SSLC MODEL EVALUATION 2021

BIOLOGY (Answer key)

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Qn num. & Key of answer	Score
1 score questions	1
1. Deoxyribose sugar	1
2. b). AB	1
3. d). Hypothalamus	1
4. a). Prolactin : Production of milk	1
5. b). Interferons	1
6. Ligase	1
7. d). This is the point of maximum visual clarity	1
8. b). Thymosin	1
9. a). Malaria	1
10. c). Monkey	
2 score questions	
11. The outer epidermis of the skin have a protein called keratin, prevents germs from entering it. Sebum, produced by the sebaceous glands makes skin oily and water proof. Sweat, produced by the sweat glands have disinfectants to destroy germs. Skin also contain useful bacteria, which indirectly prevent germs. (Any 2)	1+1
12. a). In saliva (in place of mucus)	1
d). Ommatidia (in place of eyespot)	1
13. mRNA carries information of protein synthesis from DNA to ribosomes	2
14. i). Loss of body balance, Tremor in muscles, Salivation (any 1) ii). Degeneration of neurons due to the accumulation of an insoluble protein in brain. iii). Parkinson iv). Alzheimer's	½ each
15. a). Reflex action b). Spinal reflex & Cerebral reflex.	1+1
16. i). Amino acids, fatty acids, nitrogen bases (any 1)	½
ii). Proteins, lipids, nucleotides (any 1)	½
iii). Primitive cell.	1
17. a). Ear wax b). HCl c). Mucus d). Lysozyme	½ each
18. i). Sprouting of leaves ii). Fruit formation iii). Dormancy of embryo iv). Dropping of leaves and fruits	½ each
19. -To find out hereditary characteristics, -To identify real parents in the case of parental dispute -To identify persons found after a long periods of missing due to war or natural calamities. -To prove murder, robbery etc. (any2)	1+1
20. i). Calcitonin ii). Thyroid iii). Parathormone iv). Parathyroid	½ each
21. a). Rod cell b). Rhodopsin c). Vision under dim light d). Night blindness	½ each
22. a). i). XX ii). XY	½ + ½
b). The Y chromosome of father determines the child as male and the X chromosome of father determines the child as female.	1
3 score questions	
23. a). Nucleotide. b) A- Sugar, B- Nitrogen base c). Thymine nitrogen base.	1+1+1
24. a). The normal cells become cancerous cells when the control system of cell division fails.	1
b). Environmental factors, smoking, radiations, viruses, hereditary factors, alterations in genetic material (any 2)	½ + ½
c). Surgery, Chemotherapy, radiation therapy (any 2)	½ + ½

25. i). Cerebellum ii). Maintains equilibrium of the body iii). Thalamus iv), v). -Centre of thought, intelligence and memory, Evokes sensations. vi). Analyses impulses from various parts of the body and sends to the cerebrum	½ each
26. Acromegaly – Excessive production of somatotropin after growth phase – Over growth of bones on the face, jaws and fingers.	½ + ½
Cretinism – Decreased production of thyroxine during infancy - Physical and mental growth retardation in children	½ + ½
Gigantism - Excessive production of somatotropin during growth phase - Excessive growth of the body	½ + ½
27. i). Auditory canal ii). Tympanum iii). Ear ossicles	½ each
iv). Cochlea v). Auditory nerve vi). Brain / Cerebrum.	1
28. a). Lymphocytes b). Through body fluids., By sharing needle and syringe used by HIV affected persons, Through sexual contact, From HIV infected mother to her foetus. (any 2)	1+1
29. - Cornea refracts light into the eye. - Light enter through the pupil falls on the lens. - Lens focus the light rays into the retina. - Photosensory cells on the retina stimulated. - Impulse transmitted through optic nerve to the cerebrum. - Sense of sight.	3 1
30. a). Vaccines are substances,given in advance to prevent certain diseases.	1
b). Dead, inactive, alive but neutralized germs or toxins / antigens (any 2)	1
c). BCG, OPV, Pentavalent, MMR, TT, Smallpox vaccine (any2)	1
31. a). i)- Struggle for existence b). Over a long period, the favourable variations inherited and accumulated through generations,, resulting the formation of new species.	2
32. a). Phagocytosis b). Monocyte, Neutrophil. c). Phagocytosis helps to destroy pathogens.	1 each
4 score questions	
33. a). Neuron / Nerve cell. b). A- Dendron B- Axon	1+2
c). Production of neurotransmitter when impulse reach there.	+1
34. (ചോദ്യത്തിൽ പിഴവുണ്ട്) a). i – Beta cells ii- Insulin	1+1
b). Insulin helps to normalize the rate glucose level in blood when glucose level increases. / Converts glucose to glycogen.	1
c). Diabetes mellitus	1
35. a). Tuberculosis b). Through air (when the patient speaks, coughs or sneezes)	
c). Mycobacterium tuberculosis d). Lungs, kidneys, bones, joints, brain (any 2)	1 each
36. (for redrawing)  	1 1+1+1