

**2020/TDC(CBCS)/ODD/SEM/
EESHCC-302T/392**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

ECOLOGY AND ENVIRONMENTAL SCIENCE

(3rd Semester)

Course No. : EESHCC-302T

(Environmental Biotechnology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION—A

- 1. Answer any ten of the following questions :**
2×10=20

(a) What is DNA? What type of DNA is found in human?

(b) What are the different nitrogen bases present in DNA?

(2)

- (c) Write the functions of RNA.
- (d) Write the differences between DNA and RNA.
- (e) What do you mean by central dogma?
- (f) What are the types of amino acids?
- (g) Write the functions of protein.
- (h) Write briefly about genetic materials of prokaryotes.
- (i) Write a note on recombinant DNA.
- (j) What is gene cloning?
- (k) Write a note on T_2 -bacteriophage.
- (l) Write a note on endoplasmic reticulum.
- (m) What is bioremediation? Give example.
- (n) Write a brief note on vermiculture.
- (o) What is landfill?
- (p) What is phytoremediation? Explain with example.
- (q) Write a note on the importance of biofertilizer.

(3)

- (r) What is IPM? Give one example.
- (s) What do you mean by metal leaching?
- (t) What are stress tolerant plants? Give one example.

SECTION—B

Answer *any five* questions

- 2. Describe in detail the structure of DNA and also write the functions. 4+2=6
- 3. Explain the biological significance of DNA and its application on environmental studies. 6
- 4. Describe the different structures of protein with diagram. 6
- 5. Explain the structure of eukaryotic cell and function of different organelles. 6
- 6. What is restriction enzyme? Why is restriction endonuclease called biological scissor? Write a note on cDNA library. 1+1+4=6
- 7. What is cloning? Describe in brief the different steps of gene cloning. 1+5=6

8. What is waste management? Explain the different processes of wastewater treatment.
1+5=6
9. Describe the solid waste management and its sources.
6
10. What is pesticide? Describe various types of microbial insecticides and pesticides with examples.
1+5=6
11. What are biofuels? Describe the importance of biofuel and its uses in modern day life.
2+4=6

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