



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	9	0	6	1

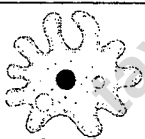
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

ROLL NUMBER						

0	0	0	0	0	0	0
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. Yellowing of leaves will occur in plants due to the deficiency of:	Magnesium	Calcium	Iron	Manganese	☐	☐	☐	☐
2. Strong wind increases transpiration rate mainly by:	Cooling leaves	Reducing light	Moving water vapours	Opening stomata	☐	☐	☐	☐
3. Tissue culture is an example of:	Sexual reproduction	Budding	Grafting	Cloning	☐	☐	☐	☐
4. In flowering plants, the zygote develops into:	Embryo	Ovule	Endosperm	Seed	☐	☐	☐	☐
5. Which cell is specialized for transmission of nerve impulses?	 Guard cell	 Neuron	 Root hair	 Amoeba	☐	☐	☐	☐
6. During a research project, scientists from different fields criticise each other's methods. This practice mainly helps to:	Delay results	Create conflict	Improve accuracy	Limit discussion	☐	☐	☐	☐
7. Development of dog breeds with different traits is an example of:	Natural selection	Genetic drift	Mutation	Selective breeding	☐	☐	☐	☐
8. If a DNA strand is having A-T-C-G-T nucleotide sequence, the mRNA formed from it will be:	U-A-G-C-A	T-A-G-C-A	T-U-G-C-U	T-U-C-G-U	☐	☐	☐	☐
9. If two different species are crossed artificially, they will produce:	Fertile offsprings	Sterile offsprings	Identical offsprings	Offspring similar to one parent	☐	☐	☐	☐
10. The longest phase of the cell cycle is usually:	M phase	G ₂ phase	Interphase	S-phase	☐	☐	☐	☐
11. The tissue which supports and binds other stomach tissues together is:	Muscular	Epithelial	Nervous	Connective	☐	☐	☐	☐
12. An organic molecule permanently attached to enzyme is a/an:	Activator	Prosthetic group	Coenzyme	Cofactor	☐	☐	☐	☐

—1SA-I 26006-(M)—



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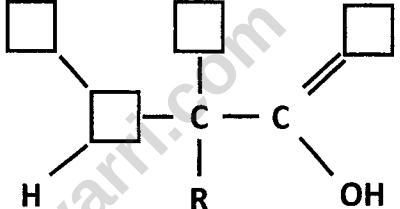
Inclusive Scheme of Studies 2024 (1200 Marks)

Time allowed: 2:40 Hours

Total Marks Sections B and C: 48

SECTION – B (Marks 30)

Q2 Attempt the following parts. (10 x 3 =30)

(i)	Compare one structural advantage of epidermal cell in plants and red blood cell in animal that help each to perform its specific function.	1.5 +1.5	OR	State two differences between natural and artificial vegetative propagation in plants. And give one advantage of asexual reproduction.	2+1
(ii)	Differentiate between competitive and non-competitive inhibition.	03	OR	Why is meiosis important for producing variation in organisms? Explain briefly.	03
(iii)	Briefly describe Taxonomy, Immunology and Morphology with one example of each.	1x3	OR	Write any three differences between prophase of mitosis and prophase I of meiosis.	1x3
(iv)	Write about any three osmotic adjustments in xerophytes.	03	OR	State two dietary sources of lipids. Why are lipids important? Explain briefly.	2+1
(v)	Complete given structure of an amino acid with correct element / group. Also write name of functional groups found in an amino acid. 	2+1	OR	Identify the event of meiosis shown in figure and briefly explain it. 	03
(vi)	Briefly explain theory of natural selection by Darwin evolution.	03	OR	Briefly describe Computational Biology and Biochemistry give one example of each.	1.5 +1.5
(vii)	Differentiate between sucrose and maltose. (Any three differences)	1x3	OR	How is parthenogenesis different form of reproduction? Briefly explain with one example.	1+2
(viii)	Give at least two advantages and one disadvantage of Transpiration.	03	OR	How are mesophyll tissues important in a leaf due to their structure and function.	1.5 +1.5
(ix)	Name the groups included in domain Eukarya. Also write two features of this domain.	1+2	OR	Name any three tissues that are present in stomach. Give one function of each.	03
(x)	How vestigial organs and selective breeding provide support as evidences of evolution?	1.5 +1.5	OR	Identify the highest and lowest taxonomic rank used in modern classification. Also describe these briefly.	1.5 +1.5

SECTION – C (Marks 18)

Note: Attempt the following questions.

(3x6=18)

Q3	Explain light dependent reactions of photosynthesis. Also draw the diagram.	5+1	OR	Explain vegetative propagation in plants through Bulb, Rhizome and Tubers. Also draw diagrams.	2+2 +2
Q4	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	Describe the effect of temperature and pH on enzyme activity. (Explaining why enzymes work best under specific conditions)	3+3
Q5	Draw and label nucleus. Explain the functions of different parts of nucleus.	2+4	OR	How does cytokinesis differ in plants and animal cell? Explain. Also draw the diagrams of both.	3+3