

INTERNATIONAL INDIAN SCHOOL – DAMMAM
FIRST TERM EXAMINATION – 2014-2015
CLASS: XI - BIOTECHNOLOGY

Time Allowed: 3 Hrs

Total 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 two 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 to 14 are short answer questions, carrying 2 marks each.

(5) Question numbers 15 to 25 are also short answer questions, but carrying 3 marks each.

(6) Question numbers 26 to 28 are long answer questions, carrying 5 marks each.

Section – A (1 Mark)

1. Explain the term patent.
2. What are x rays?
3. Draw the structure of an amino acid.
4. What are peroxisomes?
5. Write the equation for osmotic pressure.
6. What are sequenators?

Section – B (2 Marks)

7. Differentiate between pluripotent and multipotent.
8. What is nitrogenase and what is its basic structure?
9. Differentiate between Z DNA and A DNA.
10. Write a short note on any 2 plastids.
11. List the pillars of GLP.
12. What are ampholytes?
13. Write the equation representing the net outcome of glycolysis.
14. List any 4 properties of membrane proteins.

Section – C (3 Marks)

15. Explain ninhydrin test.

16. Explain alpha beta and tertiary structure of proteins.
17. Define the following terms (a) Ultracentrifuge (b) Feedback inhibition (c) Diazotrophs.

OR

- Draw and explain the structure of a chloroplast
18. Explain the two strategies evolved by the nitrogen fixing organisms in the presence of oxygen during nitrogen fixation.
 19. List any 3 differences between RNA and DNA.
 20. Differentiate between heterochromatin and euchromatin.
 21. Draw and explain the structure of a neuron.
 22. Explain the technique of Electrophoresis.
 23. Briefly explain the Watson and Crick model of DNA
 24. With the help of an example explain the function of an inhibitor.
 25. Enlist any 3 ethical issues in the field of Biotechnology.

Section – D (5 Marks)

26. Explain different types of simple and complex Plant Tissues.
27. With the help of a neat labeled diagram explain the features of a fermenter.

OR

What is C₃ cycle? With the help of a flow chart explain the cycle.

28. Explain the technique of gel permeation. List its advantages.

OR

Draw a flowchart for krebs cycle and explain the process.