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2023-24

HALF YEARLY EXAM

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Half Yearly Exam 2023-24
Question Paper

Class - XI | **Subject – Biology**
Time –3 Hours | **Maximum Marks- 70**

General Instructions:

(i) All questions are compulsory.
(ii) The question paper has five sections and 33 questions. All questions are compulsory.
(iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
(iv)There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
(v) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION A

1. Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature?
   a) First word in a biological name represents the genus name and the second is a specific epithet
   b) Biological names can be written in any language
   c) When written by hand, the names are to be underlined
   d) Names are written in Latin and are italicized

2. Mad cow's disease and Cr Jacob's disease in humans is due to the infection by
   a) bacterium
   b) virus
   c) viroid
   d) prions

3. Most primitive vascular plants?
   a) Mosses
   b) Cycads
   c) Kelps
   d) Ferns

4. In some animal groups, the body is found divided into compartments with a serial repetition of at least some organs. This characteristic feature is called
   a) Segmentation
   b) Metamerism
   c) Metagenesis
   d) Metamorphosis

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5. Venation is a term used to describe the pattern of arrangement of
   a) Floral organs
   b) Flower in inflorescence
   c) Veins and veinlets in a lamina
   d) All of them

6. A conjoint and open vascular bundle will be observed in the transverse section of
   a) Monocot root
   b) Monocot stem
   c) Dicot root
   d) Dicot stem

7. Forelimbs of frog has
   a) five digits
   b) four digits
   c) three digits
   d) one digit

8. Match Column I and II for housefly classification and select the correct option using codes provided below:

Column I	Column II
a.Family	i.Diptera
b.Order	ii.Arthropoda
c.Class	iii.Muscidae
d.Phylum	iv.Insecta

   a) a-i, b-ii, c-i, d-iii
   b) a-iv, b-iii, c-ii, d-i
   c) a-iii, b-ii, c-iv, d-i
   d) a-iii, b-i, c-iv, d-ii

9. Agar is commercially obtained from
   a) Blue-green algae
   b) Red algae
   c) Brown algae
   d) Green algae

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10. Which one of the following statements is incorrect?
    a) Mesoglea is present in between ectoderm and endoderm in Obelia.
    b) Exhibits radial symmetry *Asterias*
    c) *Fasciola* is a pseudocoelomate animal
    d) *Taenia* is a triploblastic animal

11. Roots developed from parts of the plant other than radicles are called
    a) Taproots
    b) Fibrous roots
    c) Adventitious roots
    d) Nodular roots

12. In an inflorescence where flowers are borne laterally in acropetal succession, the position of the youngest floral bud in the floral axis shall be
    a) Proximal
    b) Distal
    c) Intercalary
    d) Anywhere

Question No. 13 to 16 consist of two statements, Assertion (A) and Reason(R). Answer these questions selecting the appropriate option given below

(a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion
(b) Both Assertion and Reason, but true and Reason is not the correct explanation of Assertion.
(c) Assertion is true, but Reason is false
(d) Assertion is false, but Reason is true

13. **Assertion** (A): Viruses are considered as organism.
    Reason (R): Viruses are nucleoprotein that lack cell organelles.

14. **Assertion** (A): Coralloid roots are a feature of cycas plant.
    Reason (R): These are specialised roots, which grow on the surface of soil.

15. **Assertion** (A): Mustard and china rose have hypogynous flowers.
    Reason (R): In hypogynous flowers, ovary is said to be inferior.

16. **Assertion** (A): Radial vascular bundles are found in roots of monocots and dicots
    Reason(R): In radial vascular bundles, xylem and phloem are arranged separately in different radii.

SECTION-B

17. (a) Polluted water bodies usually have high abundance of plants like *Nostoc* and *Oscillatoria.* Give reasons.
    (b) Why the members of class Deuteromycetes are considered as the fungi imperfecti?

18. How are mosses considered ecologically important? Give four points.

19. 'Arthropods constitute the largest group of animal kingdom.' Give two reasons why.

20. Point out the differences in the anatomy of leaf of peepal (*Ficus religiosa)* and maize (*Zea mays)*

OR

What are bulliform cells? Mention their role.

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21. Gymnosperms are well adapted to xerophytic conditions. Explain with examples

SECTION-C

22. Mention the demerits of Two Kingdom classification.

23. Discuss in detail the rules of Binomial Nomenclature of living organisms as given by Carolus Linnaeus.

24. Give reasons for the following:
    a) The spread of living pteridophytes is restricted to narrow geographical regions.
    b) Heterosporous pteridophytes show characteristics that are considered as precursor to seed habit.
    c) Bryophytes are called amphibians of plant kingdom.

OR

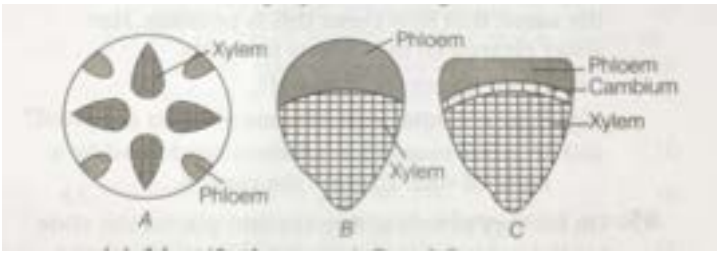
Distinguish between

a) Liverworts and mosses
b) Bryophyte and pteridophyta
c) Rhodophycae and Phaeophycae

25. Enlist the flight adaptations in Aves.

26. Describe the arrangement of floral members in relation to their insertion on thalamus.

27.

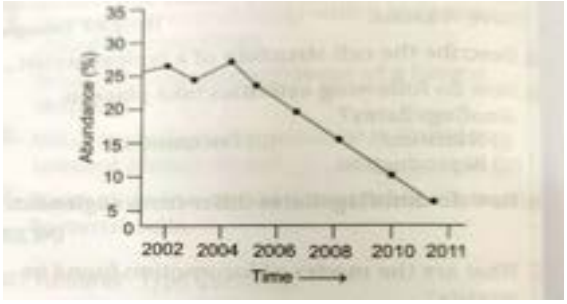


a) Identify the type A, B and C
b) Name the type of plant and the plant part in which the above are found.
c) Mention the various components of stele.

28. Write the function of the following in case of frog:
    a) Nictitating membrane
    b) Cloaca
    c) Tympanum

SECTION D

29. Given below is a graphical representation of abundance of lichens in a given area for a period of 10 years.



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Study the graph carefully and answer the following questions

a) What conclusion can be drawn from the graph?
b) Give reason for your answer in (a)
c) Comment upon the components that make up lichen and give the role of each component.

OR

c) Give two economic importance of Algae.

30. Read the following passage and answer the questions that follow

In a fishery lecture, Amar was stunned to learn about the variety of fishes across the world. Upon further investigation, Amar found that these fishes belong to three major classes, viz Cyclostomes, Chondrichthyes, Osteichthyes.

a) Cyclostomes are marine but they migrate to fresh water. Explain why?
b) Give scientific names of saw fish and flying fish.
c) Mention two characteristic features of cyclostomes.

OR

c) Give two differences between Chondrichthyes and Osteichthyes

SECTION E

31. (a) How useful is the study of the nature of body cavity and coelom in the classification of animals?
(b) Distinguish between Urochordata and Cephalochordata.

OR

(a) Which features make mammals as most successful and dominant animals?
(b) How is Pisces different from Tetrapoda?

32. What is meant by aestivation? Draw and explain the various types of aestivation possible for a typical pentamerous flower.

OR

Describe the various types of placentations found in flowering plants.

33. (a) With the help of a neat diagram briefly describe the digestive system of frog.
(b) Why is the alimentary canal of frog short?

OR

(a) With the help of labelled diagram describe the male reproductive system of frog.
(b) Frogs exhibit sexual dimorphism. How is a male frog different from a female frog?

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