

HMD

## HALF YEARLY EXAMINATION- 2022

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CLASS : 11

BOTANY

TIME : 3.00

MARKS : 70

Instructions: 1. Check the Question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately. 2. Use Blue or Black ink to write and underline and pencil to draw diagrams. 15 x 1 = 15

## PART - I

Note : i) Answer all the questions. ii) Choose the most appropriate answer from the given four alternatives and write the options code and corresponding answer.

- Which of following represents gametophytic generation in pteridophytes?  
a) Prothallus                      b) Thallus                      c) Cone                      d) Rhizophore
- Identify the correctly matched pair  
a) Actinomycetes - a) Late blight  
b) Mycoplasma - b) lumpy jaw  
c) Bacteria - c) crown gall  
d) Fungi - d) Sandal spike
- Respiratory roots are present in .....  
a) Vanda                      b) Dianospora                      c) Cuscuta                      d) Viscum
- Arrange the following stages of Meiosis in order.  
1. crossing over      2. synapsis      3. terminalisation of Chiasmata      4. Nucleolus disappears.  
a) 1,2,3,4                      b) 2,3,4,1                      c) 2,1,4,3                      d) 2, 1, 3, 4
- The most basic amino acid is  
a) Arginine                      b) Histidine                      c) Glycine                      d) Glutamine
- In Gymnosperms, the activity of sieve cells are controlled by  
a) Nearby Sieve tube members                      b) Phloem parenchyma cells  
c) Nucleus of Companion cells                      d) Nucleus of albuminous cells.
- The common bottle cork is a product of  
a) Phellem                      b) Phellogen                      c) Xylem                      d) Vascular cambium
- Match the correct combination.  

Minerals	Role
A. Molybdenum	1. Chlorophyll
B. Zinc	2. Methionine
C. Magnesium	3. Auxin
D. Sulphur	4. Nitrogenase

  

a) A - 1	B - 3	C - 4	D - 2
b) A - 2	B - 1	C - 3	D - 4
c) A - 4	B - 3	C - 1	D - 2
d) A - 4	B - 2	C - 1	D - 3
- Stomata of a plant open due to  
a) Influx of  $k^+$                       b) Efflux of  $k^+$                       c) Influx of  $Cl^-$                       d) Influx of  $OH^-$
- The compound which links glycolysis and Krebs Cycle is  
a) Succinic acid                      b) Pyruvic acid                      c) Acetyl COA                      d) Citric acid

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11. Which one of the following method are used to break the seed dormancy?  
a) Scarification                      b) Impaction                      c) stratification                      d) All the above
12. Vexillary aestivation is characteristic of the family  
a) Fabaceae                      b) Asteraceae                      c) Solanaceae                      d) Brassicaceae
13. Which family is called as castor family  
a) Solanaceae                      b) Euphorbiaceae                      c) Fabaceae                      d) Apocynaceae
14. The two subunits of ribosome remain united at critical ion level of  
a) Magnesium                      b) calcium                      c) sodium                      d) Ferrous
15. Which chlorophyll molecule does not have phytol tail?  
a) Chl a                      b) Chl b                      c) Chl c                      d) Chl d

**PART-II****NOTE : Answer any six of the following Question number 24 is compulsory.****6****x 2 = 12**

16. What is Capnophilic bacteria?
17. What is Corona?
18. Give an account of Go phase.
19. In which season the vessels of angiosperms larger in size, why?
20. Draw the structure of ATP
21. Define Programmed Cell Death.
22. Write types of phyllotaxy
23. What is Emerson's first affect?
24. What is Eustele ?

**PART- III****NOTE: Answer any six of the following Question No. 33 is compulsory.****6 x 3 = 18**

25. Classify the Inflorescence based on origin.
26. Draw the regions of root.
27. Write the differences between nodes and internodal cells in Chara.
28. Write the Significance of DNA Barcoding.
29. How phosphorylase enzyme open the stomata in Starch-Sugar inter conversion theory.
30. Differentiate Sapwood & Heartwood
31. Write the properties of Enzyme.
32. Differentiate oidium and chlamydo spore
33. What are the functions of Nucleus.

**PART-IV****Note : Answer all the Question.****5 x 5 = 25**

34. Draw the outline of the life cycle of Agaricus. **(OR)**  
Explain the structure and function of different types of RNA.
35. Explain the different types of placentation with example. **(OR)**  
Write the role of Nitrogenase enzyme in Nitrogen fixation.
36. Differentiate Dicot stem and Monocot stem. **(OR)**  
Write the significance of photosynthesis
37. Draw the different phases of Glycolysis's. **(OR)**  
Write the physiological effects of Gibbrellins.
38. Explain the floral characters of Datura metal. **(OR)**  
Write the economic importance of Gymnosperm.