

Paper Code Number: 4461		2025 (1st-A) INTERMEDIATE PART-II (12th Class)		Roll No:	
BIOLOGY PAPER-II GROUP-I					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	_____ is not the adaptation of xerophytes.	Small thick leaves	Stomata in depressions	Thick waxy cuticle	Stomata on the upper surface of leaves
2	Sclereides are most probably found in:	Xylem	Nut shells	Bundle cap	Stem cortex
3	_____ event does not occur during muscle contraction.	I-bands shorten	Z-lines get closer	A-bands reduce in length	H-zones disappear
4	The type of receptors which produce sensation of pain are:	Nociceptors	Thermoreceptors	Photoreceptors	Pacinian corpuscles
5	Over secretion of cortical hormones may cause the disease:	Addison's disease	Cushing's disease	Grave's disease	Diabetes mellitus
6	During vernalisation, low temperature stimulus in the seeds is received by:	Leaves	Shoot apex	Embryo	Roots
7	_____ organ of the plant shows indeterminate growth	Leaves	Fruits	Flowers	Stem (vegetative)
8	_____ is not a non sense codon.	AUG	UAA	UAG	UGA
9	Which type of chromosomes do not possess arms on one side of the centromere?	Metacentric	Acrocentric	Telocentric	Sub metacentric
10	The phase of Meiosis which is considered as a reduction phase:	Telophase I	Anaphase II	Metaphase I	Anaphase I
11	An organism has four pair of homologous chromosomes, how many linkage groups does this organism possess?	2	4	1	8
12	What will be the best tissue culture technique to produce plants homozygous for all their alleles?	Anther culturing	Cell suspension culturing	Protoplast culturing	Meristem culturing
13	In recombinant DNA technology, bacterial cells can be made more permeable for recombinant plasmids, if they are treated with:	Sodium chloride	Cesium chloride	Calcium chloride	Potassium chloride
14	_____ is not the part of Darwin	Over	Struggle for survival	Variations	Use and disuse of parts
15	The oxidation of ammonia or ammonium ions is termed as:	Nitrification	Assimilation	Denitrification	Ammonification
16	The zone of lake ecosystem where light does not penetrate:	Limnetic zone	Littoral zone	Profundal zone	Both littoral and Limnetic
17	_____ is a water pollution.	Ozone depletion	Eutrophication	Acid rains	Greenhouse effect

2025 (1 st -A)		Roll No:	
INTERMEDIATE PART-II (12 th Class)			
BIOLOGY	PAPER-II	GROUP-I	
TIME ALLOWED: 2.40 Hours		SUBJECTIVE	MAXIMUM MARKS: 68
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	How excess salts are excreted by fishes living in marine water?		
(ii)	Compare hydrophytes with xerophytes.	(iii)	Enlist main types of kidney stones.
(iv)	Write down the ultra structure of thin muscle filament.		
(v)	Give briefly the mechanism of movement of cilia.		
(vi)	Differentiate between Epinasty and hyponasty.		
(vii)	What is seed dormancy? How it is helpful for a plant?	(viii)	What is apomixes?
(ix)	Define Eutrophication. Give its two disadvantages.		
(x)	Differentiate between alpine and boreal forests.		
(xi)	How acid rains are harmful for a	(xii)	Why forests are called environmental buffers?
3. Attempt any eight parts.			8 × 2 = 16
(i)	Define Receptors. List different types of receptors.		
(ii)	Write two commercial applications of Gibberellin.		
(iii)	Name the hormones of adrenal medulla with function.		
(iv)	What is meant by MODY? Write its one cause.		
(v)	A normal woman whose father was red blind marries a red blind man. What proportion of their children can have normal colour vision?		
(vi)	Differentiate between Homozygous and Heterozygous.		
(vii)	What is gene pharming? Give example.	(viii)	How complementary DNA are formed?
(ix)	Name the diseases whose antibody are made from transgenic corn and soyabean.		
(x)	Summarize your understanding about root nodule during symbiotic association.		
(xi)	Compare ectoparasite with endoparasite.		
(xii)	Write same lines about crustose lichen stage of Xerosere.		
4. Attempt any six parts.			6 × 2 = 12
(i)	Write the role of hormones in apical dominance.		
(ii)	What was the conclusion of experiment of Hans Dietrich (1892)?		
(iii)	Give the information found in a typical chromosome of homo sapiens.		
(iv)	Give the role of ligase in DNA replication.		
(v)	Write down the structural formulas of both the purines bases found in DNA.		
(vi)	What is mitotic apparatus? Give its importance.		
(vii)	Fertility of a woman is affected with age in terms of genetic disorders. How?		
(viii)	Write the contribution of Lynn Margulis in evolution.		
(ix)	Differentiate the homologous organs.		
SECTION-II			
NOTE: Attempt any three questions.			3 × 8 = 24
5.(a)	Describe various adaptations in plants to cope with low and high temperatures.		4
(b)	Compare mitosis with meiosis and describe their importance.		4
6.(a)	What is secondary growth? Explain the role of vascular cambium and cork cambium in secondary growth		4
(b)	What is the nitrogen cycle? How does it regulate nitrogen availability in ecosystems?		4
7.(a)	Compare nervous system of planaria with nervous system of hydra.		4
(b)	Briefly discuss Darwin's theory of evolution.		4
8.(a)	Describe menstrual cycle in human female.		4
(b)	Write an explanatory note on Rh blood group system.		4
9.(a)	Describe the process of Aging. How it is slowed down?		4
(b)	Provide a detailed overview of PCR technique and its procedure.		4