

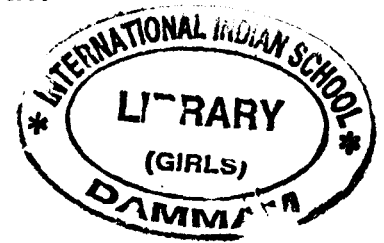
**INTERNATIONAL INDIAN SCHOOL – DAMMAM**

**FIRST TERM EXAMINATION 2013**

**Subject – Biology**

**Class - XI**

**SET- B**



**Time : 3 hours**

**Max Marks: 70**

**General Instructions :**

1. All questions are compulsory.
2. This question paper consists of four sections A, B, C and D. Section A contains 8 questions of 1 mark each, Section –B is of 10 questions of 2 marks each. Section C has 9 questions of 3 marks each and Section D is of 3 questions of 5 marks each.
3. There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks and all the three questions of 5 marks weightage. Attempt only one of the choices in such questions.
4. Wherever necessary, the diagrams drawn should be neat and properly labelled.

**Section A**

1. What does the half-leaf experiment on photosynthesis prove. [1]
2. How does a manual serve as a taxonomic aid? [1]
3. Name the membraneous extensions into the cytoplasm that contain pigments in prokaryotes. [1]
4. What do you mean by the term crossing over. [1]
5. Name the family that comprises Tiger, Leopard and Cats. [1]
6. There is a clear division of labour within the chloroplast. Justify [1]
7. Define vital capacity with respect to breathing. [1]
8. A chronic disorder in which alveolar walls are damaged due to cigarette smoking. [1]

**Section B**

Fill in the blanks : a to d in the different columns of the table given below. [2]

Enzyme	Substrate	Product of action
( a )	Starch	( b )
Pepsin	( c )	( d )

How does cytokinesis in plant cells differ from that in animal cells. [2]

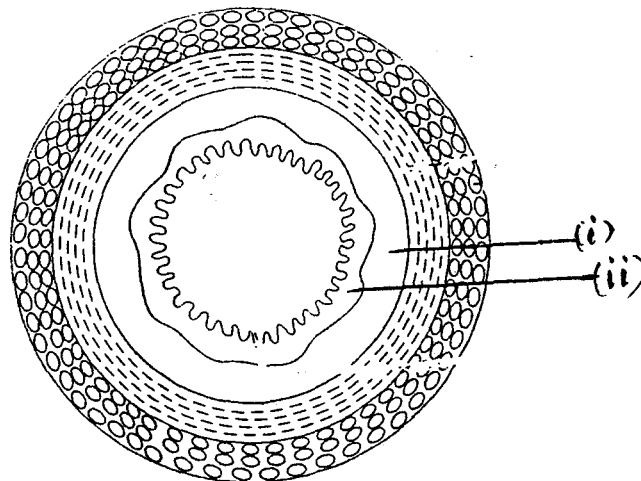
12. Enlist the function of ( a ) pyloric sphincter ( b ) sphincter of Oddi [2] 2
13. Differentiate active transport and passive transport. [2]
14. Explain how transport of oxygen takes place in the human body. [2]

OR

- Explain how transport of carbon dioxide takes place in the human body.
15. Mention the four factors needed for chemiosmosis to take place. [2] 2
16. Why the reaction centers of photosystem are named as P700 and P680 respectively. [2]
17. What are nucleosides. Name the four of them which occur in DNA. [2]
18. What will be the aminoacid if the R-group is a methyl group and represent the structural formula of the aminoacid. [2]

### Section C

19. Name the organelle in animal cell that has its own genetic material. Explain with the help of labeled diagram. [3]
20. How does the digested products of fat molecule get absorbed into the blood stream? [3]
21. Why are membraneous organelles considered as an endomembrane system. Mention its components. [3]
22. What are co-factors. Explain different kinds of co-factors and their functions with examples. [3]
23. Enumerate the events that occur in anaphase of mitosis and draw a labeled diagram of the cell in this stage. [3]
24. [3]



- (a) What does the given picture depict.
- (b) Identify (i) and <sup>write</sup> what is it formed of.
- (c) Identify (ii) and write its modification in stomach and small intestine.
25. Explain the mechanism of breathing in humans. [3]
26. Describe noncyclic photophosphorylation in plants. Why is this process called so. [3]

27. Explain the three stages of interphase [3]

OR

( i ) Why mitosis is called as equational division.

( ii ) Give any two major significant differences between mitosis and meiosis

**Section D**

28. ( a ) What is a centromere. How does the position of centromere form the basis of classification of chromosomes. Support your answer with diagrams. [5]

( b ) Define cytoskeleton in a cell and list the functions.

OR

( a ) Explain the different types of plastids on the basis of their pigments and mention their functions.

( b ) What is the importance of fluid nature of membranes regarding cell function.

29. Where does Calvin cycle take place in chloroplasts. Explain the cycle. [5]

OR

Describe the C4 pathway of photosynthesis. How is this pathway an adaptive advantage to the plant?

30. What are proteins. Describe the primary, secondary, tertiary and quaternary structure of proteins. [5]

OR

What are enzymes. Explain the different factors that affect enzyme activity.

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