

**GULF SAHODAYA EXAMINATION
(SAUDI CHAPTER) 2017 -2018**

**Biology
Class - XI
SET- A**

Time : 3 hours

Max Marks : 70

General Instructions :

1. All questions are compulsory.
2. This question paper consists of five sections A, B, C, D and E. Section A has 5 questions of 1 mark each, Section B has 5 questions of 2 marks each, Section C has 12 questions of 3 marks each, Section D has 1 question of 4 marks and section E has 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. Whenever necessary, the diagrams drawn should be neat and properly labeled.

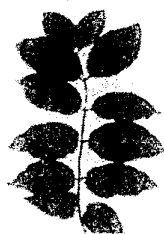
Section A

1. Who discovered nucleus in the cell ? 1
2. What is the relationship between osmotic pressure and osmotic potential . 1
3. Starch ,Cellulose , Glycogen and chitin are polysaccharides found among the following. Choose the one appropriate and write against each : 1
(i) Cotton fibres ... (ii) Exoskeleton of cockroach ...
(iii) Liver ... (iv) Peeled Potato
4. Identify the types of phyllotaxy shown below : 1

(a)



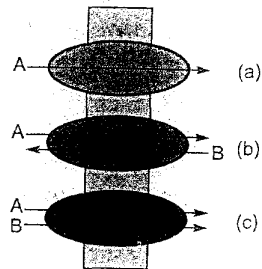
(b)



5. Name the complex III in ETS of mitochondria and mention its function. 1

Section B

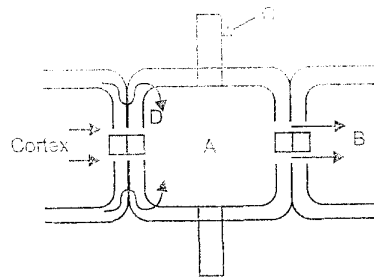
6. (a) Why species is considered as basic taxonomic category . 2
(b) Give example of two species each belonging to the same genera .
7. What are trichomes ? Mention their function . 2
8. Differentiate between RER and SER . 2
9. Observe the given figure and give the answers of the following : 2
(a) Identify the process occurring in (a) and (b).
(b) Differentiate between the process occurring in (b) and (c).



OR

Observe the given figure and answer the following :

- (a) Name the cell A and B
(b) Name the pathway of water movement represented as D and define .



10. What do the terms phycobiont and mycobiont signify ? 2

Section C

- 11 (a) Write the modification of stem in mint. 3
(b) Why are flowers of pea and gulmohar called zygomorphic ?
(c) Draw a neat labeled diagram of the structure of a monocot seed (label any four parts)
- 12 What are proteins ? Describe the primary , secondary and tertiary structure of proteins . 3

- 13 (a) What is nitrification ? Describe the steps of nitrification occurring in the soil. 3
 (b) Name two amides found in plants as structural part of proteins .
- 14 Explain the process of inspiration under normal conditions . 3
- 15 (a) Write the process of digestion of proteins in the stomach . 3
 (b) What is hyperglycemia ? What disorder does it lead to .
- 16 Write the role of calcium ions , troponin and F - actin during contraction in striated muscles of humans. 3
- 17 Give the schematic representation of glycolysis. 3
- 18 Compare the life cycle of Bryophytes with that of Pteridophytes. 3

OR

- (a) Write any four distinguishing features of phylum Cnidaria .
 (b) Name the following: (i) Lateral appendages in aquatic annelids
 (ii) A file like rasping organ in Molluscs

- 19 (a) Plant growth regulators (PGR) have innumerable practical application. 3
 Name the PGR you should use to : i) increase yield of sugarcane
 ii) promote lateral shoot growth
 iii) inhibits seed germination
 iv) induce rooting in a twig
 (b) What does sigmoid growth curve refer to ?
- 20 State the location and function of different types of meristems in plants. 3
- 21 Describe blood vascular system of cockroach. 3
- 22 Explain the following: 3
 (a) Synapsis (b) Bivalent (c) Diplotene

Section D

- 23 Shruti's grandfather has to undergo a bypass surgery for his coronary artery disease. Shruti explains to her mother and grandmother all about coronary artery disease and also tells in general how it can be prevented. 4
 (a) What is coronary artery disease commonly called ?
 (b) What happens in this disease ?
 (c) How can it be avoided by proper life style ?
 (d) What values are shown by Shruti , when she explained what she knows about the disease ?

Section E

- 24 a) Describe the structure of a plant cell organelle that has its own genetic material. 3+2
b) How does cytokinesis occur in plant cells.

OR

- a) Describe the structure of a cell organelle referred to as Power house of the cell. 3 +2
b) Explain the events occurring during Interphase of the cell cycle.

- 25 a) Draw a neat labeled diagram of functional unit of kidney. 3+2
(label any six parts)
b) Explain Renin – Angiotensin mechanism .

OR

- a) Draw a neat labeled diagram of human Eye. 3+2
(label any six parts)
b) Explain the transmission of nerve impulse across a chemical synapse.

- 26 (a) Where does Calvin cycle take place in chloroplast ? Describe the three phases of Calvin cycle. 3+2
(b) Photorespiration is a wasteful process. Give reasons.

OR

- (a) What is PEP ? Explain its role in photosynthesis. 3+2
(b) Cyclic photophosphorylation results in the production of ATPs and not NADPH. Give reasons.

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