

Quarterly Examination - 2023

Time : 3.00 Hrs.

BIOLOGY
BIO-BOTANY

Marks : 70

I. Choose the correct answer

8 x 1 = 8

1. Identify the incorrect statement about the Gram positive bacteria
 - a) Teichoic acid absent
 - b) High percentage of peptidoglycan is found in cell wall
 - c) Cell wall is single layered
 - d) Lipopolysaccharide is present in cell wall
2. The haploid number of chromosome for an angiosperm is 14, the number of chromosome in its endosperm would be
 - a) 7
 - b) 14
 - c) 42
 - d) 28
3. Bryophyllum and Dioscorea are example for
 - a) Folia bud, apical bud
 - b) Foliar bud, cauline bud
 - c) Cauline bud, apical bud
 - d) Cauline bud, foliar bud
4. Didynamous arrangement of stamens seen in.....
 - a) Ocimum
 - b) Brassica
 - c) Cassia
 - d) Datura
5. Flowers are zygomorphic in
 - a) Ceropogia
 - b) Thevitia
 - c) Datura
 - d) Solanum
6. Sequences of which of the following is used to know the phylogeny
 - a) mRNA
 - b) rRNA
 - c) tRNA
 - d) HnRNA
7. The correct sequence in cell cycle is
 - a) S-M-G₁-G₂
 - b) S-G₂-G₂-M
 - c) G₁-S-G₂-M
 - d) M - G - G₂ - S
8. β - D glucose units in cellulose are linked one another by the linkage.....
 - a) N - acetyl side chains
 - b) N - acetyl D glucosamine
 - c) 1 → 3 linkage
 - d) β - (1, 4) glycosidic linkage.

II. Write any four of the following.

4 x 2 = 8

9. What are Archaeobacteria?
10. What is plectostele?
11. Define - Gynostegium.
12. Give an account of Go phase.
13. What is sphaerosomes?
14. Define enzymes.

III. Write any three of the following. Qn.No.19 is compulsory.

3 x 3 = 9

15. Write any three distinguishing features of Monera.
16. Draw and lable the parts of regions of root.
17. Differentiate Racemose and Cymose.
18. Write any three economical importance of the family Fabaceae.
19. Write any three significance of mitosis.

IV. Answer all the questions.

2 x 5 = 10

20. a) Briefly discuss on five kingdom classification. Add a note on merits and demerits.
(OR)
b) Explain the different types of placentation with example.
21. a) Give the floral characters of Datura metel.
(OR)
b) Write the characteristic features of DNA.

BIO-ZOOLOGY SECTION - I

Choose the correct answer

What taxonomic aid gives comprehensive information about a taxon?

8 x 1 = 8

a) Taxonomic key b) Herbarium c) Flora d) Monograph

The excretory cells that are found in platyhelminthes are

a) protonephridia b) flame cells c) solenocytes d) all of these

In which of the following phyla, the adult shows radial symmetry but the larva shows bilateral symmetry?

a) Mollusca b) Echinodermata c) Arthropoda d) Annelida

The ciliated epithelium lines the

a) Skin b) Digestive tract c) Gall bladder d) Trachea

The clitellum is a distinct part in the body of earthworm *lampito mauritii*, it is found in

a) segments 13 - 14 b) segments 14 - 17 c) segments 12 - 13 d) segments 14 - 16

Which one is incorrectly matched?

a) Pepsin - stomach b) Trypsin - intestine c) Renin - Liver d) Ptyalin - mouth

Vital capacity is

a) TV + IRV b) TV + ERV c) RV + ERV d) TV + IRV + ERV

The hormone which helps in the reabsorption of water in kidney tubules is

a) cholecystokinin b) angiotensin II c) antidiuretic hormone d) pancreaseozym

SECTION - II

II. Answer any four of the following

4 x 2 = 8

9. What is Binomial Nomenclature? Give an example.

10. What are flame cells?

11. Draw the structure of a Nerve cell and label the parts.

12. Write the types of respiration seen in frog.

13. Why is pneumonia considered a dangerous disease?

14. Name the three main hormones involved in the regulation of the renal function?

SECTION - III

III. Answer any three of the following in which question No.18 is compulsory.

3 x 3 = 9

15. List three features that characterise bony fishes.

16. Differentiate white adipose tissue from brown adipose tissue.

17. State the economic importance of frog.

18. Differentiate protonephridia from metanephridia.

19. What is lymph? Write its function.

SECTION - IV

IV. Answer the following questions.

2 x 5 = 10

20. What are the basic rules of Nomenclature?

(OR)

Compare - chordates with Non-chordates.

21. List the chemical changes that starch molecule undergoes the time it reaches the small intestine.

(OR)

List and explain respiratory system disorders.