

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**

**MODEL EXAMINATION , JANUARY 2016**

**SUBJECT : BIOLOGY**  
**CLASS :XI**

**SET.A**

**TIME: 3½ Hrs**  
**MAX. MARKS : 70**

**GENERAL INSTRUCTIONS:**

1. All questions are compulsory.
2. The question paper consists of five sections, A,B,C,D & E. Section A contains 5 questions of 1 mark each, Section- B contains 5 questions of 2 marks each, Section-C contains 12 questions of 3 marks each, Section.D has one value based question of 4marks Section .E is of 3 questions of 5 marks each including OTBA questions.
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 one question of 5 marks. Attempt only one of the choices in such questions.
4. Wherever necessary, the diagrams drawn should be neat and properly labeled.

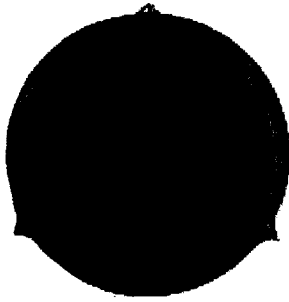
**SECTION.A**

- |  |   |
|--|---|
| 1. Why is blind spot devoid of vision?   | 1 |
| 2. What is meant by stele?   | 1 |
| 3. Name the chemical that makes the middle lamella.  | 1 |
| 4. How is a turgid cell different from a flaccid cell?   | 1 |
| 5. Name the smallest living cell that completely lacks a cell wall and can survive without oxygen. | 1 |

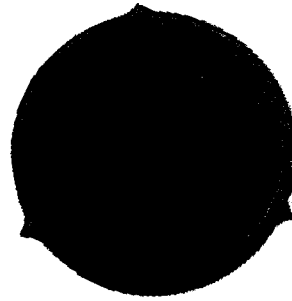
**SECTION.B**

- |  |   |
|--|---|
| 6. Mention the <u>Phylum</u> along with <u>one example</u> with reference to the distinctive features mentioned below: | 2 |
| (a) Bioluminescence and comb plates  |   |
| (b) Water vascular system  |   |
| (c) Rasping organ, radula  |   |
| (d) Cnidoblasts  |   |

7. (a) What is placentation? 2
- (b) Name the type of placentation shown in given figures (i) and (ii). Give one example each. 2



(i)



(ii)

8. Diagrammatically represent the Nitrogen cycle. 2
9. Name one surface structure of motile bacteria which help in motility. Briefly describe its structure. 2
10. Describe the structure of the contractile protein Actin with the help of a neat labeled diagram 2

OR

Describe the role of lungs and skin in excretion.

### SECTION.C

11. Give a brief account of the events that takes place in the Prophase –I of the Meiosis. 3
12. Draw the structure of a double membrane bound cell organelle in plant cell which are found in green cells and label the following parts : 3
- (a) Space limited by inner membrane.
- (b) Flattened membranous sacs.
- (c) Flat membranous tubules which connect membranous sacs of the different grana.
- (d) Relatively less permeable membrane.

13. What is Facilitated diffusion? How symport transport is different from antiport transport? 3
14. What is aestivation? Describe the different types of aestivation found in flowering plants. 3
15. (a) Name the widely accepted improved model of the structure of cell membrane  
(b) Who proposed this model? 3  
(c) Explain this model of Plasma membrane with the help of the diagram.
16. a) Which pathway of photosynthesis is more efficient – C<sub>3</sub> or C<sub>4</sub> pathway. Give reason. 3  
(b) Give a diagrammatic representation of C<sub>4</sub> Pathway.
17. Differentiate between Red algae, Green algae and Brown algae with respect to their pigments and stored food. 3
18. In the given table showing name of some hormones and their function .Fill in the blanks **A to F**

No.	Name of the hormone	Function
1.	Glucagon	( A )
2.	( B )	Controls metabolism of proteins
3.	Parathyroid Hormone	( C )
4.	( D )	Regulates the diurnal rhythm of human body
5.	Prolactin	( E )
6.	( F )	Regulates female sexual behaviour

**OR**

Which of the plant growth regulators one would use for the following :-

- a) 'bolt' a rosette plant .  
 (b) induce immediate stomatal closure of leaves  
 (c) quickly ripen a fruit  
 (c) induce rooting in a twig  
 (c) delay in the leaf senescence  
 (c) induce parthenocarpy in tomatoes

19. Describe Primary ,Secondary and Tertiary structure of proteins and support your answers with diagrams. 3
20. Where do you find the following in the cockroach alimentary canal and mention their function also. 3
- (i) Crop (ii) Hepatic caecae (iii) Gizzard
21. Differentiate between the anatomy of dicot stem and that of a monocot stem with reference to the following : 3
- (i)Epidermis (ii)Hypodermis (iii)Vascular bundles
22. Give Schematic representation of Glycolysis. 3

#### SECTION.D

23. Priya had a party at home .So she was very busy in preparing varieties of dishes. When she was cooking vegetable, suddenly she picked that hot utensil with bare hands in a hurry. As she touched that utensil, she quickly left the utensil and all vegetable fell down .Her husband, Mohan explained to her, what such actions were called and how it happens 4
- (a)Which action was shown by Priya?
- (b) Mention the arc of that action .What is the importance of that action?
- (c ) What values are shown in the action of Mohan.

#### SECTION.E

24. a) Where does Non –cyclic Photophosphorylation takes place? 5
- (b) Describe Z-scheme in light reaction of photosynthesis.
- (c) Why is it called so?
- OR
- (a) Explain Pressure flow hypothesis of translocation of sugars in plants.
- (b) A transverse section of root nodule of soya bean plant appears pink .
- (i) What makes nodule pink?
- (ii) What type of condition does this pigment create in the nodule and how?

## Section : Open Text Based Assessment(OTBA) questions

### Instructions for the students:

01. These questions are based on one of the themes provided to you by the board .
  02. Please ensure that you get a copy of the relevant themes from the school to refer while answering the questions.
  03. Each question carries 5 marks.
  04. The suggested word limit for the questions is 100-120 words .However depending on the question, your answer could be shorter /or longer.It is important to present your views, arguments and conclusions logically, coherently in your own language ;based on the concepts learnt during teaching learning sessions till class xi,their applicability with respect to the open text material and your own awareness of of the given theme.
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25. Represent the integrity in various systems of the body by taking examples of at least three body systems and any two examples from your daily life and their processes 5
  26. Reflect ,how the above text material prepares you for life ,by giving suitable examples from real life situations 5

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