

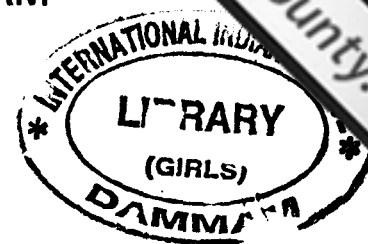
INTERNATIONAL INDIAN SCHOOL – DAMMAM

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. Whereever 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

1. 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 )

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

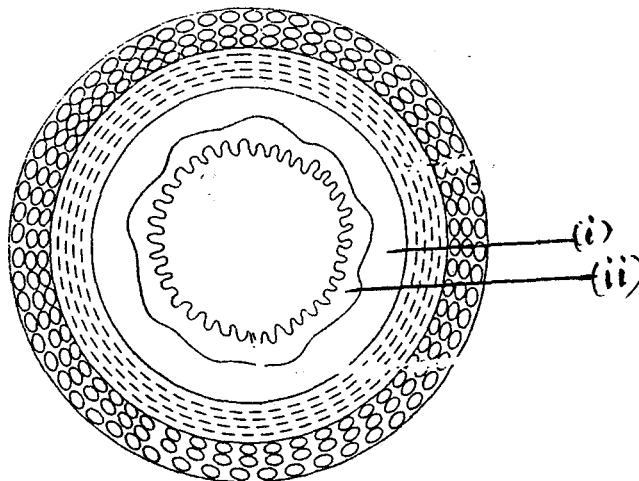
OR

Explain how transport of carbon dioxide takes place in the human body.

15. Mention the four factors needed for chemiosmosis to take place. [2]
16. Why the reaction centers of photosystem are named as P<sub>700</sub> and P<sub>680</sub> respectively. [2]
17. What are nucleosides. Name the four of them which occur in DNA. [2]
18. What will be the amino acid if the R-group is a methyl group and represent the structural formula of the amino acid. [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.

[2]

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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