



## BIOLOGY

# BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

## SAMPLE PAPER-4 (SOLVED)

### Bio Botany Part I

1. Which one of the following statement about virus is correct?

A. Possess their own metabolic system

B. They are facultative parasites

C. They contain DNA or RNA

D. Enzymes are present

**Answer: C**



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**2. An example of colonial algae is**

A. Chlorella

B. Volvox

C. Ulothrix

D. Spirogyra

**Answer: B**



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**3. In Artabotrys, ..... is modified into hook.**

A. leaflets

B. inflorescence axis

C. petiole

D. axillary buds

**Answer: B**



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**4.** In china rose the flower are

A. Actinomorphic. Epigynous with valvate  
aestivation

B. Zygomorphic, hypogynous with  
imbricate aestivation

C. Zygomorphic, epigynous with twisted  
aestivation

D. Actinomorphic, hypogynous with twisted  
aestivation

**Answer: D**



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5. Terminalisation of chiasmata occurs at .....

.

A. Zygotene

B. Leptotene

C. Diakinesis

D. Pachytene

**Answer: C**



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6. What is the study of tissues called?

A. Anatomy

B. Cytology

C. Histology

D. Embryology

**Answer: C**



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7. Identify the wrong statement(s).

(i) Molybdenum is a micronutrient.

(ii) Carbon, Hydrogen, Nitrogen are skeletal elements.

(iii) Manganese is the activator for RUBP carboxylase.

(iv) Potassium maintains osmotic potential of the cell.

A. (i) and (iv)

B. (i) and (iii)

C. Only (ii)



D. Only (iv)

**Answer: B**



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**8. Foolish seedling disease affects ..... .**

A. Maize

B. Rice

C. Sorghum

D. Wheat

**Answer: B**



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## **Bio Botany Part Ii**

**1. Deuteromycetes are imperfect fungi - Justify.**



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2. Why are bryophytes called non-vascular cryptogams?



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3. What are root stocks ? What are its function?



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4. What is cladogram? Draw a model cladogram.



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5. Mention the drawbacks of diffusion.



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6. What is Phytol tail ? Mention its role .



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## Bio Botany Part Iii

1. State the 3 types of viral symmetry,



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2. What is the importance of inflorescence.



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3. Write a brief note on Manganese toxicity.



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4. Draw the ultra structure of plant cell.



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5. What is the agricultural role of ethylene?



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1. List the different phases of a cell cycle.



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2. Explain in detail about the various life cycle patterns in plants.



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3. Describe Lundegardh's Cytochrome Pump Theory .



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4. Differentiate photorespiration and Dark respiration.



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1. Turbellarians are free living .....

A. Flatworms

B. Trematodes

C. Nematodes

D. cestodes

**Answer: A**



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2. Renal portal system is absent in .....

A. Reptiles

B. Amphibians

C. Reptiles and amphibians

D. Birds

**Answer: D**



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

List I (Proteins)	List II (Functions)
1. Collagen	(i) Sensory reception (Eg: taste)
2. Trypsin	(ii) Fights against infections
3. Antibody	(iii) Intercellular ground substance
4. Receptors	(iv) Enzyme

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

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

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

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

**Answer: A**



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4. PNS stands for ..... .

- A. Peripheral neural system
- B. Primary neural system
- C. Pituitary nephron system
- D. Peripheral nephron system

**Answer: A**



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5. Which of the following is an correct statement?

A. Large intestine completes digestion and absorbs nutrients.

B. Anus expels wastes

C. Rectum is the opening for waste elimination

D. Esophagus helps in the conduction of the food to stomach.

**Answer: D**



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**6.** Which of the following is an incorrect statement?

A. Hind brain comprises of cerebellum, pons varoli and medulla oblongata.

B. The mid brain is located between the diencephalon and the pons

C. Hypothalamus forms the floor of the diencephalon.

D. The superficial region of the cerebrum is called gyri.

**Answer: D**



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7. There is no DNA in .....

A. Mature RBC'S

B. Mature spermatozoa

C. Hair root

D. Ovum

**Answer: A**



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**8. Centres for sense of smell are located in**

..... .

A. Cerebellum



B. Mid brain

C. Olfactory lobes

D. Cerebrum

**Answer: C**



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## **Bio Zoology Part Ii**

**1. What is radial symmetry?**



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2. Why do you call cockroach a pest?



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3. Why do plants not require a digestive system?



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4. Draw the the structure of Blood Vessel - Large Vein.



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5. What are Nodes of Ranvier?



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6. Differentiate between outbreeding and inbreeding.



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## Bio Zoology Part Iii

1. What is vermicompost?



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2. What is the difference between a Zoa and wild life sanctuary?



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3. What is lymph? Write its function.



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4. Draw the L.S. of human eye and label the parts.



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5. What are the main duties of a worker bee ?





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## Bio Zoology Part Iv

1. Draw the flowchart of classification of phylum Chordata.



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2. Write a short note on the life cycle of earthworm.





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**3. Explain the structure of nephron.**



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**4. Explain the endorenal function of gonads.**



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