

# SARASWATI



## HEAD OFFICE

208, CD, LOCAL SHOPPING CENTER  
AGGARWAL SHOPPING PLAZA, PITAMPURA

## BRANCH-1

AYODHYA CHOWK  
SEC – 3 , ROHINI

## BRANCH-2

DC CHOWK  
SEC – 9, ROHINI

9<sup>TH</sup> & 10<sup>TH</sup> MATHS / SCIENCE

11<sup>TH</sup> & 12<sup>TH</sup> – PHYSICS / CHEMISTRY / MATHS / BIOLOGY

EXCLUSIVE BATCH FOR NEET / JEE ASPIRANTS

Ph no. 9696 500 500 / 9696 400 400

## BIOLOGY

### CHAPTER- 7    STRUCTURAL ORGANISATION IN ANIMALS

**(1 MARK)**

Q1.How does a gap junction facilitate intercellular communication?

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Q2. Name the communication junction present in the cardiac muscle?

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Q3. In which type of tissue excess fat is stored?

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Q4.in which type of muscle tissue can you see intercalated discs? What is its significance?

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Q5.State the number of segments in earthworm which are covered by a prominent dark band or clitellum?

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Q6. What is the scientific term given to earthworm's body segments?

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Q7. What is metamerism?

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Q8. How many times do nymphs moult to reach the adult form of cockroach?

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Q9. Which mouth part of cockroach is comparable to our tongue?

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Q10. The digestive system of frog is made of the following parts. Arrange them in an order beginning from mouth.

Mouth, oesophagus, buccal cavity, stomach, intestine, cloaca, rectum, cloacal aperture.

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Q11. Identify the sex of a frog in which sound producing vocal sacs are present.

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Q12. What are cellular components of blood?

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Q13. Why are striated muscles called 'skeletal muscles'?

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Q14. Why are smooth muscles called 'involuntary muscles'?

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Q15. A muscle fibre tapers at both ends and does not show striations. Name the muscle fibre.

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Q16. How do cardiac muscle fibres contract as a unit?

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Q17. How many segments are found in the abdomen of a cockroach?

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Q18. Cockroaches are uricotelic. Justify?

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Q19. Why is mosaic vision also known as nocturnal vision?

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Q20. Development in cockroach is described as paurometabolous. What is meant by this?

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**(2 Mark)**

Q21. Cardiac muscle tissue have both characters of skeleton and smooth muscles. Explain

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Q22. What is special about the tissue present in the heart?

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Q23. Stratified epithelial cells have limited role in secretion. Justify their role in our skin.

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Q24. Where is areolar tissue present in our body? Name the types of cells and fibres found in it.

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Q25. Why earthworm is called the friend of farmer?

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Q26. Describe the structural of compound eyes of cockroach?

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Q27. Give the location of hepatic caecae in a cockroach. What is their function.

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Q28. what happens if bone of frog is kept in dilute hydrochloric acid?

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Q29. How can a male frog be distinguished from a female frog?

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Q30. Mention the function of ureters in frog.

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Q31. Frog is a poikilotherm, exhibits camouflage and undergoes aestivation and hibernation, how are all these beneficial to it?

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Q32. Distinguish between simple epithelium and compound epithelium.

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Q33. Distinguish between simple gland and compound gland?

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Q34. Distinguish between dense regular and dense irregular connective tissue.

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Q35. Distinguish between adipose and blood tissue.

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Q36. Distinguish between cardiac muscles and smooth muscles.

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Q37. How is the gizzard in the alimentary canal of a cockroach suitable for grinding the food?

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Q38. Mention the special features of eye in cockroach.

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Q40. Mention the role of crop, gizzard, tracheoles and compound eyes in cockroach?

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Q41. Match the terms in column I with those in

COLUMN I	COLUMN II
a. Compound epithelium	(i) Bone
b. compound eye	(ii) Skin
c. Osteocytes	(iii) Phallomers
d. Genitalia	(iv) Mosaic vision

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Q42. Match the following with reference to cockroaches:

COLUMN I	COLUMN II
A. Phallomere	(1) Chain of developing ova
B. Gonopore	(ii) Bundles of sperms
C. Spermatophore	(iii) Opening of ejaculatory duct
D. Ovarioles	(iv) External genitalia

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**(3 Mark)**

Q43. Why are blood, bone and cartilage called connective tissue?

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Q44. Distinguish between septal nephridium and pharyngeal nephridium

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Q45. Draw a labelled diagram of the reproductive organs of an earthworm

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Q46. Why nephridia in earthworm that basically similar in structure is classified into three types? Mention the names of each.

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Q47. Explain the digestive system of cockroach with the help of a labelled sketch.

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Q48. (a) Name the connective tissue that lacks fibre in its matrix.

(b) Write two differences between male and female cockroach.

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Q49. Draw a well labelled diagram of alimentary canal of a cockroach.

Q50. Write the appropriate type of tissues in column B according to the functions mentioned in column A.

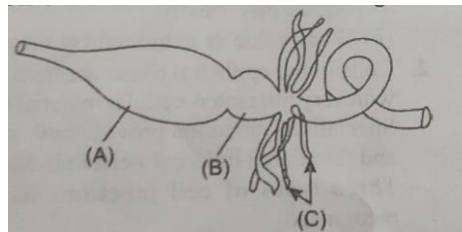
Column A	Column B
a. Secretion and absorption	(i) .....
b. Protective covering	(ii).....
c. Linking and supporting framework	(iii).....

Q51. What are the following and where do you find them in animal body?

- (a) Chondriocytes
- (b) Axons
- (c) Ciliated epithelium

Q52. In the figure, some parts of alimentary canal of cockroaches are shown in the figure. Name the organs A, B and C.

State the function each of these organs.



Q53. Complete the following statements:

- a. In cockroach, grinding of food particles is performed by .....
- b. Malpighian tubules help in removal of .....
- c. Hindgut of cockroach is differentiated into ..... , ..... and .....
- d. In cockroach, blood vessels open into spaces, called .....

**(5 Mark)**

Q54. Describe various types of epithelial tissue with the help of labelled diagrams?





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Q60. Mark the odd one out in each of the following series:

- (a) Areolar tissue, blood, neuron, tendon
- (b) RBC, WBC, platelets, cartilage
- (c) Exocrine, endocrine, salivary gland ligament.
- (d) Maxillae, mandible, labrum, antennae
- (e) Prothorax, mesothorax, metathorax, coxa.

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Q61. In complex multicellular organisms, the physiological functions or life processes are performed by different groups of cells (called tissues). The structure and shape of cells vary according to their functions. There are four basic types of tissues, each of which performs a specific function.

- (a) Is there division of labour in unicellular organisms? Justify.
- (b) What value is exhibited by these?

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Q62. Cells in the epithelial tissue are held together with very little inter- cellular material (matrix). Specialised junctions provide both structural and functional links between individual cells. Three types of cell junctions have been recognised.

- (a) Name the three types of cell junctions and write their functions.
- (b) What value is shown by such an arrangement?

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Q63. Connective tissues are the most abundant and widely distributed in the body of multicellular animals. They are called connective tissues because they bind/link and support other tissues and/or organs. There are cells widely separated by the matrix and fibres.

(a) Name the two types of fibres in the connective tissue.

(b) Name the cells which secrete them.

(c) What functions do the fibres perform?

(d) Name the connective tissue that lacks fibres.

(e) Write the value you learnt from this.

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Q64. Blood is a fluid connective tissue and helps in circulation of nutrients, metabolites, respiratory gases, etc. and provides immunity.

(a) Name the three cell types present in human blood.

(b) One of the cell types lacks nucleus and is said to carry out anaerobic respiration. Justify.

(c) Which cell type is responsible for clotting of blood during an injury of blood vessels?

(d) What value is exhibited by blood?

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Q65. Rahul and his friend Rohit are football players. While playing football one day, Rohit reported to have pain and swelling in the knee. Rahul took him to the doctor. The doctor examined Rohit and told Rahul that his friend is having meniscus tear. The doctor advised Rohit to take proper rest as his injury will take long time to heal.

(a) What is meniscus? What are its functions?

(b) What are the other symptoms of meniscus tear?

(c) Why cartilage injury takes a long time to heal?

(d) What values are shown by Rahul?

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Q66. Muscles are the specialised tissue of mesodermal origin and show specific features responsible for movement. The muscles are of three types, based on their location, appearance and nature of regulation of their activities.

- (a) Name the three types of muscles based on their location.
- (b) Why are visceral muscles called as smooth muscles as well as involuntary muscles?
- (c) What value is imparted to you by the muscle functioning?

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Q67. While teaching in a classroom, biology teacher told students that earthworms are called farmer's friend though they sometime and asked many questions regarding the can be harmful too. Ria found this interesting topic to her teacher.

- (a) Why earthworms are called as farmer friend?
- (b) How earthworms can be harmful to us?
- (c) What values does Ria possess as a student?

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