



BIOLOGY SSC-I

Inclusive Scheme of Studies 2024 (1200 Marks)

SECTION – A (Marks 12)

Time allowed: 20 Minutes

Candidate Sign. _____

Invigilator Sign. _____

Answer Sheet No. _____

Version No.				
1	2	0	6	1

①	①	●	①	①
●	①	①	①	●
②	●	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	●	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

ROLL NUMBER						

①	①	①	①	①	①	①
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

Deleting/overwriting is not allowed.
Do not use lead pencil.

Fill the relevant bubble against each question according to curriculum:

Question	A	B	C	D	A	B	C	D
1. A team studying a new disease includes a biologist, computer scientist, and statistician. Which outcome best shows scientific collaboration?	Biologist works alone	Data kept secret	Shared analysis and feedback	Single opinion accepted	☐	☐	☐	☐
2. Fossils of the same organism found in different rock layers mainly show:	Sudden creation	No variation	Gradual change over time	Random destruction and blockage	☐	☐	☐	☐
3. A DNA strand having nucleotide sequence A-T-G-C-T will have complementary strand:	A-T-G-C-A	T-A-C-G-A	A-U-G-C-T	G-C-A-T-A	☐	☐	☐	☐
4. A species is best defined as a group of organisms that:	Look similar	Interbreed naturally	Live together	Share habitat	☐	☐	☐	☐
5. In G ₁ phase of cell cycle:	Nucleotides are formed	DNA replicates	Cell exits cell cycle	Cell divides	☐	☐	☐	☐
6. The main tissue in the stomach responsible for secretion of gastric juice is:	Epithelial	Nervous	Muscular	Connective	☐	☐	☐	☐
7. An enzyme is best described as a/an:	Lipid molecule	Hormone	Energy source	Biological catalyst	☐	☐	☐	☐
8. Magnesium is required for the synthesis of:	Chlorophyll	Cell wall	Guard cells	Proteins	☐	☐	☐	☐
9. Which structure is NOT related to xylem, tissue in plants?	Vessels	Sieve tubes	Tracheid	Xylem fibers	☐	☐	☐	☐
10. Cloning is the process of producing:	Different cells	Mutated cells	Identical cells	Hybrid species	☐	☐	☐	☐
11. After pollination, which process must occur for seed formation?	Germination	Dispersal	Meiosis	Fertilization	☐	☐	☐	☐
12. Which cells contain more chloroplasts for photosynthesis?	 Epidermal cells	 Sclerenchyma cells	 Parenchyma cells	 Mesophyll cells	☐	☐	☐	☐



BIOLOGY SSC-I

Inclusive Scheme of Studies 2024 (1200 Marks)

44

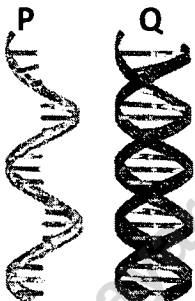
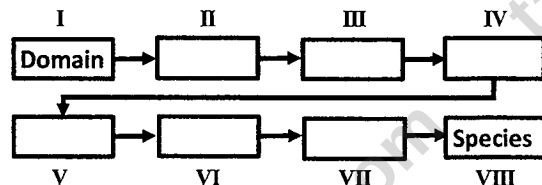
Time allowed: 2:40 Hours

Total Marks Sections B and C: 48

SECTION – B (Marks 30)

Q. 2 Attempt the following parts.

(10 x 3 =30)

i)	Identify the Biomolecules P and Q. Write one function of each.		1.5 + 1.5	OR	Complete the given flowchart of Taxonomic ranks of classification in correct order.	03
						
ii)	Enlist main points of Darwin's theory of evolution. Briefly explain the key principle on which theory is based.		2+1	OR	Enlist any three careers related to the field of Biology and briefly state what each deals with.	1x3
iii)	Differentiate between monosaccharides and disaccharides (any three difference).		1x3	OR	What is meant by parthenogenesis? Why is it considered a form of asexual reproduction?	1+2
iv)	How wind and humidity affect rate of transpiration?		1.5 +1.5	OR	Briefly describe macronutrients and micronutrients in plants with one example of each.	1.5 +1.5
v)	Name and write one characteristic of three domains into which living organisms are broadly classified.		1x3	OR	Name any three basic types of tissues found in the human stomach with their functions.	1x3
vi)	How does Paleontology support evolution?		03	OR	How is the concept of emergent properties as gain in functionality applied to going from subcellular organelles to tissues level?	03
vii)	A plant cell placed in a hypotonic solution does not burst. How its structure provides an advantage? Give reason.		03	OR	A farmer uses stem cuttings to grow new plants instead of seeds. Identify the type of propagation and give reasons to use cuttings.	1+2
viii)	What is competitive inhibition in enzyme action? Explain briefly.		1+2	OR	Briefly explain the role of meiosis in maintaining chromosome number in animals and plants.	1.5 +1.5
ix)	Briefly describe Biometry and Biogeography with one example of each.		1.5 +1.5	OR	What are stem cells? Write about its types.	1+2
x)	Name any three main tissues found in a typical leaf and state one function of each.		1x3	OR	What are lipids? Write about the basic structure of a lipid molecule.	2+1

SECTION – C (Marks 18)

Note: Attempt the following questions.

(3x6=18)

Q.3	Draw and label Endoplasmic reticulum, Golgi apparatus and Mitochondria. Also outline one role of each in a cell.	2+2 +2	OR	How does Karyokinesis occur in mitosis in a cell? Explain in detail. Also draw labelled diagram of the process.	4+2
Q.4	Describe the steps involved in aerobic respiration. Also write chemical equations.	06	OR	Explain development of female gametophyte plants. How double fertilization occurs in plants? Also draw life cycle of a plant.	3+1 +2
Q.5	How is the scientific method used to solve a biological problem? Explain all steps in correct sequence with brief explanation of each involved in scientific method.	06	OR	What are enzymes? Explain any five characteristics of enzymes.	1+5