

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**

**FIRST TERMINAL EXAMINATION- JULY-2017**

**CLASS: XI**

**Time: 3 Hrs**

**SUBJECT:BIOTECHNOLOGY**

**Max Marks:70**

**General instructions**

- (1)All questions are compulsory.
- (2)There is no overall choice. However internal choice has been provided in one question of three marks and three questions of five marks. You have to attempt only one of the choices in such questions. Question paper contains four sections – A, B, C and D
- (3)Question numbers 1 to 6 are very short answer questions, carrying 1 mark each.
- (4)Question numbers 7 to14 are short answer questions, carrying 2 marks each.
- (5)Question numbers 15 to 25 are also short answer questions, carrying 3 marks each.
- (6)Question numbers 26 to 28 are long answer questions, carrying 5 marks each.
- (7)use of calculators is not permitted. However, you may use log tables, if necessary.

**SET A**

**SECTION A ( 1 Mark )**

1. Name the recombinant products from E.coli in health care industry.
2. Name i)the enzyme that keep the DNA in super coiled state.ii) the first protein to be sequenced.
3. Name the co enzyme form of a) lipoic acid b) biotin
4. Name one i)Aldotetrose ii) heteropolysaccharide
5. Define epimers.
6. Define fermentation.

**SECTION B ( 2 Marks )**

7. List the important applications of biotechnology in agriculture industry.
8. List two functions of plasma membrane.
9. Draw the structure of ATP.
10. What are the ethical issues regarding the biotech recombinant products.(any two)
11. List four amino acids and their derivatives.
12. Diphenyl amine test is specific to DNA. Why?
13. Proteins are the most diverse group of biomolecules. Explain.
14. Knowing the 3-D structure of enzyme is significant in pharmaceutical industries.Justify.



**SECTION C ( 3 Marks )**

15. Explain the procedure of large scale fermentation using a fermenter.
16. Write a short note on aminoacids.
17. How enzymes differ from inorganic catalyst.
18. Explain the strategy used in amino acid sequencing.
19. Differentiate between homofermentation and heterofermentation.
20. Explain secondary structure of protein.
21. Explain the three major forms of RNA.
22. Explain ninhydrin test. what is its importance.

OR

Hemoglobin is functionally more complex than myoglobin. Why

23. Describe the formation of disaccharide with one example.
24. Draw a flowchart showing the pathway of glycolysis.
25. Explain any three classification of sugars.

**SECTION D ( 5 Marks )**

26. Explain with a diagram, the important features of Watson and Crick model of DNA.

OR

Briefly explain any four technologies in modern biotechnology.

27. Draw and explain the structure of nucleotides.
28. Explain r-DNA technology procedure with the help of diagram.

OR

Schematically explain TCA cycle

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