



# BIOLOGY

## BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

### SAMPLE PAPER - 13

#### Bio Botany Part I

1. Ergot alkaloids are produced by .....

A. *Penicillium notatum*

B. *Acremonium chrysogenum*

C. *Claviceps purpurea*

D. *Penicillium griseofulvum*

**Answer: C**



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2. The plants that grows on dry habitats are called .....

- A. mesophytes
- B. xerophytes
- C. lithophytes
- D. psammophytes

**Answer: B**



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**3. Vexillary aestivation is characteristic of the family**

A. Fabaceae

B. Asteracene

C. Solanaceae

D. Brassicaceae

**Answer: A**



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4. Life span of the cells is determined by

.....

A. Kinetochore

B. Satellite

C. Chromatin

D. Telomere

**Answer: D**



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5. Which of the following is also called as direct division ?

A. Amitosis

B. Meiosis

C. Mitosis

D. Reduction division

**Answer: A**



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**6. Which of the following is termed as Cork ?**

A. Phellem

B. Periderm

C. Phellogen

D. Phelloderm

**Answer: A**



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**7. The element which is not remobilized?**

A. Phosphorous

B. Potassium

C. Calcium

D. Nitrogen

**Answer: C**



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**8.** The term vernalisation was first used by

.....

A. Chailakyan

B. Garner & Allard



C. Lysenko

D. FW. Went

**Answer: C**



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## **Bio Botany Part Ii**

1. Lichens are useful in the studies of atmospheric pollution because they



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2. What is plant morphology ?



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3. Write the floral formula of *Pisum sativum*.



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4. What is the role of MPF in Cell cycle ?



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5. Give an account on Aquaporin.



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6. How chlorophyll b differs from chlorophyll a ?



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1. Cladode is a stem modification. Comment on it.



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2. Why do we need the classification of organisms ?



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3. Distinguish between rough endoplasmic reticulum and smooth endoplasmic reticulum.



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4. Give a short note on EDTA.



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5. Draw a graph of sigmoid curve.



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## Bio Botany Part Iv

1. Write down the characteristic features of Rhodophyceae.



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2. Write the Binomials of any three medicinally useful plants in Liliaceae.



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3. Describe the  $K^+$  Transport theory on transpiration .



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4. Differentiate between Photosystem I and Photosystem II.



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1. Who is known as the "Father of Botany" ?

A. Aristotle

B. Carolus Linnaeus

C. Theophrastus

D. Tansley

**Answer: C**



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2. The pigment haemocyanin is found in

..... .

A. Mollusca

B. Chordate

C. Echinodermata

D. Annelida

**Answer: B**



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

	List I (Characters)		List II (Segments of <i>Lampito mauritii</i> )
1.	Pharynx	(i)	5 <sup>th</sup> Segment
2.	Oesophagus	(ii)	7 <sup>th</sup> Segment to anus
3.	Gizzard	(iii)	3 <sup>rd</sup> - 4 <sup>th</sup> Segment
4.	Intestine	(iv)	6 <sup>th</sup> Segment

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

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

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

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

**Answer: A**



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4. TLC stands for .....

A. Total Liver Capacity

B. Total Tidal Capacity

C. Total Lung Capacity

D. Total Light Capacity

**Answer: D**



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5. Which of the following is a correct statement ?

A. Pons Varoli forms the posterior most part of the brain.

B. Medulla Oblongata lies in front of the cerebellum between the mid brain and Pons.

C. Cerebellum is the second largest part of the brain.

D. The function of temporal brain lobe is visual processing.

**Answer: A**



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6. Which of the following is an incorrect statement ?

A. Pincal gland regulates the timing of sexual maturation of gonads.

B. Thymus gland is the largest endocrine gland in the body.

C. Sporadic goitre is a genetic disease and is not caused by iodine or thyroxine deficiency.

D. Melatonin is secreted at night.

**Answer: A**



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7. A kidney stone is .....

A. Blockage by fats

B. Deposition of sand in kidney

C. A salt such as oxalate crystallised in  
pelvis

D. Blockage by proteins

**Answer: C**



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**8.** In humans, coccyx is formed by the fusion of vertebrae.

A. 3

B. 4

C. 5

D. 6

**Answer: C**



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1. List three features that characteristise bony fishes.



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2. How will you identify Alzheimer's disease.



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3. Differentiate between probiotic and pathogenic bacteria.



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4. Define - Cloaca.



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5. Draw the diagram of the nephron.



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6. What are true ribs ? Why ?



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## Bio Zoology Part Iii

1. List the unique features of bird's endoskeleton.



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2. Distinguish between invertebrates and vertebrates.



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3. Define - Macrophages.



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4. Draw the diagram of Eosinophils and Neutrophils.



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**5. What are the functions of hypothalamus?**



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## **Bio Zoology Part Iv**

**1. What are the rules of Nomenclature?**



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2. Write a note on neural tissue.



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3. Explain the structure of a skeletal muscle fibre.



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4. Write the peculiar functions of spinal cord.



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