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PG Even Semester (CBCS) Exam., May—2019

BIOTECHNOLOGY

(2nd Semester)

Course No. : BTYOC–203

(Fundamentals of Biotechnology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Chalk out the steps of glycolysis. Explain the not yield of ATP per mole of glucose metabolized via glycolysis. 14

OR

2. What are cell lines? Differentiate between transformed and non-transformed cell lines in culture. 2+12=14

3. Write the process of isolation of microbes and methods used for their molecular characterization. 14

OR

4. Chalk out the cytosolic and endocytic pathways of antigen processing. 14

5. Explain the mechanism of protein synthesis in prokaryotes. 14

OR

6. Discuss any four post-translational modifications which are necessary for the functionality of proteins. 14

7. *(a)* Define multiple alleles.

(b) Discuss the features of multiple alleles.

(c) Write a note on ABO blood grouping indicating genotypes and phenotypes in human. 2+4+8=14

OR

8. *(a)* What is sex-linked inheritance?

(b) Discuss the characteristics of sex-linked gene.

(c) Write a note on diseases caused by sex-linked genes. 2+8+4=14

9. What are transgenic plants? Write the methods of gene transfer with the help of T_i plasmid. 2+12=14

OR

10. Write short notes on the following : 3½×4=14

(a) ICSI

(b) Restriction enzymes

(c) Biofuel

(d) Bioremediation with the help of recombinant DNA technology

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