

**C.U.SHAH UNIVERSITY**

Wadhwan City

Summer Examination-2014

Date: 2/06/2014

Subject Code : 4LS02BOT1

Subject Name: **Plant Physiology**

Branch/Semester:-B.Sc(Micro) /II

Time:2:00 To 5:00

Examination: Regular

**Instructions:-**

- (1) Attempt all Questions of both sections in same answer book / Supplementary
- (2) Use of Programmable calculator & any other electronic instrument is prohibited.
- (3) Instructions written on main answer Book are strictly to be obeyed.
- (4) Draw neat diagrams & figures (If necessary) at right places
- (5) Assume suitable & Perfect data if needed

**SECTION I****Q.1 Define the following:** [07]

a) Photosynthesis b) Transpiration c) Cohesion d) Capillary fringe e) Guttation f) Sink g) Osmosis

Q.2 a) Explain different types of stomata with examples. [05 ]

b) Explain phenomenon of Osmosis using potato osmoscope &amp; Egg membrane method. [05 ]

c) Describe the properties of water. [04 ]

**OR**

Q.2 a) Explain determination of stomatal index. [05 ]

b) Explain factors affecting transpiration. [05 ]

c) Explain uptake of water by Passive transport. [04 ]

Q.3 a) Describe the ultrastructure of chloroplast. [07 ]

b) Classify types of soil &amp; soil water. [07 ]

**OR**

Q.3 a) Describe mechanism of translocation of inorganic solutes. [07 ]

b) Explain Calvin's cycle. [07 ]

**SECTION II****Q.4 Define the following:**

a) Aquaporins b) Field capacity c) Fermentation d) Hydrogen bonding e) Respiration f) Diffusion

g) Respiratory quotient [01 mark each]

Q.5 a) Explain factors affecting stomatal aperture. [05 ]

b) Differentiate between respiration &amp; fermentation. [05 ]

c) Differentiate between aerobic &amp; anaerobic respiration. [04 ]

**OR**

Q.5 a) Explain mechanism of stomatal opening. [05 ]

b) Explain structure of Mitochondria. [05 ]

c) Explain phenomenon of transpiration using bell jar method. [04 ]

Q.6 a) Write a note on Macro &amp; micro elements. [07 ]

b) Explain Krebs's cycle. [07 ]

**OR**

Q.6 a) Explain Light reaction. [07 ]

b) Explain Mass flow hypothesis. [07 ]

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