Roll Number		

SET A

INDIAN SCHOOL MUSCAT
FINAL TERM EXAMINATION
BIOLOGY [THEORY]

CLASS: XI | Sub. Code: 044 | Time Allotted: 3 Hrs

21.02.2019 | Max. Marks: 70

General Instructions:

1. All questions are compulsory.
2. The question paper consists of four sections A, B, C and D.
3. Internal choice is given in all the sections. **A student has to attempt only one of the alternatives in such questions.**
4. Section–A contains 5 questions of 1 mark each.
5. Section–B has 7 questions of 2 marks each.
6. Section–C is of 12 questions of 3 marks each
7. Section–D has 3 questions of 5 marks each.
8. Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION - A

1. Identify the type of simple tissue present in the leaves of tea. 1

2. Name the non membrane bound organelle found only in animal cells. 1

OR

Which phospholipid is present in the cell membrane?

3. Define critical concentration. 1

4. What is a staminode? 1

5. Abscisic acid is known as stress hormone. Why? 1

OR

List the factors affecting Water potential.

SECTION - B

6. Archaebacteria can survive in various harsh climatic conditions. Give any two examples with their habitat. 2

7. Define imbibitions. Mention its significance. 2

OR

Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while others they do so in mature organs?

8. What is gemma? Where do you find them? 2

9. a) Stomach is located in upper left portion of the abdominal cavity and has three major parts. Name these three parts. 2
   b) Name the enzymes involved in the breakdown of nucleotides into sugars and bases?

OR

Differentiate between Inspiratory and expiratory reserve volume.

10. You have heard about several insectivorous plants that feed on insects. Nepenthes or the pitcher plant is one such example, which usually grows in shallow water or in marsh lands. What part of the plant is modified into a 'pitcher'? How does this modification help the plant for food even though it can photosynthesize like any other green plant? 2

11. What are the characteristic differences found in the vascular tissue of gymnosperms and angiosperms? 2

12. What is the role played by Renin-Angiotensin in the regulation of kidney function? 2

SECTION - C

13. Distinguish between bony fishes and cartilaginous fishes. 3

14. Mention special features of eye in Cockroach. 3

OR

Explain with suitable examples the different types of phyllotaxy.

15. a) Tendrils of grapevines are homologous to the tendril of pumpkins but are analogous to that of pea. Justify the above statement. 3
   b) What is pulvinus?

16. Describe the ultra structure of flagellum. 3

17. Differentiate between cofactor, co enzyme and prosthetic group. 3

18. Describe the haplo diplontic life cycle of Bryophytes. 3

19. Distinguish between PS I and PS II. 3

20. Give the schematic representation of Kreb's cycle. 3

21. PGRs are simple molecules of diverse chemical composition. They play different roles in the plant body. List two functions each of Auxin, Gibberellins and Cytokinins. 3

22. Different types of ion channels are present on the neural membrane. Movement of K+ and Na+ ions help in conduction of nerve impulses. Explain the role of Na+ in the generation of action potential. 3

23. Describe the structure of thyroid gland. 3

24. Explain the structure of myosin monomer with the help of a labeled diagram. 3

SECTION - D

25. Enzymes are biological catalysts. In living systems every single biochemical reaction is catalysed by enzyme. List the stages of the catalytic cycle of an enzyme action. Also mention the effect of substrate concentration in enzyme action. 5

OR

Explain the main events occurring during the Prophase I of meiosis I.

26. Explain C3 Cycle with the help of a diagrammatic sketch. 5

OR

Schematically represent Glycolysis.

27. a) Draw a labeled diagram of cross section of kidney and label any six parts. 5
    b) Differentiate between Juxta medullary nephrons and Cortical nephrons.

OR

With the help of a labeled diagram of human eye explain the mechanism of vision.

End of the Question Paper

Roll Number		

SET B

INDIAN SCHOOL MUSCAT
FINAL TERM EXAMINATION
BIOLOGY [THEORY]

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8. Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION - A

1. What is epipetalous stamen? 1

2. Name the non membrane bound organelle found only in animal cells. 1

OR

Which phospholipid is present in the cell membrane?

3. Identify the type of simple tissue present in the leaves of tea. 1

4. Define chlorosis. 1

5. Abscisic acid is known as stress hormone. Why? 1

OR

List the factors affecting Water potential.

SECTION - B

6. You have heard about several insectivorous plants that feed on insects. Nepenthes or the pitcher plant is one such example, which usually grows in shallow water or in marsh lands. What part of the plant is modified into a 'pitcher'? How does this modification help the plant for food even though it can photosynthesize like any other green plant? 2

7. What is the role played by Renin-Angiotensin in the regulation of kidney function? 2

8. What is gemma? Where do you find them? 2

9. How are trichomes different from roothairs? 2

10. a) Stomach is located in upper left portion of the abdominal cavity and has three major parts. Name these three parts. 2
    b) Name the enzymes involved in the breakdown of nucleotides into sugars and bases?

OR

Differentiate between Inspiratory capacity and expiratory capacity.

11. Define imbibitions. Mention its significance. 2

OR

Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while others they do so in mature organs?

12. Archaebacteria can survive in various harsh climatic conditions. Give any two examples with their habitat. 2

SECTION - C

13. a) Tendrils of grapevines are homologous to the tendril of pumpkins but are analogous to that of pea. Justify the above statement. 3
    b) What is pulvinus?

14. PGRs are simple molecules of diverse chemical composition. They play different roles in the plant body. List two functions each of Auxin, Gibberellins and Cytokinins. 3

15. Mention special features of eye in Cockroach. 3

OR

Explain with suitable examples the different types of phyllotaxy.

16. Give the schematic representation of Kreb's cycle. 3

17. Explain the structure of Actin filament with the help of a labeled diagram. 3

18. Distinguish between cyclic and non cyclic photophosphorylation. 3

19. Distinguish between bony fishes and cartilaginous fishes. 3

20. Differentiate between cofactor, co enzyme and prosthetic group. 3

21. Different types of ion channels are present on the neural membrane. Movement of K+ and Na+ ions help in conduction of nerve impulses. Explain the role of Na+ in the generation of action potential. 3

22. Describe the ultra structure of flagellum. 3

23. Name the hormones secreted by Adrenal cortex and adrenal medulla. 3

24. Describe the haplo diplontic life cycle of Bryophytes. 3

SECTION - D

25. DNA is the genetic material of higher organisms. Explain the structure of proteins put forwarded by Watson and Crick. 5

OR

Explain the main events occurring during the Prophase I of meiosis I.

26. Explain C3 Cycle with the help of a diagrammatic sketch. 5

OR

Schematically represent Glycolysis.

27. a) Draw a labeled diagram of cross section of kidney and label any six parts. 5
    b) Differentiate between Juxta medullary nephrons and Cortical nephrons.

OR

With the help of a labeled diagram of human eye explain the mechanism of vision.

End of the Question Paper

Roll Number		

SET C

INDIAN SCHOOL MUSCAT
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8. Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION - A

1. Identify the most widely used compound as a source of ethylene. 1

OR

Define water potential.

2. Define critical concentration. 1

3. Identify the type of simple tissue present in the leaves of tea. 1

4. Name the non membrane bound organelle found only in animal cells. 1

OR

Which phospholipid is present in the cell membrane.

5. What is a staminode? 1

SECTION - B

6. Archaebacteria can survive in various harsh climatic conditions. Give any two examples with their habitat. 2

7. Mention two differences between diffusion and facilitated diffusion. 2

OR

Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while others they do so in mature organs?

8. a) Stomach is located in upper left portion of the abdominal cavity and has three major parts. Name these three parts. 2
   b) Name the enzymes involved in the breakdown of nucleotides into sugars and bases?

OR

Differentiate between Inspiratory Reserve volume and inspiratory Capacity.

9. What are the characteristic differences found in the vascular tissue of gymnosperms and angiosperms? 2

10. What is gemma? Where do you find them? 2

11. What is the role played by Renin-Angiotensin in the regulation of kidney function? 2

12. You have heard about several insectivorous plants that feed on insects. Nepenthes or the pitcher plant is one such example, which usually grows in shallow water or in marsh lands. What part of the plant is modified into a 'pitcher'? How does this modification help the plant for food even though it can photosynthesize like any other green plant? 2

SECTION - C

13. Describe the haplontic life cycle of Thallophytes. 3

14. Describe the structure of thyroid gland. 3

15. Describe the ultra structure of flagellum. 3

16. Different types of ion channels are present on the neural membrane. Movement of K+ and Na+ ions help in conduction of nerve impulses. Explain the role of Na+ in the generation of action potential. 3

17. Differentiate between cofactor, co enzyme and prosthetic group. 3

18. Distinguish between bony fishes and cartilaginous fishes. 3

19. Distinguish between PS I and PS II. 3

20. Explain the structure of myosin monomer with the help of a labeled diagram. 3

21. Give the schematic representation of Kreb's cycle. 3

22. Mention special features of eye in Cockroach. 3

OR

Explain with suitable examples the different types of phyllotaxy.

23. PGRs are simple molecules of diverse chemical composition. They play different roles in the plant body. List two functions each of Auxin, Gibberellins and Cytokinins. 3

24. a) Tendrils of grapevines are homologous to the tendril of pumpkins but are analogous to that of pea. Justify the above statement. 3
b) What is pulvinus?

SECTION - D

27. a) Draw a labeled diagram of cross section of kidney and label any six parts. 5
b) Differentiate between Juxta medullary nephrons and cortical nephrons.

OR

With the help of a labeled diagram of human eye explain the mechanism of vision.

25. Enzymes are biological catalysts. In living systems every single biochemical reaction is catalysed by enzyme. List the stages of the catalytic cycle of an enzyme action. Also mention the effect of substrate concentration in enzyme action. 5

OR

Explain the main events occurring during the Prophase I of meiosis I.

26. Explain C3 Cycle with the help of a diagrammatic sketch. 5

OR

Schematically represent Glycolysis.

End of the Question Paper