

SEAT No. _____



No. of Printed Pages: 2

[2/A-1]

SARDAR PATEL UNIVERSITY
B.Sc.4th SEMESTER EXAMINATION

Friday 14th October 2022

Time - 12 : 30 P.M to 2 : 30 P.M.

Subject / Course Code : Botany (US04EBOT 01)
(Plant Histology , Taxonomy, Physiology and Genetics)

Maximum Marks : 70

Draw neat and labeled diagrams wherever necessary.

Q. 1 MULTIPLE CHOICE QUESTION:

(10)

1. Air spaces are found in _____
(a) Parenchyma (b) Aerenchyma (c) Collenchyma (d) None of these
2. Companion cells are associated with _____
(a) Cambium (b) Sieve tubes
(c) Sclerenchyma (d) Xylem
3. Conduction of water is the function of _____
(a) Phloem (b) Xylem (c) Companion Cells (d) None of these
4. Coffea arabica is the example of family _____
(a) Rubiaceae (b) Liliaceae
(c) Myrtaceae (d) Annonaceae
5. Many vegetables and pulses yielding plants belongs to family
(a) Meliaceae (b) Leguminosae (c) Myrtaceae (d) Annonaceae
6. Calvin cycle is found in _____
(a) C₄ Plants (b) C₃ Plants (c) Both a and b (d) None of these
7. Plant cooling is due to _____
(a) Transpiration (b) Guttation (c) Photosynthesis (d) Photolysis
8. 9:3:3:1 is the ratio of
(a) Dihybrid cross (b) Test cross (c) Back cross (d) None of these
9. Mendel works on _____ plant
(a) Pea (b) Cotton (c) Maize (d) Sunflower
10. Yellow color of cotyledons is dominant over
(a) Green (b) Gray (c) White (d) None Of These

Q 2 Fill in the blanks

(08)

- 1 The function of photosynthesis is carried out by _____
(Aerenchyma /Chlorenchyma)
- 2 Vexillary aestivation is found in _____ family (Papilionaceae /Rubiaceae)
- 3 Transpiration occurs from _____ (leaves /Roots)
- 4 T.H. Morgon worked on _____ (Pea/Drosophila)

True or False

- 1 Sclerenchyma gives mechanical strength to plants.
- 2 Milky latex is the characteristic of Euphorbiaceae family
- 3 C₄ cycle discovered by Hatch & Slack
- 4 Dominant epistasis gene interaction ratio is 9:3:3:1

Q.3 Answer the following questions in brief (any ten)

(20)

- 1 .Write functions of Xylem ?
2. Write characteristics of Parenchyma ?
3. Write about the apical meristem.
4. Write corolla of Fabaceae family.
5. Write economic importance of Mimosae family.
6. Define Placentation.
7. Define Dormancy.
8. What is Photoperiodism.
9. Define Transpiration.
10. Define - Test cross.
11. What is Linkage ?
12. Define Dominance .

Q.4 Long Answer (Write any four)

(32)

1. Describe the type and function of Parenchyma.
2. Explain about Xylem tissue.
3. Describe general characters and economic importance of Fabaceae.
4. Describe general characters and economic importance of Rubiaceae.
5. Describe factors affecting transpiration.
6. Describe cyclic Photophosphorylation.
7. Describe Dominant epistasis gene interaction with suitable example.
8. Explain Mendel' s law of inheritance.

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