



SECTION – E

Answer any one :

Long essay type questions. **Each** question carries a weightage of **4**.

27. Describe C4 pathway.
28. With the help of suitable diagrams explain the primary structure of dicot stem.
29. What are growth regulators ? Explain the role gibberellins in the growth of the plant. **(1×4=4)**



Reg. No. :

Name :

IV Semester B.Sc. Degree (CCSS – Regular/Supple./Imp.)
Examination, May 2014
COMPLEMENTARY COURSE IN BOTANY
4C04 BOT : Plant Physiology, Angiosperm Anatomy and Crop
Improvement
(2012 Admn.)

Time : 3 Hours

Total Weightage : 30

SECTION – A
(Answer all)

Questions in bunches of **four**; **Each** bunch carries a weightage of **1**.

1. Choose the correct answer :

- i) The difference between the diffusion pressure of a solution and its solvent at a particular temperature
 a) D.P.D. b) O.P. c) T.P. d) S.P.
- ii) The technique of culturing plant cells and organs on artificial media
 a) In vivo b) In vitro c) Hybridisation d) Selection
- iii) Loss of water as liquid droplets from the leaf margin
 a) Guttation b) Transpiration c) Evaporation d) Imbibition
- iv) Small isolated openings on the surface of old stem
 a) Stomata b) Cambium c) Lenticels d) Cork

2. State **true** or **false** :

- i) Plasmolysis leads to wilting.
- ii) Phytochrome is the pigment involved in photosynthesis.
- iii) Vascular bundles are scattered in monocot stem.
- iv) In gymnosperm phloem includes sieve cells.



3. Fill in the blanks :

- The thick extra stelar covering in old stem is called _____
- The path of translocation of organic solutes is the _____
- The S shaped curve representing the grand period of growth is called _____
- _____ is the sum total of genes present in a species.

4. Match the following :

A	B	C
Antitranspirants	Single layered	Anther
Rhizobium	Medium	Casparian strips
Endodermis	Nitrogen fixing	Carbondioxide
Explant	Gas	Symbiosis

5. Answer in **one** word or in **one** sentence :

- Hematoxylin
- Tyloses
- Coconut milk factor
- Physical or chemical agent inducing mutation.

(5×1=5)

SECTION – B

Answer **any four** :

Differentiate the following. **Each** question carries a weightage of **1**.

- Killing and fixing.
- Anomocytic and anisocytic stomata.
- Symbiotic and asymbiotic nitrogen fixation.
- Phytosanitary certificate and quarantine regulation.
- Heart wood and sapwood.
- CAM and C4 plants.

(4×1=4)



SECTION – C

Answer **any five** :

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

- Water potential.
- Structure of hydathode.
- Hybrids.
- Anatomical adaptations of epiphytes.
- Essential elements.
- Abscissic acid.
- Simple tissues.

(5×1=5)

SECTION – D

Answer **any six** :

Short essay questions. **Each** question carries a weightage of **2**.

- Give an account of trichomes.
- Explain passive absorption of water.
- Write a note on different types of vascular bundles.
- Give the practical application of auxins.
- Explain Munch hypothesis.
- List out the anatomical adaptations of hydrophytes.
- Comment on the phases of growth.
- Explain the technique of invitro culture.

(6×2=12)