

Model Question Paper 2025-26

Class : 10

Biology

Time : 1½ hours

Score : 40

Scoring Key and Marking Scheme

Qn. No	Score	Answer/ Value Points	Further Information
1	1	C. ii only	
2	1	B. P-iii, Q-i, R-ii	
3	1	C. Statement correct, reason incorrect	
4	1	D. i, iv correct ii, iii incorrect	
5. A) a	1	Rr , Red flowers	
b	1	<p>(OR)</p>	
B) a	1	TR, Tr, tR, tr	
b	1	Tall and wrinkled seeded , dwarf and round seeded.	
6	2	The beaks of medium-sized seed-eating finches are different from those of large seed-eating and insect-eating ones. The beaks are their main means to obtain food. Birds with beaks of suitable shape or size, depending on the availability of food resources in the environment, will survive and produce more offspring.	
7	1	<ul style="list-style-type: none"> Gibberellins - break seed dormancy. 	
	1	<ul style="list-style-type: none"> Cytokinins - stimulate cell division and cell differentiation in germinating seeds. 	

8	2	Wildlife Tracking Sensors, Global Biodiversity Data Sensors, Cryopreservation, Bioremediation (any two / including their use)	
9	2	Agree. Since AB blood group has no antibodies, it does not react with the antigens in the donor's blood, and therefore blood clotting does not occur.	
10) A. a)	1	Malaria. Intermittent fever, chills and shivering, head ache, vomiting, muscular pain, body pain and fatigue	
b)	1	Since the disease is spread by mosquitoes, precautions should be taken for mosquito control. (OR)	
10) B. a)	1	Haemophilia. Defect of the gene that controls the production of proteins responsible for blood clotting.	
b)	1	Gene therapy / protein therapy	
11	2	The increase in the size of the brain gave complex social behaviour, to make tools, to use language, and to perform higher-level cognitive functions. The increase in cranial capacity has also helped man to adapt to changing environments, develop culture and to use advanced technologies.	
12. a)	1	formed from a specific nucleotide sequence (gene) in DNA with the help of various enzymes.	
b)	1	tRNA (transfer RNA) carry specific amino acids to the ribosome based on message in the mRNA	
	1	rRNA (ribosomal RNA) helps in the formation of bonds between amino acids./ combine amino acids to make protein.	

13) A. a)	1	Clotting of blood.	
b)	2	The platelets and damaged tissues at the site of injury produce an enzyme called thromboplastin. This converts a protein in the blood plasma called prothrombin into thrombin. Thrombin then converts an inactive protein called fibrinogen into fibrin. The fibrin forms a network of fibers that traps red blood cells, forming a blood clot.	
(OR)			
13) B. a)	1	Inflammatory response	
b)	2	The cells at the injured part releases histamine and other chemical substances. This dilates the blood vessels. As blood flow increases, blood cells such as monocytes and neutrophils reach the injured area. They engulf and destroy the pathogens.	
14	1	<ul style="list-style-type: none"> The layer in which photoreceptors are seen. Rod cells recognise objects in both dim light and in shades of black and white. The cone cells provide vision in intense light and also help in recognising colours. 	
	1	<ul style="list-style-type: none"> Transmits impulses from the photoreceptors to ganglion cells. 	
	1	<ul style="list-style-type: none"> Transmits impulses from bipolar cells to the optic nerve. 	
15. a)	1	To redraw the diagram	
b)	1	P - Dendron, Q - Axonite	
c)	1	increase the speed of transmission of messages by acting as an insulator, provide nourishment to the neuron and to protect the axon from external injuries. (any 1 function)	
16) A. a)	2	Recombinant DNA technology. The genetic constitution of an organism can be altered by adding or removing genes.	
b)	1	P- Ligase, Q- Restriction endonuclease	
(OR)			
16) B. a)		CRISPR Technology	
b)	1	guide RNA : precisely identifies the DNA segment that needs to be cut.	
	2	Cas9 : cuts the DNA segment identified by the guide RNA	

17. a)	1	Perilymph	
b)	2	Organ of corti. The vibrations that reach the hair cells present here generate impulses. These impulses reach the brain through auditory nerve resulting in the sense of hearing.	
18) A.			
a)	1	Beta cells. Pancreas	
b)	2	converts glycogen into glucose. Synthesise glucose from amino acids.	
c)	1	<ul style="list-style-type: none"> • Healthy food habits • Exercise 	
		(OR)	
18) B.	3	<ul style="list-style-type: none"> • Excessive heat and sweating during summer can lead to dehydration, which increases the production of vasopressin. It speeds up water reabsorption in the kidney. As a result, the production of urine decreases, and dehydration is prevented. During winter, since dehydration through sweating is reduced, the reabsorption of water from the kidneys also decreases. 	
	1	<ul style="list-style-type: none"> • Vasopressin is produced by the hypothalamus. 	