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SARDAR PATEL UNIVERSITY  
S.Y.B.Sc.4th SEMESTER EXAMINATION

16<sup>th</sup> April 2016, Saturday

10.30 AM to 12.30 PM

Plant Histology, Taxonomy, Physiology and Genetics (US04EBOT 01)

Total Marks-70

- Q.1 **Multiple Choice Questions (one mark each)** 10
- The cells of \_\_\_\_\_ tissue are generally dead cells.  
(a) Parenchyma (b) Chlorenchyma (c) Aerenchyma (d) Sclerenchyma
  - The thickenings are confined to corners of cells in \_\_\_\_\_ tissue.  
(a) Parenchyma (b) Collenchyma (c) Aerenchyma (d) Sclerenchyma
  - The function of photosynthesis is carried out by \_\_\_\_\_ cells.  
(a) Parenchyma (b) Chlorenchyma (c) Aerenchyma (d) Sclerenchyma
  - Clove is an economically important plant of \_\_\_\_\_ family.  
(a) Myrtaceae (b) Caesalpinaceae (c) Lamiaceae (d) Rubiaceae
  - Vexillary aestivation is found in \_\_\_\_\_ plant.  
(a) *Psidium guajava* (b) *Pisum sativum* (c) *Eucalyptus globosus*  
(d) all
  - Gynobasic style is a characteristic feature in \_\_\_\_\_ family.  
(a) Myrtaceae (b) Caesalpinaceae (c) Lamiaceae (d) Rubiaceae
  - Transpiration occurs from \_\_\_\_\_.  
(a) leaves (b) stems (c) roots (d) none
  - The first stable product of carbon assimilation is \_\_\_\_\_.  
(a) PGA (b) Glucose (c) Starch (d) Pyruvic acid
  - Mendel's Dihybrid phenotypic ratio is \_\_\_\_\_.  
(a) 1:2:1 (b) 1:1 (c) 3:1 (d) 9:3:3:1
  - The ratio of complementary gene interaction is \_\_\_\_\_.  
(a) 9:7 (b) 9:3:4 (c) 12:3:1 (d) 9:3:3:1

- Q.2 **Answer any ten** 20
- Discuss about the apical meristem.
  - Write characteristics of Collenchyma cells.

(P.T.O.)

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- 3 Give an outline classification of tissue system.
- 4 Write about the corolla of Fabaceae family.
- 5 Write about diadelphous condition of stamens .
- 6 Write botanical names of 2 plants of Myrtaceae family.
- 7 What is Guttation?
- 8 Explain the term Dormancy.
- 9 What are macro and micro nutrients.
- 10 What is test cross?
- 11 Explain law of purity of gametes.
- 12 What is Crossing over?
- Q.3a. Discuss the structure and function of Sclerenchyma tissue. 5
- b. Write about Xylem Tissue 5
- OR**
- Q.3a. Discuss the structure and function of Parenchyma tissue . 5
- b. Write about the Phloem tissue. 5
- Q.4a. Explain floral characters of family Lamiaceae . 5
- b. Write a note on economic importance of family Fabaceae. 5
- OR**
- Q.4a. Write about floral characters of family Rubiaceae. 5
- b. Write about economic importance of family Myrtaceae. 5
- Q.5a. Write about cyclic photophosphorylation . 6
- b. Write the factors affecting transpiration. 4
- OR**
- Q.5a. Write about the role of Nitrogen and iron in mineral nutrition. 6
- b. Discuss the factors affecting photosynthesis. 4
- Q.6 Write about Supplementary gene interaction with examples. 10
- OR**
- Q.6 . Explain in detail Mendel's law of Dominance and law of Independent Assortment. 10

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