



SN - 417

V Semester B.Sc. Examination, November/December 2017
(F + R/CBCS)
BIOTECHNOLOGY - V
Genetic Engineering and Environmental Biotechnology

Time : 3 Hours

Max. Marks : 70

Instruction : Draw neat labelled Diagrams wherever necessary.

SECTION - A

I. Write short notes on the following : (5×2=10)

- 1) DDT
- 2) RNase H
- 3) Methanogens
- 4) Lac Z gene
- 5) PAGE.

SECTION - B

ii. Answer any four of the following : (4×5=20)

- 6) Write a note on PBR322.
- 7) Write a note on Southern Blotting.
- 8) What is colony hybridisation ? Explain.
- 9) Explain microbial H₂ production.
- 10) Write a note on genetically modified plants.

P.T.O.

SN-417



SECTION - C

III. Answer **any three** of the following : **(3×10=30)**

- 11) Describe in detail the steps involved in PCR. Add a note on its applications.
- 12) Discuss about the degradation of plastics in detail. Add a note on its environmental hazards.
- 13) What are Biofertilizers ? Explain in detail symbiotic N_2 fixation in bacteria.
- 14) Write notes on the following :
 - a) T_4 DNA ligase
 - b) Expression of cloned DNA in E.coli.
- 15) Explain the steps involved in construction of cDNA library.

SECTION - D

IV. Answer the following : **(10×1=10)**

- 16) What is pyrolysis ?
 - 17) Name any two organisms used in the bioleaching of Uranium.
 - 18) Define Biosorption.
 - 19) Expand TEMED.
 - 20) Name the vector commonly used in the recombinant Hepatitis B vaccine production.
 - 21) Write any two demerits of microinjection.
 - 22) Expand dd NTP's.
 - 23) What is the function of exonucleases ?
 - 24) Give any two examples of conventional fuels.
 - 25) What are cosmids ?
-