



## BIOLOGY

# BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

## SAMPLE PAPER-10 (SOLVED)

### Botany Part I

1. The term bacterium was coined by .....



A. Stanley

B. Ehrenberg

C. Gram

D. Koch

**Answer: B**



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2. Which of the following components provides sticky character to the bacterial cell?



A. Cell wall

B. Nuclear membrane

C. Plasma membrane

D. Glycocalyx

**Answer: D**



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**3. Number of floral parts per whorl is called**

----



A. curiosity

B. atrocity

C. merosity

D. porosity

**Answer: C**



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4. The book titled 'Evolution and classification of flowering plants' was written by\_\_\_\_\_.



A. Engler & Prantl

B. Bentham & Hooker

C. Cronquist

D. Theophrastus

**Answer: C**



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5. Lampbrush chromosomes occur at \_\_\_\_\_ stage of meiotic Prophase I.



A. Leptotene

B. Diplotene

C. Zygotene

D. Pachytene

**Answer: B**



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**6. Who is called as father of plant physiology ?**

A. J.C. Bose



B. Stephen Hales

C. Dixon

D. Unger

**Answer: B**



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7. Pitcher plant is the common name for

..... .

A. Drosera



B. Nepenthes

C. Utricularia

D. Dionaea

**Answer: B**



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**8. Chemiosmotic theory was proposed by \_\_\_\_\_**

A. Mitchell

B. Hatch & Slack



C. Calvin

D. Priestley

**Answer: A**



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## Botany Part Ii

**1. What re mycorrhiza ?**



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2. Why do roots modify their structure ? Name the types of root modification.



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3. What are the sub-classes of Liliopsida?



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4. How vacuoles helps to maintain the structure of a plant cell?





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5. Compare Active transport with passive transport.



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6. What are Quantasomes?



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1. Classify lichens based on morphology.



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2. "Roots perform photosynthesis" - Justify with example.



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3. Distinguish between apocarpous and syncarpous ovary.



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4. Draw & label the ground plan of T.S of Dicot root



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5. What are respiratory substrates? Name the most common respiratory substrate.



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## Botany Part Iv

1. Define phyllotaxy. Mention its types.



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2. distinguish between prokaryotes and eukaryotes.



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3. Explain the insectivorous mode of nutrition in angiosperms?



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4. Explain the physiological effects of ABA.





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## Zoology Part I

1. Cladogram considers the following characters

- A. Physiological and Biochemical
- B. Evolutionary and Phylogenetic
- C. Taxonomic and systematic
- D. None of the above



**Answer: B**



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**2. The limbless amphibian is**

A. Hyla

B. Rana

C. Ichthyophis

D. Salamander

**Answer: C**





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3. ECG stands for \_\_\_\_

- A. Electrocardiogram
- B. Electro Caplaris gram
- C. Electro Carrying gram
- D. Electro ensephalo gram

**Answer: A**



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#### 4. Match the List I and List II :

List I	List II
1. Tidal Volume	(i) 1100 to 1200 ml
2. Residual Volume	(ii) 500 ml
3. Expiratory reserve Volume	(iii) 2500 to 3000 ml
4. Inspiratory reserve Volume	(iv) 1000 to 1100 ml

A. 1-(i),2-(ii),3-(iii),4-(iv)

B. 1-(ii),2-(i),3-(iv),4-(iii)

C. 1-(ii),2-(iv),3-(i),4-(iii)

D. 1-(iv),2-(iii),3-(i),4-(ii)

**Answer: B**



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5. Which of the following is correct statement?

A. All the reptiles have a three chambered heart.

B. All mammals are viviparous.

C. All cyclostomes do not posses jaws and paired fin.

D. All pisces have gills covered by a operculum



**Answer: C**



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6. Which of the following is incorrect statement with regard to peripheral neural system ?

- A. Its pathways innervate skeletal muscles
- B. Its pathways are usually voluntary
- C. Its pathways always involve four neurons.



D. Some of its pathways are referred to as reflex arcs.

**Answer: C**



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7. Centres for sense of smell are located in

..... .

A. Cerebellum

B. Midbrain



C. Olfactory lobes

D. Cerebrum

**Answer: C**



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**8.** What are the effects of excess secretion of cortisol?

A. Addison's disease

B. Grave's disease



C. Cushing's syndrome

D. Gull's disease

**Answer: C**



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## **Zoology Part Ii**

1. Write about the classification of *Lampito mauritii*.



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2. What is indigestion?



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3. Explain muscle fatigue.



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4. Distinguish between neutrophils and eosinophils.





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**5. Draw and label the L.S. of Human Kidney**



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**6. What are the functions of glucagon?**



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1. Bioluminescence is advantageous to ctenophores.



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2. How do earthworms breathe?



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3. What is vermicompost?



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4. Differentiate between elastic fibres and elastic connective tissue.



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5. A normal ECG shows



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1. Differentiate Chordates and Non-Chordates.



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2. Write an essay on digestion of food and role of digestive enzymes.



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3. Name the different types of movement.



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**4.** Tabulate the major hypothalamic hormones and their functions.



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