SSLC Examination 2021

Biology Answer key

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1.	DNA- Deoxyribose Sugar
2	AB
3	Hypothalamus
4	Prolactin : Production of Milk
5	Interferons
6	Ligase
7	This is the point of maximum visual clarity
8	Thymosin
9	Malaria
10	Monkey
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
12	(a) Substances responsible for taste should dissolve in Saliva to stimulate the chemoreceptors. (d) The cluster of photoreceptors of a housefly is Ommatidia.
13	mRNA, which carries information, forms from DNA. - mRNA reaches outside the nucleus. - mRNA reaches ribosome. - Based on the information, amino acids are transferred to ribosomes by the tRNA. - Ribosomes bind amino acids to form protein molecule
14	(i) Loss of body balance. Tremor in muscles, flow of saliva (ii) Continuous degeneration of neurons due to the accumulation of an insoluble protein (iii) Parkinsons (iv) Alzheimer's
15	a. Reflex Actions b. Cerebral reflex, Spinal reflex
16	(i) Amino Acid/ Fatty Acid/ Nitrogen Base (ii) Protein/ Fat/ Nucleotide (iii) Primitive Cells
17	a. Ear- Ear Wax b. Stomach- Hydrochloric Acid c. Trachea- Mucus d. Urinary Tract- Lysozyme
18	(a) Gibberellin - Sprouting of leaves (b) Auxin - Fruit Formation

<table>
<tr><td></td><td>(c) Abscisic acid - Dormancy of Embryo
(d) Abscisic acid and Ethylene - Dropping of leaves and fruits</td></tr>
<tr><td>19</td><td>-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.</td></tr>
<tr><td>20</td><td>(i) Calcitonin (ii) Thyroid
(ii) Parathormone (iv) Parathyroid</td></tr>
<tr><td>21</td><td>a. Rod Cell
b. Rhodopsin
c. Vision under dim light
d. Night blindness</td></tr>
<tr><td>22</td><td>a. (i) XX
(ii)XY
b. Male can produce X and Y chromosomes</td></tr>
<tr><td>23</td><td>a. Nucleotide
b. A- Sugar Molecule B- Nitrogen Base
c. Thymine</td></tr>
<tr><td>24</td><td>a. Failure of Cell division mechanism
b. Environmental factors, smoking, radiations, viruses, hereditary factors and alterations in genetic material (any two)
c. Reduce use of tobacco, Eat a healthy diet and physically active, early detection of cancer</td></tr>
<tr><td>25</td><td>i. Cerebellum
ii. Maintain the equilibrium of the body
iii. Thalamus
iv. Centre of thought, intelligence, memory and imagination
v. Evoke sensation
vi. Analyses impulses from various parts of the body and send to cerebrum</td></tr>
<tr><td>26</td><td>
<table>
<tr><td>A</td><td>B</td><td>C</td></tr>
<tr><td>Acromegaly</td><td>Excessive production of somatotropin after growth phase</td><td>Overgrowth of bones on the face, jaws and fingers</td></tr>
<tr><td>Cretinism</td><td>Decreased production of thyroxine during infancy</td><td>Physical and mental growth retardation in children</td></tr>
<tr><td>Gigantism</td><td>Increased production of somatotropin</td><td>Excessive growth of the body</td></tr>
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			during growth phase	

27	i. Auditory Canal ii. Eardrum iii. Ear ossicles iv. Cochlea v. Auditory nerve vi. Cerebrum
28	a. Lymphocytes b. •Through body fluids. • By sharing needle and syringe used by HIV affected persons. • Through unprotected sexual contact. • From HIV infected mother to her foetus
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 transmit through optic nerve to the cerebrum. Sense of sight
30	a. Vaccines are substances, given in advance to prevent certain diseases. Dead, inactive, alive but neutralized germs or toxins are used as vaccines. b. Dead, inactive, alive but neutralized germs or toxins are used as vaccines. c. BCG, OPV, Pentavalent, MMR, TT
31	i. Struggle for existence ii. When over production of organisms occurs, they compete for food, space, mate, and other limited resources (Struggle for Existence). In this struggle, only organisms with favorable variations survive in that nature. Over a long period, the favorable variations accumulate, resulting the formation of new species. (Natural selection).
32	a. Phagocytosis b. Monocytes and neutrophils c. Engulfing and destroying germs.
33	a. Neuron / Nerve cell b. A:Dendron B :Axon c. Secretes neuro transmitter.
34	a. i. beta cells ii. Insulin b. It accelerates the process of glucose intake by the cells and conversion of the excess glucose in to glycogen. c. Diabetes
35	a. Tuberculosis b. TB bacteria are spread through the air from one person to another. The TB bacteria are put into the air when a person with TB disease of the lungs or throat coughs, speaks, or sings. People nearby may breathe in these

	bacteria and become infected. c) Mycobacterium tuberculosis d) Lungs. Kidneys, bones, joints, brain (any two)
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