

TDC (CBCS) Even Semester Exam., 2019

BIOTECHNOLOGY

(2nd Semester)

Course No. : BTCDSC-201T/BTCGEC-201T

(Biotechnology and Human Welfare)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer any *ten* questions from the following :
1×10=10

- (a) Define enzyme.
- (b) Give an example of polysaccharide.
- (c) What is the scientific name of yeast?
- (d) Name two nitrogen fixing organisms.
- (e) Define mycorrhiza.
- (f) What is hybrid vigour?
- (g) Name two biodegradable pollutants.

- (h) What do you mean by xenobiotics?
- (i) Give an example of chlorinated organic pollutant.
- (j) Define forensic science.
- (k) What is DNA probe?
- (l) Define monoclonal antibody.
- (m) What is *E. coli*?
- (n) Define amniocentesis.

UNIT—I

2. (a) Who coined the term 'antibiotics'? Write about enzyme activity. 1+3=4
- (b) How does polysaccharide synthesis take place? 4

Or

- (c) Give an account of industrial production of ethyl alcohol. 4
- (d) Define protein engineering. Describe its various aspects. 1+3=4

UNIT—II

3. (a) What is antagonism? Write about leghaemoglobin and nitrogenase. 1+3=4
- (b) Write a note on dairy farming. 4

(3)

Or

- (c) Give a detailed account of symbiotic nitrogen fixation. 4
- (d) Describe transfer of pest resistant genes in plants. 4

UNIT—III

4. (a) Name a bacterium of degradation of oil spill. Write a note on degradation of agricultural wastes. 1+3=4
- (b) Give a detailed account of stress management. 4

Or

- (c) Give an illustrated account of degradation of hydrocarbons. 4
- (d) Write about development of biodegradable polymers. 4

UNIT—IV

5. (a) What is southern blotting? Write about DNA polymorphism. 2+2=4
- (b) Write about paternity test. Add a note on applications of forensic science. 2+2=4

(4)

Or

- (c) Give a detailed account of solving violent crimes. 4
- (d) Describe the principle and applications of DNA fingerprinting. 4

UNIT—V

6. (a) Write a note on nontoxic therapeutic agents. 4
- (b) Give a detailed account of recombinant live vaccines. 4

Or

- (c) Give a detailed account of gene therapy. 4
- (d) Point out the findings of Human Genome Project. Add a note on its ethical and moral issues. 2+2=4
