



RAN - 1903001103020003



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**S. Y. Biotech (Sem. - III) Examination**

**March 2023**

**Plant Morphology and Physiology : BT-07**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**S. Y. Biotech (Sem. - III)**

Name of the Subject :

**Plant Morphology and Physiology : BT-07**

Subject Code No.: **1903001103020003**

Seat No.:

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Student's Signature

(2) All questions are compulsory.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ  
O.M.R. Sheetની પાછળ છાપેલ છે.  
Important instructions to fillup O.M.R. Sheet  
are given on back side of the provided O.M.R. Sheet.***



- Q. 10.** Which theory proposed that water molecules have strong cohesive force and they have strong natural attraction.
- A) Transpiration pull theory                      B) Root pressure theory  
C) Vital theory    D) None
- Q. 11.** Which is active form of phytochrome?
- A) Pfr    B) Pr  
C) Both    D) None
- Q. 12.** Calvin cycle occurs in which organelle \_\_\_\_\_.
- A) Mitochondria    B) Chloroplast  
C) Cytoplasm    D) Glyoxysomes
- Q. 13.** Science which deals with the branch of biology that deals with the study of plants, including their structure, properties, and biochemical processes
- A) Zoology    B) Immunology  
C) Botany    D) Mycology
- Q. 14.** \_\_\_\_\_ are elements required by plants in relatively large quantities?
- A) Micronutrients    B) Macronutrients  
C) Phytohormones    D) Vitamins
- Q. 15.** Hanging structures providing support present in banyan trees are \_\_\_\_\_.
- A) Prop root    B) Stilt root  
C) Tap root    D) Strap root
- Q. 16.** In these stomata the guard cells are surrounded by two or more accessory cells.
- A) Diacytic type    B) Anisocytic type  
C) Anomocytic type    D) Paracytic type
- Q. 17.** Which theory was given by Eminent Scientist Prof. J C Bose?
- A) Root pressure    B) Pulsation theory  
C) Capillary force theory    D) Inhibition theory

- Q. 18.** The first step for initiation of photosynthesis will be \_\_\_\_\_.
- A) Photolysis of water  
 B) Excitement of chlorophyll molecules due to absorption of light  
 C) ATP formation  
 D) Glucose formation
- Q. 19.** Root system is initiated through \_\_\_\_\_.
- A) Radical  
 B) Plumule  
 C) Petiole  
 D) Pulvinis
- Q. 20.** Phytochromes are a class of \_\_\_\_\_ receptors present in plants, used to detect \_\_\_\_\_.
- A) Chemo and chemical  
 B) Thigmo and touch  
 C) Photo and light  
 D) Thermo and temperature
- Q. 21.** On full turgidity of cell water does not enter inside the cell so diffusion pressure deficit (DPD) will be
- A) Positive  
 B) Zero  
 C) Negative  
 D) No fix value.
- Q. 22.** Matrix potential is also called \_\_\_\_\_.
- A) Osmotic potential  
 B) Pressure potential  
 C) Gravitational potential  
 D) Capillary potential
- Q. 23.** \_\_\_\_\_ is hormone-like molecule generated in leaves and transported to the shoot apical meristem responsible for controlling or triggering flowering in plants.
- A) Minerals  
 B) Florigen  
 C) Proteins  
 D) Glycoconjugates
- Q. 24.** Kranz anatomy is associates with \_\_\_\_\_.
- A) C<sub>3</sub> plants  
 B) C<sub>4</sub> plants  
 C) CAM plants  
 D) All
- Q. 25.** Example of fusiform root is \_\_\_\_\_.
- A) Carrot  
 B) Beet  
 C) Sweet potato  
 D) Radish

- Q. 26.** Long day plants also called \_\_\_\_\_.
- A) Long night plants                      B) Short night plants  
C) Long day plants                        D) A & C
- Q. 27.** OP of a solution can be measured by \_\_\_\_\_.
- A) Photometer                                B) Osmometer  
C) Calorimeter                               D) Plasmolysis
- Q. 28.** Which is the strongest solvent in the following?
- A) NaCl solution                              B) Pure water  
C) H<sub>2</sub>SO<sub>4</sub>                                        D) HNO<sub>3</sub>
- Q. 29.** Endosmosis takes place when a plant cell is immersed in
- A) Hypotonic solution                        B) Isotonic solution  
C) Hypertonic solution                        D) HCl solution
- Q. 30.** Which one is an example of natural cytokinin \_\_\_\_\_.
- A) IBA    B) IAA  
C) Zeatin                                        D) Kinetin
- Q. 31.** What is the full form of DPD?
- A) Diffusion potential deficit                B) Diffusion pressure deficit  
C) Diffusion pressure deposite              D) Diffusion potential deposite
- Q. 32.** The Leaf arise from the part of the stem.
- A) Internodes                                    B) Node  
C) Petiole                                        D) Margin
- Q. 33.** Stomata open at night and close during day time in \_\_\_\_\_.
- A) Xerophytes                                    B) Terrestrial plant  
C) Succulents plant                            D) Hydrophytes
- Q. 34.** Which micronutrient is involved in Nitrogen fixation \_\_\_\_\_.
- A) Molybdenum                                B) Boron  
C) Copper                                        D) Zinc

- Q. 35.** Which two hormone are antagonistic phyto-hormones  
 A) Auxin and cytokinin                      B) Auxin and Gibberellins  
 C) ABA and Gibberellins                    D) Cytokinin and Gibberellins
- Q. 36.** The leaf part Lamina is also called \_\_\_\_\_.  
 A) Hypopodium                                B) Epipodium  
 C) Mesopodium                                D) None
- Q. 37.** Pure water is the strongest \_\_\_\_\_.  
 A) Solvent                                        B) Solute  
 C) Solution                                      D) Both B & C
- Q. 38.** What is the unit of water potential?  
 A) Mega Fahrenheit                          B) Mega Pascal  
 C) Mega Kelvin                                 D) Mega Celsius
- Q. 39.** Some Monocot plants, leaf base is expanded is called \_\_\_\_\_.  
 A) Petiole                                        B) Sheath  
 C) Pulvinus                                      D) Calyx
- Q. 40.** In which flower position the margin of the thalamus grows upward to form a cup shaped structure?  
 A) Hypogyny                                    B) Epigyny  
 C) Perigyny                                     D) Mesogamy
- Q. 41.** In chloroplast the photosynthetic pigments are located at  
 A) Inner membrane                          B) Thylakoid membrane  
 C) Thylakoid lumen                            D) Outer membrane
- Q. 42.** There are \_\_\_\_\_ essential whorls present in flower.  
 A) 1    B) 2  
 C) 3    D) 4
- Q. 43.** The induction of a plant's flowering process by exposure to the prolonged cold of winter, or artificial low temperature is termed as  
 A) Cryopreservation                          B) Vernalization  
 C) Vitrification                                 D) Sterilization

- Q. 44.** Which is responsible for increase the cell number?  
A) Meristematic zone                      B) Maturation region  
C) Elongation region                      D) All
- Q. 45.** Shoot system is initiated through \_\_\_\_\_.  
A) Radical                                      B) Plumule  
C) Petiole                                      D) Pulvinis
- Q. 46.** Almost 9 % of transpiration is carried out through \_\_\_\_\_.  
A) Lenticular transpiration              B) Cuticular transpiration  
C) Stomatal transpiration              D) All of the above
- Q. 47.** When pollen tube enters the ovule through Micropyle, fertilization is called \_\_\_\_\_.  
A) Porogamy                                  B) Chalazogamy  
C) Mesogamy                                  D) All
- Q. 48.** In which type, the stomata open throughout the daytime and close at night.  
A) Barely type                                  B) Alfafa type  
C) Potato type                                  D) Equisetum type
- Q. 49.** Give an example of Succulent plant.  
A) Cabbage                                      B) Pea  
C) Bryophyllum                                  D) Cereals
- Q. 50.** When fruits are develop from many carpels, fruits called  
A) Simple    B) Composite  
C) Aggregate                                      D) Drupe
- \_\_\_\_\_

**SPACE FOR ROUGH WORK**