

Dr. A. Vennela, Principal, Kumbakonam

Thanjavur - District

HYM

HALF YEARLY EXAMINATION - 2024**11** - Std**BIOLOGY**

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Time : 3.00 Hrs

BIO - BOTANY

Marks : 70

SECTION - I**I Answer all the questions.**

8 x 1 = 8

- In gymnosperm endosperm is formed
 - At the time of fertilization
 - before fertilization
 - after fertilization
 - along with the development of embryo
- Match the following.**

| | 1 | 2 | 3 | 4 |
|---------------|---|---------------|-------|-----|
| 1) Cauducous | - | i) Lannea | a) ii | i |
| 2) Deciduous | - | ii) Opuntia | b) i | ii |
| 3) Evergreen | - | iii) Fagaceae | c) ii | i |
| 4) Marcescent | - | iv) Mimusops | d) iv | iii |
- Aggregate fruit develops from
 - multicarpellary, apocarpous ovary
 - multicarpellary, syncarpous ovary
 - multicarpellary ovary
 - whole inflorescence
- Identify the correct statements.
 - Taxonomy governs the practices of the classification.
 - Systematics goverus the practices of classificatin, naming and preservation.
 - Both (i) and (ii) are correct
 - (i) is wrong and (ii) is correct
 - Both (i) and (ii) are correct
 - (i) is correct and (ii) is wrong
- In meiosis crossing over is initiated at
 - DiploTene
 - Pachytene
 - Leptotene
 - Zygotene
- Tyloses arises from all of xylem
 - Parenchyma
 - Collenchyma
 - Sclerenchyma
 - Sclereids
- The compound which links glycolysis and Kреб's cycle is
 - succinic acid
 - Pyruvic acid
 - Acetyl COA
 - Citric acid
- The element which is not remobilized?
 - Phosphorous
 - Potassium
 - Calcium
 - Nitrogen

SECTION - II**II Answer any four questions.**

4 x 2 = 8

- What is actinostele? Give example.
- Write short notes on phyllotaxy.
- What are the exceptions to cell theory.
- Write down the types of RNA.
- Differentiate - pinus and moras.
- Define : Respiratory quotient.

SECTION - III**III Answer any three questions. Q.No. 19 is compulsory.**

3 x 3 = 9

- Write any three living features of virus.
- Differentiate : Raceme and cyme.
- What are the importance of diffusion in plant.
- Write the physiological effect of Auxin.
- Draw and neatly label the diagram of Bicollateral vascular bundle.

SECTION - IV**IV Answer all the questions.**

2 x 5 = 10

- Write the botanical description of Datura metal. (OR)
 - List out the significance of mitosis.
- Explain the insectivorous mode of nutrition in angiosperms. (OR)
 - Differentiate C₃ cycle and C₄ cycle.

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BIO - ZOOLOGY**SECTION - I**

I Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer. 8 x 1 = 8

1. Which of the following is correctly matched?

| | | | |
|--------------|---|-------------|------------|
| a) Physalia | - | Portugese | man of war |
| b) Pennatula | - | Sea fan | |
| c) Adamisia | - | Sea pen | |
| d) Gorgonia | - | Sea anemone | |
2. Which of the following is not involved in blood clotting?

| | | | |
|-----------|------------|--------------|--------------|
| a) Fibrin | b) Calcium | c) Platelets | d) Bilirubin |
|-----------|------------|--------------|--------------|
3. An example for Tautonymy

| | | | |
|---------------------|--------------|--------------------|---------------------|
| a) Felis silvestris | b) Naja Naja | c) Ailurus fulgens | d) Felis demesticus |
|---------------------|--------------|--------------------|---------------------|
4. Hypersecretion of growth hormone in children leads to

| | | | |
|--------------------|--------------|-----------|--------------|
| a) Grave's disease | b) Cretinism | c) Tetany | d) Gigantism |
|--------------------|--------------|-----------|--------------|
5. Rod cells are predominant in the

| | | | |
|----------------|---------------|-----------------------|---------|
| a) Optic nerve | b) Blind spot | c) Extra forea region | d) Iris |
|----------------|---------------|-----------------------|---------|
6. The limbless amphibian is

| | | | |
|---------|---------------|----------------|---------|
| a) Rana | b) Salamander | c) Ichthyophis | d) Hyla |
|---------|---------------|----------------|---------|
7. The tidal volume of a normal person is

| | | | |
|-----------|----------|-------------------|-----------|
| a) 500 ml | b) 800ml | c) 1100 - 1200 ml | d) 1200ml |
|-----------|----------|-------------------|-----------|
8. Macrophages exhibit the movement of

| | | | |
|-----------------------|---------------------|----------------------|----------------------|
| a) Flagellar movement | b) Ciliary movement | c) Muscular movement | d) Amoeboid movement |
|-----------------------|---------------------|----------------------|----------------------|

SECTION - II

II Answer any four questions.

4 x 2 = 8

9. Define - Thermoacidophiles.
10. What are earthworm casts?
11. Name the respiratory organs of flatworm, Cockroach and fish.
12. Open circulatory system and closed circulatory system - compare.
13. Tabulate the function of brain lobes.
14. How Jaundice is caused? Write its symptoms.

SECTION - III

III Answer any three questions. Question No. 19 is compulsory.

3 x 3 = 9

15. Mention the function of Vasopressin.
16. Draw the labelled sketch of kidney.
17. Compare white adipose tissue from brown adipose tissue.
18. Mention the diseases caused by virus, fungi and bacterias in silkworm.
19. Aqueous humour maintains the intra - ocular pressure - Justify.

SECTION - IV

IV Answer all the questions.

2 x 5 = 10

20. Tabulate the differences between chordates and non - chordates. (OR)
Explain the origin and conduction of Heart and zBeat.
21. List out the various functions of skeletal system. (OR)
Write in detail about economical importance of fishes.