

**S. N. KANSAGRA SCHOOL
BIOLOGY (THEORY)**

STD11

Annual examination 2014-2015

(Three hours)

Answer all questions in Part I and six questions in Part II, choosing two questions from each of the three sections A, B and C.

All working including rough work should be done on the same sheet as, and adjacent to, the rest of the answer.

The intended marks for questions or parts of questions are given in brackets [].

Part II each point carries half mark.

NOTE: ATTACH THE QUESTION PAPER WITH THE ANSWERSHEET.

Part I (20 marks)

Answer all questions

Question 1

A. Answer the following **[5]**

1. What are ray and fusiform initials?
2. Based on the structure of jaw give two differences between humans and apes.
3. What is the difference in the structure of cell wall of the bacteria that is gram positive?
4. Kingdom Protista shows wide range of organisms. Explain the statement.
5. What is the reason for the success of Gymnosperms?

B. Give a term for **[3]**

1. Group of animals that lay eggs.
2. The male reproductive structures in Pteridophytes.
3. Organs that show similarity in the external forms with different internal structures.

C. Give scientific names of **[4]**

1. Handy man
2. Spider
3. Elephant
4. Fern

D. Give the phylum/division of: **[4]**

1. *Volvox*
2. Salamander
3. Penguin
4. Maize

E. Give the contribution of the following scientist **[2]**

1. Louis Leakey
2. Raymond dart

F. Choose the correct option (copy and write the answer with the alphabet): **[2]**

1. The phloem formed from vascular cambium is called
 - a. primary phloem
 - b. secondary phloem
 - c. protophloem

- d. metapholem
- 2. What is critical for flowering of a short day plant?
 - a. Short days
 - b. Long nights without interruption
 - c. Long nights
 - d. Long nights with interruption
- 3. A hormone delaying senescence is
 - a. Auxin
 - b. Cytokinin
 - c. Ethylene
 - d. Gibberellin
- 4. Collenchyma differs from sclerenchyma in
 - a. Having thick cell walls
 - b. Having wide lumen
 - c. Being flexible
 - d. Being living at maturity

Part II
Section A

Answer any two questions

Question 2

- a. Draw the types of vascular bundles and give examples. [4]
- b. Give four characteristics of meristematic tissue. [1]

Question 3

- a. Describe the role of auxins. [3]
- b. What are phytochromes, how do they affect flowering in plants? [2]

Question 4

- a. Discuss the role of cytokinins. [2]
- b. Give four differences between photoperiodism and vernalisation [2]
- c. Name the complex tissues. Why are they called so? [1]

SECTION B

Answer any two questions

Question 5

- a. Classify octopus (start with Kingdom) and state two characters of the phylum of Octopus. [3]
- b. Bacteria are classified on the basis of shape of body and organ of locomotion. Show the types with diagrams. [Detailed labeling of individual organisms **not** required] [4]

- c. With the help of diagram show the characters of Cnidarians. [Label the characteristics in the diagram] [3]

Question 6

- a. Make a chart showing the complete classification of Cryptogams with examples. [3]
b. Show the alternation of generation in *Funaria*. [3]
c. With the help of diagram describe the characteristic of protozoan protists. [2]
d. Describe the further classification of mammals with examples. [2]

Question 7

- a. With the help of diagram show the characteristics of Arthropoda. [Label the characteristics in the diagram] [3]
b. Draw the structure of Pteridophyte and describe its characteristics. [4]
c. Cockroach is an omnivore. Bring out the features of its digestive system for its food habit. [3]

SECTION B

Answer any two questions

Question 8.

- a. Mention two morphological and four anatomical differences between monocot and dicot stem. [3]
b. Birds are glorified reptiles and are evolved from them. Justify the statement. [3]
c. Cro magnon men were the most highly evolved group. Comment. [2]
d. What is adaptive radiation? Explain with example. [2]

Question 9

- a. Evolution of giraffe with long neck. Explain this on the basis of Darwin and Lamarck's theory. [4]
b. What is Hardy-Weinberg law? Describe three ways by which there can be change in this. [4]
c. Draw schematic representation of monocot and dicot root, bringing out the differences between the two. [2]

Question 10

- a. Describe the process of secondary growth in the stellar region. [4]
b. Describe how the experiment by Miller and Urey proved the chemosynthetic origin of life. [3]
c. Describe three evidences that can be given for monophyletic origin. [3]