

**B.N.Bandodkar College of Science, Thane**  
**F.Y.B.Sc. Second Semester Examination 2013**  
**USBOT202**  
**Paper II**

Duration 2 hrs

Max Marks 60

- 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 the different types of ecosystems. Describe marine ecosystem in detail. 7  
OR  
a) Give a detailed account of phytoremediation. 7  
b) With reference to structural aspects of ecosystems, discuss nutrients and species composition 8  
OR  
b) Discuss the concept of ecosystem. 8
- Q. 2 a) With reference to genetic engineering, explain any one type of cloning vector. 7  
OR  
a) Describe the process of replication as seen in eukaryotes. 7  
b) Explain restriction endonuclease enzyme with respect to gene cloning. 8  
OR  
b) Give a detailed account of duplication as seen in prokaryotes. 8
- Q. 3 a) With reference to herbal cosmetics explain Keshya and Twakprasadana. 7  
OR  
a) Describe in detail the different branches of forestry. 7  
b) With reference to horticulture, explain Pomology and Olericulture. 8  
OR  
b) With reference to herbal cosmetics explain the concept of beauty adding a note on its merits. 8
- Q. 4 a) Answer **any three** of the following in one word/ sentence: 3  
1. What is the name given to grassland of North America?  
2. Define the term 'Ecological efficiency'.  
3. Which enzyme prevents excessive super coiling of DNA during replication?  
4. What is bacteriophage?  
5. Name any two essential oils used in Aromatherapy  
6. Which method is used to treat muscular aches and sprains?
- b) Attempt **any two** of the following: 12  
1. Explain the process of mycoremediation with the help of suitable examples.  
2. Describe the structure of DNA.  
3. Write a note on 'hair' and 'skin' care.  
4. Discuss Tendu leaves with respect to forest product.