

VPM's B. N. Bandodkar College of Science, Thane  
S. Y. B. Sc. (Sem IV) Examination 2016-17  
REV--USBO402

Botany

Duration 2<sup>1/2</sup> Hrs

Total  
Marks 75

- N.B 1. All questions are compulsory.  
2. Figures to the right indicate full marks.  
3. Draw neat labeled diagrams wherever necessary.
- Q.1 a) Discuss normal secondary growth of dicotyledonous stem with suitable example. 10
- OR
- a) Describe role of xylem as a mechanical tissue. 10  
b) Explain different components of phloem with their functions. 10
- OR
- b) Give an account on types of vascular bundle. 10
- Q.2 a) Discuss the process of Photorespiration. 10
- OR
- a) Give an account of physico-chemical properties of phytochrome. 10  
b) Describe the Glycolysis pathway. 10
- OR
- b) Explain the mechanisms and applications of Vernalization. 10
- Q.3 a) Describe gaseous cycle of carbon with respect to its flow in an atmosphere. 10
- OR
- a) Discuss various biotic and abiotic components of an ecosystem. 10  
b) Explain different chemical components of soil in detail. 10
- OR
- b) Give an account on soil profile supported by suitable diagram. 10
- Q.4 Write short notes on any three of the following: 15
- a) Incompressibility  
b) Sclereids  
c) Energetic of respiration  
d) Pr-Pfr interconversion of phytochrome  
e) Biological weathering of soil  
f) Concept of community