



# BIOLOGY

## BOOKS - SUPER COMPANION 5 IN 1

### PU BOARD QUESTION PAPER 01

#### Part A

1. What is a herbarium ?



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2. Give an example for palmately compound leaf.



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3. Collenchyma is called a simple tissue. Why ?



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4. What are mesosomes ?



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5. Mention the significance of meiosis.



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6. Define root pressure.



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7. Name the oxygen scavenger molecule that protects nitrogenase in nodules.



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8. What is emphysema ?



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9. Which blood group is called universal donor ?



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**10.** Why the filtration of blood in Bowman's capsule is referred as ultrafiltration ?



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## Part B

**1.** Write any four character of fungi.



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2. List any four salient features of phylum colelenterata.



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3. Give reasons for the following :

The blood vascular system in cockroach is considered as open type.



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4. Give reasons for the following :

The vision in cockroach is referred as mosaic vision.



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5. Draw a labeled diagram of section of chloroplast.



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6. What is vernalization ? Mention any one of its importance.



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7. Explain how the exchange of  $O_2$  and  $CO_2$  is achieved between alveoli and deoxygenated blood.



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**8.** Explain the role of Atrial Natriuretic factor in the regulation of kidney function.



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**9.** What is osteoporosis ? Mention the common cause that leads to osteoporosis.



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1. List the important rules of binomial nomenclature. Write the scientific name of housefly.



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2. Define the terms : (i) Monodelphous condition (ii) Apocarpous condition (iii) Zygomorphic flower.



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3. Write any three anatomical differences between dicot leaf and monocot leaf.



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4. Write a note on the  $G_0$  phase of cell cycle.



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5. Draw a graph showing the typical growth curve and mark the phases of growth in it.



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6. Give a brief account of absorption of fatty acids and glycerol in small intestine.



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7. Explain the mechanism of coagulation of blood.



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8. Write a note on myosin protein.



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## Part D

1. Write the general characters of angiosperms.



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2. Write any four differences between chordates and non - chordates.



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3. Draw a neat labelled diagram of the digestive system of the human body.



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4. Mention any four functions of plasma-membrane.



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5. Explain how the  $p^H$  and concentration of substrate affect enzyme activity with graphical representation.



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6. What are macronutrients ? Describe the roles played by calcium and magnesium in plants.



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7. Explain the events of C4 pathway. Mention any two special features of C4 plants.



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**8.** Write the schematic representation of overall view of Citric Acid cycle.



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**9.** Describe the events of reflex action with a diagrammatic representation of knee jerk reflex.



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**10.** What are hormone ? Mention one function each for (i) ACTH (ii) Melatonin (iii) Parathyroid hormone (iv) Thymosin.



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