DIET WAYAND
PRE MODEL EXAMINATION MARCH 2022
BIOLOGY
ANSWER KEY

Time : 1 ½ Hrs   **Maximum score : 40**

Qn. No.	Scoring indicators	Split score	Total Score
1	c) Protein	1	1
2	Sensory nerve	1	1
3	Photopsin/ Iodopsin	1	1
4	a) Restriction endonuclease	1	1
5	b) keratin	1	1
6	Pituitary	1	1
7	d) Leptospira	1	1
8	Mutation theory	1	1
9	b) Ommatidia, Others Ear ossicles / Bones of ear	1	1
10	a) The arrangement of nucleotides in each person are different. b) helpful to find out hereditary characteristics/ to identify real parents in cases of parental dispute/ to find out hereditary characteristics / to identify real parents in cases of parental dispute / real culprit can be identified from among the suspected persons (2)	1 1	2
11	a) Excess blood is lost even through minor wounds. b) Identifying and injecting the deficient protein.	1 1	2
12	In all organisms Enzymes control chemical reactions. Energy is stored in ATP molecules. Genes determine hereditary traits. Carbohydrates, proteins and fats are the basic substances. (Any 2)	2	2
13	Aromatic particles diffuse in the air and enter the nostrils → Aromatic particles dissolve in the mucus inside the nostrils → Stimulate the olfactory receptors→ Generate impulses → Impulses reaches the brain through olfactory nerve → Sense of smell	½X6	3
14	a) Synaptic knob b) Neurotransmitters. They stimulate the adjacent dendrite or cell and new electric impulses are generated.	1 2	3
15	a) mRNA, carries information from DNA b) tRNA brings different kinds of amino acids to ribosome	½+½=1 2	3
16	a) Pheromones b) Pheromones help in attracting mates/ informing the availability of food/ determining the path of travel/ signalling dangers etc. (Any two)	1 2	3
17	(b) Blood flows from the wound→ (c) Tissues degenerate to form the enzyme called thromboplastin → (a) Thromboplastin converts prothrombin to thrombin → (d) Thrombin converts fibrinogen to fibrin → (f) The red blood cells and platelets entangle in the fibrin network → (e) Blood clot is formed.	½x6=3	3
18	a) Dominent trait – Tall, Recessive trait – Dwarf	1	

	b) Tt X Tt Gametes (T) (t) (T) (t) F2 TT Tt Tt tt Tall Tall Tall Dwarf	3	4
19	a) X-calcium, Y-Glucose b) Calcitonin, Parathormone c) Cellular uptake of glucose molecules by insulin, converts glucose into glycogen in the liver and muscles by insulin.	½ + ½ =1 ½ + ½ =1 2	4
20	Charls Darwin c) Over production a) Struggle for existence e) Those with unfavorable variations are destroyed and those with favorable variations survive d) Favorable variations are transferred to the next generation f) Accumulation of variations inherited through generations b) Origin of new species	1 ½ x6=3	4
21	a) Diphtheria - Corynebacterium diphtheria / Bacteria Filariasis – Filarial worm b) Filariasis c) The worms stay in the lymph ducts and obstruct the flow of lymph by blocking the ducts	½ x2 =1 1 2	4
22	a) i-Vestibular nerve, ii- Auditory Nerve b) i – Carries impulses to cerebellum, ii- carries impulses to cerebrum c) The movement of the endolymph present inside the semicircular canals causes movement of the sensory hair cells and generates impulses	½ x2 =1 ½ x2 =1 2	4
23	a) The substances used for artificial immunization. b) Any one of the components from Alive or dead or neutralised germs,neutralised toxins or cellular parts of the pathogens. c) Components of vaccines act as antigens .They stimulate the defense mechanism of the body. Antibodies are formed in the body against them. These antibodies are retained in the body. Which in future protects the body from the pathogen responsible for the same disease.	1 2 2	5
24	Drawing (1) Identifying the parts (½ score each) Correct labeling (½ scores each) a) Cerebrum b) Cerebellum c) Thalamus d) Medulla oblongata	1 ½x4=2 ½x4=2	5