

c. in carbaminohaemoglobin d. As carbaminolaemoglobin and carbonic acid

7. A person having both antigen A and antigen B on the surface of RBCs belongs to blood group

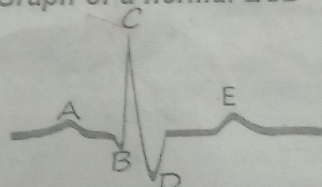
- a. A b. B c. AB d. O

8. Angiotensinogen is a protein produced and secreted by _____ a. Juxtaglomerular (JG) cells

b. Macula densa cells c. Endothelial cells of blood vessels d. Liver cells

II. Answer any four of the following questions: - Graph of a normal ECD 4 x 2 = 8

9. Write the name of the waves A, B, C, D and E with the help of below diagram



10. How does the body make long-term adjustments when living at high altitude?

11. Write any two functions of the liver.

12. What are earthworm casts?

13. Differentiate between elastic fibres and elastic connective tissue.

14. Which of the chordate characteristics do tunicates retain as adults?

III. Answer any three of the following questions.

(question number 19 is compulsory).

3 x 3 = 9

15. List three features that characterise bony fishes.

16. What is the difference between a Zoo and a wildlife sanctuary?

17. Write the classification of connective tissue and their functions

18. What are the heart sounds? When and how are these sounds produced?

19. Sketch a flow chart to show the pathway of airflow during respiration.

2 x 5 = 10

IV. Answer all the questions :-

20. a) Write the Rules of Nomenclature. (OR)

b) Differentiate between male and female cockroaches? (OR)

21. a) Discuss about appendicitis and hepatitis.

b) Write the Mechanism of urine formation in human.

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