

2054

B.E. (Biotechnology) Second Semester  
ESBT-201: Basic Bio-Technology ✓

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

Write briefly:

(1×10 = 10)

1. a) How can we differentiate chromosomes from chromatin?
- b) Give example of voluntary and involuntary muscle.
- c) What is nucleosome?
- d) Which chemical bonds predominate in complementary base pairing of DNA?
- e) What is parthenogenesis?
- f) What are the types of white blood cells and their function?
- g) Give example of two non toxic biopolymer used in drug delivery.
- h) What is incomplete dominance?
- i) What is bolus in digestive system?
- j) What are microvilli in digestive system?

**SECTION-A**

2. A) Describe digestive system in detail with diagram.  
B) Describe about adrenal glands. Brain controls endocrine glands in body. Justify the statement.  
(5, 5)
3. A) Explain circulatory system in detail with diagram.  
B) Explain about different muscle tissue along with diagram.  
(5, 5)
4. A) Explain dihybrid cross in detail with punnet square.  
B) Extrachromosomal inheritance is non-Mendellian inheritance. Justify the statement.  
(5, 5)

**SECTION-B**

5. A) Compare: GLP and GMP.  
B) What are hydrogels? Explain their applications with suitable application.  
(5, 5)
6. A) What are the applications of genetic engineering in different aspects of life?  
B) Describe about vectors for cloning in genetic engineering.  
(5, 5)
7. A) How to deal with biomedical wastes? Explain in details.  
B) What are the national and international norms of biosafety?  
(5, 5)

x-x-x