

439 k '4

INTERNATIONAL INDIAN SCHOOL – DAMMAM  
SECOND 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.
- (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.
- (7) Use of calculators is not permitted. However, you may use log tables if necessary

**Section – A (1 Mark)**

1. Differentiate between homo and hetero-fermentation.
2. Name the heteropolysaccharide present in cell walls of bacteria.
3. What are microsomes?
4. Draw the structure of an ATP molecule.
5. What is replication fork?
6. Name a meat tenderizer.

**Section – B (2 Marks)**

7. List any four features of organellar genome.
8. How does the addition of salt in a protein solution bring about the precipitation of proteins?
9. Differentiate between primary and secondary lymphoid organs.
10. What is the role of chlorophyll a molecule in the light reaction of photosynthesis?
11. State the role of sigma factor in the case of RNA polymerase.
12. What is acrolein? How can you identify the presence of it?
13. Explain the catalytic power of enzymes.
14. Write a short note on G phase.



**Section – C (3 Marks)**

15. (a) Explain Fehlings and Benedicts test. (b) Give reason why sucrose is not a reducing sugar.
16. Give a short note on 2 types of stem cells.
17. What are the modifications done to mRNA before transferred to cytoplasm?
18. Sketch out the primitive pathway of glucose catabolism.

OR

Draw the flow chart of Krebs cycle.

19. Muscle is a tissue which is unique to animals and plays a leading role in mobility of animals explain.
20. Differentiate between mitosis and meiosis.
21. Explain the principle involved in colorimetry.
22. With the help of a diagram explain the structure of a gene.
23. List the properties of enzymes.
24. Describe the semi-conservative model of DNA replication.
25. Give a short note on the following terms (a) RNA splicing (b) Transformation (c) Ampholytes.

**Section – D (5 Marks)**

26. Bring out the steps involved in prophase I with the help of relevant diagrams.
27. With the help of diagrams explain the process of protein synthesis.

OR

Give a note on different types of animal tissues.

28. Explain primary secondary tertiary and quaternary structure of proteins. Write an example for each structure.

OR

Write a short note on three forms of RNA also write the differences between RNA and DNA.