

✓ MANISH

XI DPS, R.K.P.

S-3

Half Yearly Examinations
Subject: Biology (Set I)

Time: 3hrs.

Max. Marks.70

General Instructions:

1. There are a total of 26 questions and five sections in the question paper. All questions are compulsory.
2. Sections A contains question number 1 to 5; Very Short Answer type questions of one mark each.
3. Sections B contains question number 6 to 10; Short Answer type I questions of two marks each.
4. Sections C contains question number 11 to 22; Short answer type II questions of three mark each.
5. Sections D contains question number 23 ; Value based question of four marks.
6. Sections E contains question number 24 to 26; Long answer type questions of five marks each.

Section A

1. What is the difference between flora and manual? (1)
2. What is meant by heterospory? Name one heterosporous pteridophyte. (1/2+1/2)
3. What do you understand by metameric segmentation? Give an example. (1/2+1/2)
4. What is the role of mycobiont in lichens? (1/2+1/2)
5. What is perinuclear space? Mention its function. (1/2+1/2)

Section B

6. (a) Where is ciliated epithelium found in human body? Mention its function? (1/2+1/2)
(b) What is adipose tissue? Where is it present in human body? (1/2+1/2)
7. (a) How is incomplete digestive system different from complete digestive system? Show only with an illustration. (1/2+1/2)
(b) Name two phyla which have incomplete digestive system. (1/2+1/2)
8. Write short note on the following:
(a) Double fertilization.
(b) Gametophyte of mosses. (1+1)
9. Name the following:
(a) A colonial green alga.
(b) The group of algae that have pear shaped gametes with two lateral flagella.
(c) The group of algae which do not have motility at any stage of their life cycle.
(d) A bryophyte which is used as packing material for transportation of live

plant material.

(1/2X4)

10

Give scientific terms for the following:

- (a) Collar cells, lining the canal system in sponges.
- (b) File like rasping organ for feeding in Molluscs.
- (c) Rows of ciliated extensions, which help in locomotion in Ctenophores.
- (d) Covering over gills in Osteichthyes.

(1/2X4)

Section C

11. (a) Lion, tiger and leopard belong to same genus *Panthera* but to different species. What defines them as separate species?

(1+1)

(b) What is a taxon? Give an example to show that the same taxon can be placed in two different categories.

(1/2+1/2)

12. (a) What is the morphological similarity in:

(i) Tendril of pumpkin and thorn of citrus.

(ii) Prop roots of Banyan tree and stilt roots of maize.

(1/2+1/2)

(b) Why is the leaf of neem called pinnately compound leaf

(c) Describe the phyllotaxy in *Alstonia*

(1+1)

13. (a) Both potato and sweet potato are underground, non-green storage structures. Will you classify them as root or stem? Explain.

(1+1)

(b) What are bisexual flowers. Give an example.

(1+1/2)

14.



(1)

Draw and label:

(a) Aleurone layer

(b) Radicle

(c) Coleoptile

(d) Endosperm

(1/2X4)

15. (a) Doob grass grown in the lawns needs to be mown frequently to prevent its overgrowth. Which tissue is responsible for its rapid growth?

(1)

(b) What are sclereids? Where are they commonly found?

(1/2+1/2)

(c) How is the xylem tissue in gymnosperms different from angiosperms?

(1)

16. What is the difference between vascular bundles of dicot and monocot stem? Show it with the help of a diagram.

(1+2)

17. (a) What are parapodia? Mention their function.

(b) What is intracellular digestion? Name the Phylum which has both intracellular and extracellular digestion.

- (c) Name the Phylum of exclusively marine animals which have notochord extending from head to tail, which persists throughout their life. (1X3)
18. (a) Why are blood, bone and cartilage called connective tissue? (1)
 (b) The body of sponges does not have tissue level organization though it is made up of large number of cells. Why? (1)
 (c) Mention one similarity and one difference between striated and cardiac muscles. (1)
19. Distinguish between:
 (a) Acoelomate and pseudo-coelomate.
 (b) Open and closed circulatory system
 (c) Ascomycetes and Basidiomycetes (1X3)
20. Draw a well labeled diagram to depict Fluid mosaic model of plasma membrane.
 Why is it described as quasi fluid structure? (2+1)
21. Distinguish between:
 (a) Simple diffusion and Facilitated diffusion across plasma membrane. (1)
 (b) Rough ER and Smooth ER. (1)
 (c) Gram positive and Gram negative bacteria (1)
- (22) Name the three types of Leucoplasts and mention their functions. (3)

Section D

23. (a) Systems of classification have undergone several changes over a period of time. What was the reason for these changes and their impact? (2)
 (b) What values do we do learn from these observations. (2)

Section E

24. (a) What is the meaning of alternation of generations? (1)
 (b) Explain the three patterns of alternation of generations with the help of schematic representation. (3)
 (c) How is the life cycle pattern of Pteridophytes different from Bryophyte (1)
25. Give reasons for the following:
 (a) Bony fish do not have to swim constantly.
 (b) Long bones of birds are hollow with air cavities.
 (c) Skin of amphibians does not have scales.
 (d) All vertebrates are chordates but all chordates are not vertebrates.
 (e) Aves and mammals have four chambered heart. (1X5)
26. (a) Compare chordates and non-chordates. (3)
 (b) Draw a well labeled diagram to illustrate the general body plan of chordates. (2)

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