

SSLC MODEL EXAMINATION FEB 2023 BIOLOGY

Qn	<p align="center">Answer Key / Hints (English medium) By Rasheed Odakkal, 9846626323, GVHSS Kondotty</p>	Score	Total											
1	Oncology.	1	5x1											
2	(a). <u>ommatidia</u> (c). <u>radial muscles</u>	½+½												
3	(b). Gene mapping.	1												
4	Crossing over.	1												
5	Glucagone. Others are hormones of adrenal gland.	1												
6	Mutation theory / Theory of Hugo deVries.	1												
7	(a). The positive ions get inside, while the negative ions come out side the membrane. (b). Yes. This charge difference stimulates its adjacent parts and similar changes occur there, resulting a continuous flow of the impulse.	1 1	6x2											
8	(a). B -lymphocytes. (b), Antibodies destroy germs by disintegrating tbacterial cell membrane, neutralise their toxins and stimulate the other white blood cells. (any 2)	½+1½												
9	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Spinal reflex</td> <td align="center">Cerebral reflex</td> </tr> <tr> <td>(a). A thorn picked the leg suddenly...</td> <td>(c). Light suddenly flashed and eyes...</td> <td></td> </tr> <tr> <td>(e). Under the control of the spinal cord.</td> <td>(d). Under the control of the cerebrum.</td> <td></td> </tr> </table>	Spinal reflex		Cerebral reflex	(a). A thorn picked the leg suddenly...	(c). Light suddenly flashed and eyes...		(e). Under the control of the spinal cord.	(d). Under the control of the cerebrum.		½ x4			
Spinal reflex		Cerebral reflex												
(a). A thorn picked the leg suddenly...	(c). Light suddenly flashed and eyes...													
(e). Under the control of the spinal cord.	(d). Under the control of the cerebrum.													
10	(a). Corynebacterium diphtheriae. (b). Fever, throat pain, inflammation in lymph glands of the throat. Mucus membrane becomes an ash coloured thick coating in throat. (any 2)	1+1												
11	(a). i. ttrr ii. TR (b). Tall plant, Round seed.	1+1												
12	(a) Haemophilia. (b). Temporary relief is brought in by identifying and injecting the deficient protein.	1+1												
13	Differences in their external appearances are their adaptations to live in their own habitats. All thes organisms were evolved from a common ancestor.	2												
14	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td align="center">A</td> <td align="center">B</td> <td align="center">C</td> </tr> <tr> <td>Oval window</td> <td>Membrane seen attached to the stapes</td> <td>Spreads the vibration of ear ossicles to the inner ear</td> </tr> <tr> <td>Eustachian tube</td> <td>Connects the middle ear and pharynx</td> <td>Balance the pressure on either side of the tympanum</td> </tr> <tr> <td>Tympanum</td> <td>A thin circular membrane that separates the middle ear from the external ear</td> <td>Vibrates in resonance with sound waves.</td> </tr> </table>	A	B	C	Oval window	Membrane seen attached to the stapes	Spreads the vibration of ear ossicles to the inner ear	Eustachian tube	Connects the middle ear and pharynx	Balance the pressure on either side of the tympanum	Tympanum	A thin circular membrane that separates the middle ear from the external ear	Vibrates in resonance with sound waves.	1+1+1
A	B	C												
Oval window	Membrane seen attached to the stapes	Spreads the vibration of ear ossicles to the inner ear												
Eustachian tube	Connects the middle ear and pharynx	Balance the pressure on either side of the tympanum												
Tympanum	A thin circular membrane that separates the middle ear from the external ear	Vibrates in resonance with sound waves.												
15	(a). X= Central canal, Cerebrospinal fluid. (b). Y= Dorsal root, Z= Ventral root. (c). No, the Y (dorsal root) carries sensory impulses and the Z (ventral root) carries motor impulses.	1+1+1												
16	i. Ethylene. ii. Auxine. iii. Gibberellin. iv. Break down of stored food to facilitate germination. v. Abscicic acid. vi. Cell differentiation.	½ x6												
17	(a). X= mRNA, Y= Ribosome. (b). The X, (mRNA) carries information for protien synthesis from DNA to the ribosomes. (c). Protien synthesis / binding amino acids.	1+1+1												
18	(a). Fatty liver, Stroke. (b). Avoid the use of fatty and salty food, Control diabetes and hypertension, Take measures to reduce mental stress, Abandon the habits of smoking and alcohol consumption, Proper exercise... (any 4)	1+2												
19	(a). The collected DNA sample and that of the Suspect 2 are same. (b). The arrangement of nucleotides in the DNA of each person differs. (c). 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. (any 2)	1+1+1												
20	b. Formation of atmosphere of primitive earth. d. Formation of ocean. c. Formation of simple organic molecules. a. Formation of complex organic molecules f. Nucleic acids, lipid layer. e. Primitive cell.	3	5x3											
21	(a). Phagocytosis. (b). Monocytes, Neutrophils. (c). The pathogens in the membrane sac are destroyed by the enzymes in lysosome.	1+1+2												
22	(a). Somatotropin, Prolactin. (b). Oxytosin, which facilitates child birth by stimulating the contraction of smooth muscles in the uterine wall and also facilitates lactation. OR													

23	<p>Vasopressin, which helps in the reabsorption of water in the kidney. (any 1) (c). Releasing hormone, Inhibitory hormone. (d). Releasing hormone stimulates the anterior lobe of the pituitary gland and secretes tropic hormones. Inhibitory hormone inhibits the production of tropic hormones.</p>	1+1+1 +1	2x4 (40)
	 <p>(a). i. Optic nerve. ii. Yellow spot.</p> <p style="text-align: right;">(Redrawing)</p>	1+	
	<p>(b), X (aqueous humor) supplies nutrients and oxygen to cornea and lens. Y (vitreous humor) helps to maintain the shape of eyeball.</p>	1+1+2	