

FIRST YEAR SAMPLE QUESTION PAPER

PART III-BOTANY

Max. Score :30

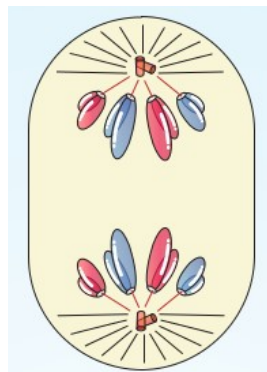
Time: 1 Hour

I. Answer any 3 questions from 1 to 5 . Each question carries 1 score (3 X 1=3)

1. The green, multicellular, asexual buds produced in liverworts are called
a) Protonema b) Prothallus c) Gemmae d) Capsule (1)
2. By observing the relationship between the first pair, fill up the blanks.
a) xylem: Vascular tissue system
b) Guard cell:..... (1)
3. In Nostoc, specialised cell called..... helps in nitrogen fixation. (1)
4. RQ value of carbohydrate is
a) 1 b) 1.5 c) .9 d) .7 (1)
5. Name the special type of leaf anatomy seen in C4 plants? (1)

II. Answer any 9 questions from 6 to 16 . Each question carries 2 score (9 X 2=18)

6. During interphase stage , cells prepare for cell division.
a) Write any three phases of interphase (1)
b) Write the peculiarity of quiescent stage? (1)
7. Cell wall deposits of diatoms are called diatomaceous earth.
a) What is the nature of cell wall in diatoms? (1)
b) Write any two uses of it ? (1)
8. Observe the figure .



- a) Identify the stage of mitosis? (1)
- b) Write two major events occurring in the stage? (1)

9. Complete the table with appropriate terms

(2)

Class	Common name	Pigments
Phaeophyceae(A)	Chl a, Chl c,(B)
.....(C)	Green alga	Chl a, Chl b
Rhodophyceae(D)	Chl a, Chl d, Phycoerythrene

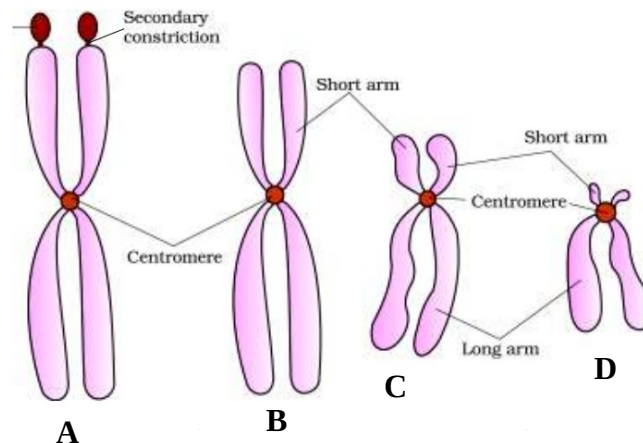
10. C4 plants are adapted to overcome a wasteful process found in C3 plants and hence productivity and yield are better in these plants.

a) Name the wasteful process found in C3 plants? (1)

b) Identify the cells involved in C4 pathway? (1)

11. Define phyllotaxy? Name any two types of phyllotaxy? (2)

12. Chromosomes are classified on the basis of position of centromere. Identify A,B,C,D?



13. Match the following

(2)

- | <u>A</u> | <u>B</u> |
|---------------|------------------------------|
| a) Auxin | i) Fruit ripening |
| b) Gibberlin | ii) Stomatal closure |
| c) Cytokinins | iii) Root initiation |
| d) Ethylene | iv) Bolting |
| | v) Overcome apical dominance |

14. a) What is fermentation? (1)

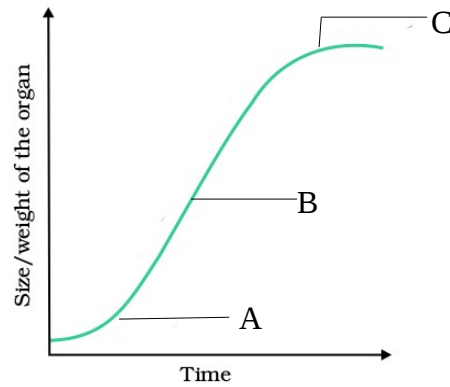
b) Which are the main products produced as a result of fermentation in yeast? (1)

15. Write any two types of proteins present in cell membrane?

Mention any two functions of plasma membrane? (2)

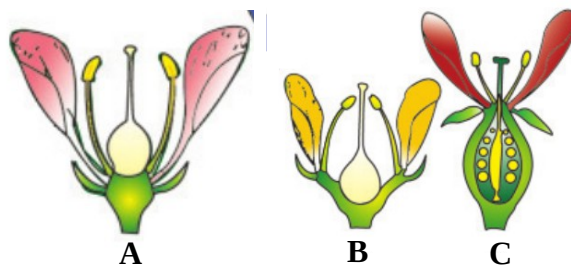
16. a) Write the name of growth curve seen in the given figure? (1)

b) Write the name of phases marked A,B,C (1)



III. Answer any 3 questions from 17 to 20 .Each question carries 3 score (3 X 3 =9)

17. For each of the following tell whether the ovary is superior or inferior or half inferior. Give examples for each? (3)



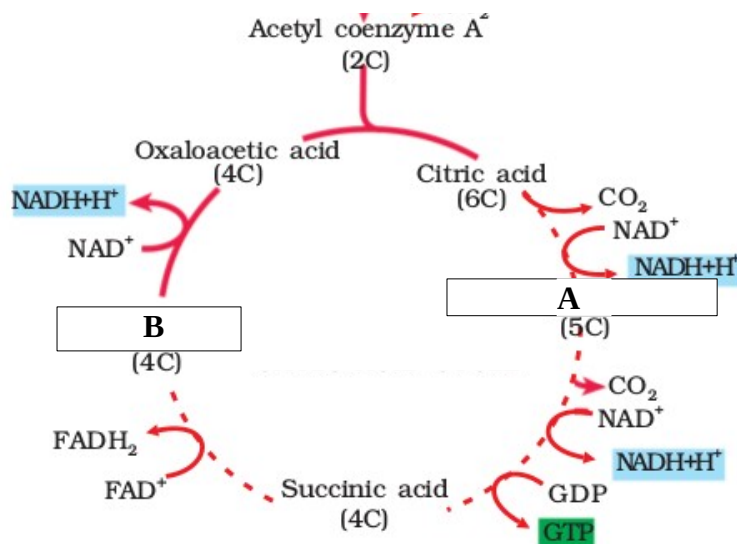
18. Light reaction is otherwise called as photophosphorylation. (3)

a) Justify the statement?

b) Locate the site for this reaction?

c) Write any one difference between cyclic and noncyclic photophosphorylation?

19. Diagrammatic representation of Krebs' Cycle is given below with some omissions



- a) Why Krebs' cycle is also called TCA cycle? (1)
- b) Where does it occur? (1)
- c) Complete the diagram by filling the gap? (1)
20. Write any three differences between dicot stem and monocot stem? (3)
-

Prepared by :

1. Sheeja A - NMHSS Chelambra
2. Rasli.C - BYKVHSS Valavannur
3. Jilsha N V - DGHSS Tanur
4. Asha Jose - IUHSS Parappur
5. Bisini.S - GHSS Nirmaruthur
6. Deepak A.S - SMMHSS Rayirimangalam
7. Rajesh K Kuniyil - GHSS Othukkungal