

VCD: 010423 Sem-IV Botany-II Date: \_\_\_\_\_ Time: \_\_\_\_\_

[Time: Three Hours]

[ Marks:100]

Please check whether you have got the right question paper.

- N.B: 1. All questions are compulsory.  
2. Figures to the right indicate full marks.  
3. Draw neat and labelled diagrams wherever necessary.

Q.1 A) Choose the correct option from the following:

10 Marks

- a. Osteo sclereids are also known as \_\_\_\_\_ cells.  
a. Bone                      b. Stellate                      c. Rod                      d. Stone
- b. Xylem and phloem located on the same radius such type of vascular bundle is known as \_\_\_\_\_ Vascular bundles.  
a. Conjoint                      b. Radial                      c. Exarch                      d. Endarch
- c. Balloon like protrusion are present inside the vessels are known as \_\_\_\_\_.  
a. Tylosis                      b. Lenticel                      c. Periderm                      d. Sclereid
- d. \_\_\_\_\_ are plants that flower or in which flowering is accelerated when the daily light period exceeds a critical daylength.  
a. Day Neutral Plants (DNP)                      b. Long Day Plants (LDP)                      c. Short Day Plants (SDP)                      d. All of the above
- e. Aerobic Respiration is also known as \_\_\_\_\_ oxidation.  
a. Complete                      b. Incomplete                      c. Neutral                      d. Essential
- f. Phytochrome Pr absorbs the visible radiation at \_\_\_\_\_ nm.  
a. 530                      b. 625                      c. 660                      d. 730
- g. Cellular Respiration is carried out by \_\_\_\_\_.  
a. Ribosome                      b. Mitochondria                      c. Chloroplast                      d. Nucleus
- h. The study of complex interrelations between organism and their environment in which they live and struggle for their existence is known as \_\_\_\_\_.  
a. Niche                      b. Ecosystem                      c. Ecology                      d. Habitat
- i. \_\_\_\_\_ includes vegetation growing on wetland.  
a. Fellfield                      b. Steppe                      c. Savanna                      d. Swamp
- j. Soil is a superficial layer of the earth's crust formed from the soil parent material called \_\_\_\_\_.  
a. Calcification                      b. Eluviations                      c. Regolith                      d. illuviation



**Q.1 B) Answer the following in one sentence:**

**10 Marks**

- a) What are the Functions of phloem
- b) What is the parenchymatous tissue.
- c) Give the Number of ATP obtained from  $\text{NADH}_2$  and  $\text{FADH}_2$
- d) Define Glycolysis.
- e) Define the Topographic factor

**Q.2 Answer any two from the following:**

**20 Marks**

- a) Explain Growth Rings with help of neat and labelled diagram
- b) Describe the different types of collenchyma and comment on its functions.
- c) Describe components Xylem and its function.
- d) Describe Shearing stress and Inextensibility with help of neat and labelled diagram.

**Q.3 Answer any two from the following:**

**20 Marks**

- a) Explain the mechanism of Anaerobic Respiration. Give its importance.
- b) Describe the Electron Transport System (ETS) with neat and labelled schematic diagram.
- c) What is Photoperiodism? Give difference between SDP and LDP.
- d) Define the Vernalisation process in detail. Give its application.

**Q.4 Answer any two from the following:**

**20 Marks**

- a) Describe in detail carbon cycle. Add a note on its importance.
- b) Explain the concept of Environmental factors.
- c) Discuss the process of soil formation with respect to chemical weathering.
- d) Enlist and explain quantitative characteristics of community.

**Q.5 Answer any four from the following:**

**20 Marks**

- a) Periderm
- b) Heart and wood and Spring wood
- c) Importance of Respiration in plants.
- d) Describe the Reaction of interconversion of Phytochromes
- e) Pedogenesis
- f) Stratification

-----XXX-----