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Code Number 044/



**INDIAN SCHOOL MUSCAT
FINAL TERM EXAMINATION
BIOLOGY**

CLASS: XI

Sub.Code: 044

Time Allotted: 3 Hrs

25.02.2018

Max.Marks: 70

General Instructions:

- (i) There are a total of 26 questions and five sections in the question paper. All questions are compulsory.
- (ii) Section A contains questions number 1 to 5, Very Short Answer type questions of 1 mark each.
- (iii) Section B contains questions number 6 to 10, Short Answer type I questions of 2 marks each.
- (iv) Section C contains questions number 11 to 22, Short Answer type II questions of 3 marks each.
- (v) Section D contains question number 23, Value Based Question of 4 marks.
- (vi) Section E contains questions number 24 to 26, Long Answer type questions of 5 marks each.
- (vii) There is no overall choice in the question paper, however, an internal choice is provided in one question of 2 marks, one question of 3 marks and all the three questions of 5 marks. In these questions, an examinee is to attempt any one of the two given alternatives.

SECTION A

1	Write the significance of G0 cycle in cell division	1
2	Differentiate between natural and artificial systems of classification.	1
3	Which group of fungi are called fungi imperfecti?	1
4	Which connective tissue doesnot havefibres in its matrix?	1
5	Answer the following with respect to anatomy of dicot root:	1
	a) Where is pericycle located?	
	b) What do you call the arrangement of vascular bundle?	
	c) Which types of cells are present in the cortex?	
	d) Identify the thickening present in the endodermis.	

SECTION B

- 6 Explain the following terms with respect to cell division. 2
- Synaptonemal complex
 - Metaphase plate
- 7 What is the most common respiratory substrate? Find its respiratory quotient. 2
- 8 Pure water has greatest water potential. Give reason. 2
- 9 Name the organelles which represent cells' 2
- Protein synthesis machinery
 - Powerhouse
 - Disposal unit
 - Circulatory system

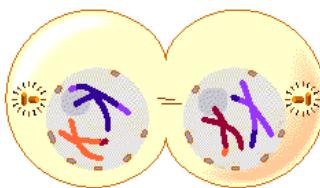
OR

- Describe cytokinesis in plant cells, how is it different in animal cell?
- 10 Differentiate between Racemose and Cymose inflorescences. 2

SECTION C

- 11 Apart from being plant hormone having physiological role, Gibberellins are also used in agriculture to increase the yield. What role do these hormones play when applied externally in crop fields? 3
- 12 a. Name the types of joints present between 3
- Atlas and axis
 - Phalanges
 - Femur and Acetabulum
 - Cranial bones
- b. What are synovial joints?
- 13 Identify the most common pathway of respiration in all living organisms. Where does it occur? What is the end product? List the energy rich compounds produced during this process. 3
- 14 Where do you find the following bonds in biomolecules- Peptide bond, Glycosidic bond and Phosphodiester bond? Enumerate any three categories of enzymes. 3

15	a) If a group of plants lack photorespiration, (1) Which of the cell in plants might be having RuBISCO enzymes? (2) In which cells the initial CO ₂ fixation occur? (3) Describe the characteristic feature of this plant. (4) Identify the photosynthetic pathway involved. b) Photorespiration is a wasteful process. Why?	3
16	Which group of plants are called 'Amphibians of plant kingdom' and why? Name the sexual reproductive structures present in them. What do you call the root like structures present in them?	3
17	Explain the process of depolarization of a nerve fibre.	3
	OR	
	Name one enzyme of gastric juice and one of pancreatic juice that are released as proenzymes in the human alimentary canal. Give the substrate and the end products of each.	
18	Name the hormone that regulates each of the following and mention the source of it. (i) Uterine contractions (ii) Fall of calcium ion level in blood (iii) Basal metabolic rate	3
19	Draw the structure of sarcomere and label the parts.	3
20	Glycine and Alanine are different with respect to one substituent in the α -carbon. What are the other common substituent groups. Draw the structure of Glycine.	3
21	Differentiate between nucleotides and nucleosides. Give examples each. Give two examples of lipids.	3
22	a) A cell has 32 chromosomes. It undergoes mitotic division. What will be the chromosome number (N) during metaphase? What would be the DNA content (C) during anaphase? b) Identify the following stage of meiosis I. Name the main events happening during this stage.	3



SECTION D

23 Bavin's grandfather while on a walk in the morning collapsed in the garden. Bavin spotted him and called his neighbour Dr Adithya and took him to the hospital. After examining him the doctor gave him an injection and asked Bavin to take proper care of his diet and exercise regime, else he would have to take these injections regularly, to control his increasing level of sugar. 4

- (i) Name the injection, the doctor might have given to the patient.
- (ii) Mention the role of this particular injection in the body.
- (iii) Why is this taken as injection, not orally?
- (iv) What values are reflected in Bavin's behavior?

SECTION E

24 Explain counter current mechanism of kidney function. 5

OR

List the stages of respiration in human beings. Explain the ways in which oxygen is transported in the body.

25 Describe C₃ cycle of carbon fixation in plants. 5

OR

Explain Kreb's cycle with the help of a diagrammatic sketch.

26 Explain the digestive system of cockroach with the help of a labeled diagram. 5

OR

What is aestivation? Describe the different types of aestivation with the help of diagram.

End of the Question Paper