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) R Nase 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 P^{BR322}.

7) Write a note on Southern Blotting.

8) What is colony hybridisation ? Explain.

9) Explain microbial H_2 production.

10) Write a note on genetically modified plants.

P.T.O.

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 ?

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V Semester B.Sc. Examination, Nov./Dec. 2017
(F + R/CBCS)
BIOTECHNOLOGY – VI
Immunology and Animal Biotechnology

Time : 3 Hours Max. Marks : 70

Instruction : *Draw a **neat** labelled diagrams **wherever** necessary.*

SECTION – A

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

1) Acquired immunity.
2) Antigens.
3) Blood cell components.
4) Erythropoietin.
5) Transformed cells.

SECTION – B

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

6) Explain humoral immunity.
7) Write a note on ABO Blood grouping system.
8) What is Immunization ? Explain.
9) Explain serum free media with examples.
10) Give an account on expression vectors.

SECTION – C

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

11) Explain the technique of enzymatic disaggregation of the tissue.
12) Write the principle, protocol and application of ELISA.
13) Discuss the role of Antibodies in Allergic reactions.
14) What is a vaccine ? Explain peptide and DNA vaccine.
15) What is transfection ? Explain in detail.

P.T.O.

SECTION – D

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

16) Define passive immunity.

17) What are epitopes ?

18) What are lymphocytes ?

19) Expand RIA.

20) What is attenuation ?

21) What is serum ?

22) Expand PDGF.

23) What is cloning ?

24) Name the person who discovered monoclonal antibodies.

25) What is Biopharming ?