

Sample paper Entry Test MSc Botany (Two years Evening program)

A. Fill in the blanks in each of the following statements (5 marks)

- I. The largest organisms on earth are the _____.
- II. Plants are thought to have evolved from _____.
- III. Asexual reproduction in plants is often called _____.
- IV. _____ is the major component of primary and secondary cell wall layers.
- VI. All plants have _____ cells.

B. Encircle the right choice in the following MCQs (25 marks)

- Which is the end product of oxidative phosphorylation:
A. ATP, B. ATP and water, C. NADH, D. Oxygen
- Total no. of ATP molecules produced per glucose molecules in eukaryotic cell are:
A.12, B. 24, C. 36, D. 38
- Which of the following gives rise to cork tissue?
A. Phellogen, B. Periblem, C. Periderm, D. Phelloderm
- Angiosperms differ from gymnosperms in having
A. Fruits, B. Cotyledon, C. Trachieds, D. All of the A, B and C
- The site of dark reaction in the process of photosynthesis is:
A. Grana, B. Stroma, C. Thylacoids, D. Both A and B
- An ecosystem must have external source of:
A. Minerals, B. Energy, C. Food, D. All of the above
- Ecology deals with the study of:
A. Living beings, B. Living and non-living components, C. Reciprocal relationship between Living and non-living components, D. Environment
- In a food chain of grassland ecosystem, the top consumers are:
A. Herbivorous, B. Carnivorous, C. Bacteria, D. Either carnivorous or herbivorous
- Succession initiated on large sand deposits or deserts is called:
A. Hydrosere, B. Psammosere, C. Xerosere, D. Oxylosere
- The final stable community in an ecological succession is called:
A. Final community, B. Ultimate community, C. Climax community, D. Seral community
- 75% of the flowers are red and 25% are white. The genotypic constitution of the parents having red coloured flowers will be.
A. Both heterozygous B. One homozygous and other heterozygous C. Both homozygous D. Both hemizygous
- In a given plant, red colour[®] of fruits is dominant over white fruit(r); and tallness (T) is dominant over dwarfness (t). If a plant with genotype RrTt is crossed with plant of genotype rrtt, what will be the percentage of tall plants with red fruits in the next generation?
A. 20% B. 40% C. 50% D. 60%
- In pea plants, yellow seeds are dominant to green. If a heterozygous yellow seeded plant is crossed with green seeded plants would you expect in F1 generation?
A. 3:1 B. 50:50 C. 9:1 D. 1:3
- Mating of an organism to a double recessive in order to determine whether it is homozygous or heterozygous.
A. Rociprocal cross B. test cross C. dihybrid cross D. back cross

15. Abnormal secondary growth is found in
A. dracaena B. Triticum C. Halianthus D. Curcubita
16. Presence of casparian strips is characteristic feature of
A. endodermis B. exodermis C. epidermis D. pericycle
17. External protective tissue of plants are
A. cork & cortex B. cortex & epidermis C. epidermis & cork D. pericycle & cortex
18. Annual rings are distinct in plants growing in
A. epidermis B. phloem C. Annual rings D. none
19. Intercalary meristem results in
A. Secondary growth B. Apical growth C. Primary Growth D. None of above
20. The best method to determine the age of tree is
To count the number of leaves B. To count the number of annual rings C. To measure its diameter D. To find out the number of branches
21. The bark of a tree comprises
A. All the tissues outside the cork cambium B. All the tissues outside the vascular cambium C. Only the cork D. Just inside the cork cambium
22. Which of the following give rise to the cork tissue
A. Phellogen B. periblem C. priderm D. phelloderm
23. A gymnospermic plants
A. Bear flowers B. Exhibit no vascular tissue C. Produce seeds in cones D. Does not produced seeds in cones
24. Megasporophyll is a term used in gymnosperm to denote
A. carpels B. Stamens C. leaves D. Female cone
25. The megasporium is also known as
A. Ovule B. Nucellus C. Fruit D. Micropyle

Differentiate between: (each part contain 2.5 marks)

i) Angiosperm and gymnosperm

ii) Algae and Fungi

iii) Photosynthesis and Respiration

iv) Xerosere and Hydrosere succession

