M 7280

Reg. No. : .....

Name : .....

V Semester B.Sc. Degree (CCSS-Reg./Supple./Imp.)
Examination, November 2014
CORE COURSE IN BOTANY/PLANT SCIENCE
5B07BOT/PLS : Angiosperm Anatomy and Reproductive Botany
(2012 Admission)

Time : 3 Hours Total Weightage : 30

***Instruction** : Draw diagrams **wherever** necessary.*

SECTION – A

Answer **all**. (Questions in bunches of **four**; **each** bunch carries a weightage of **1**.)

1. Choose the correct answer :
   i) The vascular bundle in which xylem in the center surrounded by phloem
      a) Collateral b) Amphi cribal
      c) Amphi vassal d) Radial
   ii) The entry of pollen tube into the ovule through the micropyle is called
      a) Porogamy b) Mesogamy
      c) Chalazogamy d) Dichogamy
   iii) A simple living mechanical tissue is
      a) Parenchyma b) Collenchyma
      c) Sclerenchyma d) Wood fiber
   iv) Bulliform cells are present in
      a) Dicot stem b) Monocot stem
      c) Dicot leaf d) Monocot leaf

2. State **true** or **false** :
   i) Companion cells are absent in gymnosperms.
   ii) In angiosperms endosperm is haploid and is formed before fertilization.
   iii) Vascular tissues are well developed in xerophytes.
   iv) Cork cambium in dicot root takes origin from pericycle.

3. Fill in the blanks :
   i) The nourishing tissue present in anther is _____
   ii) Proto xylem cavity is noticed in _____
   iii) The stomata where the subsidiary cells are arranged parallel to the long axis of the pore is _____
   iv) The alkaloid quinine is obtained from the bark of _____

4. Match the following :

A	B	C
i) Tunica – Corpus theory	Scheeup	Lysigenous cavity
ii) Korper – Kappe theory	Schmidt	Root apex
iii) Digestive glands	Citrus	Shoot apex
iv) Oil glands	Nepenthes	Hydrolases

(4×1=4)

SECTION – B

Answer **any five**. (Differentiate the following, **each** question carries a weightage of **1**.)

5. Eccentric starch grains and concentric starch grains
6. Simple pit and bordered pit
7. Orthotropous ovule and anatropous ovule
8. Apospory and agamospermy
9. Sexine and nexine
10. Fusiform initials and ray initials. **(5×1=5)**

SECTION – C

Answer **any five**. Short answer questions. **Each** question carries a weightage of **1**.

11. Explain the primary structure of monocot stem.
12. What are tyloses ?
13. What is Ne'mec phenomenon ?
14. Write briefly on the ecological adaptations of the xerophytes.

15. What is poly embryony ? Explain its importance.
16. What are latex vessels ?
17. Explain the histogen theory related to the organization of shoot apex. **(5×1=5)**

SECTION – D

Answer **any six**. Short answer questions. **Each** question carries a weightage of **2**.

18. Write on the different types of mineral crystals present in plants.
19. Explain periderm formation in dicot stem.
20. With the help of a neat and labelled diagram, describe the structure of a mature anther.
21. Give a brief account regarding the classification of meristem based on position.
22. What is a simple tissue ? Explain the different types of collenchyma based on their thickening.
23. Discuss the different types of vascular bundles seen in angiosperms.
24. What are annual rings ?
25. Describe the structure of the secondary cell wall.
26. Explain the different components of phloem. **(6×2=12)**

SECTION – E

Answer **any one**. Essay type questions. **Each** question carries a weightage of **4**.

27. What is a complex tissue ? Describe the components of xylem.
28. What is anomalous secondary thickening ? Explain the anomaly in Boerhavia stem.
29. Describe the structure of a mature embryosac with a neat and labeled diagram and discuss polygonum type of development. **(1×4=4)**
