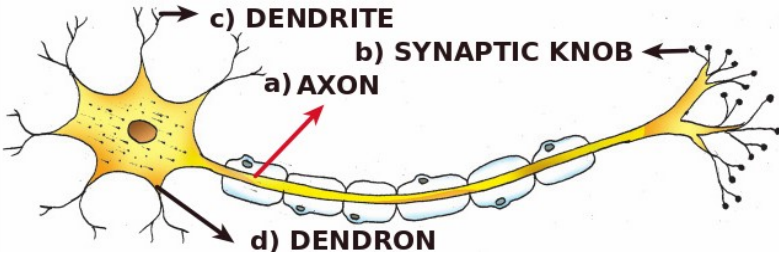


SSLC MODEL EXAMINATION, MARCH-2022
ANSWER KEY
BIOLOGY(ENG MED)

QNO	VALUE POINTS	SCORE	TOT
1	c) cilia cells present	1	1
2	Adenine: Thymine, Guanine: Cytosine	$\frac{1}{2} + \frac{1}{2}$	1
3	Rat fever(Leptospirosis)	1	1
4	Bombykol	1	1
5	Joining insulin gene with plasmid	1	1
6	Photopsin/Iodopsin	1	1
7	Production of saliva increases. Others are actions in Parasympathetic	1	1
8	balancing the body	1	1
9	Hominoidea	1	1
10	a) Gene therapy b) Gene therapy is a method of treatment in which the genes that are responsible for diseases are removed and normal functional genes are inserted in their place.	1 1	2
11	a) 46 b) somatic chromosomes	1 1	2
12	a) Enzymes control chemical reactions. b) Energy is stored in ATP molecules. Genes determine hereditary traits. Carbohydrates, proteins and fats are the basic substances.(Any Two)	1 1	2
13	a) Glandular cell b) Synapse is the junction between two neurons or a neuron and a muscle cell or a neuron and a glandular cell. c) Acetylcholine/Dopamine	1 1 1	3
14	a) AIDS b) HIV (Human Immuno deficiency Virus) enters the body and multiplies using the genetic mechanism of lymphocytes. Hence the number of lymphocytes decreases considerably and reduces the immunity of the body.	1 2	3
15	a) Insulin and Glucagon b) When glucose increases in the blood: Insulin converts glucose into glycogen in the liver and muscles. When glucose decreases in the blood: Glucagon converts the glycogen stored in the liver to glucose.	1 2	3

16	B- Lymphocytes	T- Lymphocytes	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	3
	Destroy the bacteria by disintegrating their cell membrane.	Destroy the cells affected by virus		
	Neutralise the toxin of the antigens.	Destroy cancer cells.		
	Destroy the pathogens by stimulating other white blood cells.	Stimulate other defense cells of the body.		
17	a) Ear canal b) Tympanum c) Ear ossicles d) cochlea e) Auditory nerve f) cerebrum		6 X $\frac{1}{2}$	3
18	a) Chemical evolution theory b) Stanley Miller and Harold Urey c) In the place of natural energy sources like thunder and lightning in the atmosphere of primitive earth, high voltage electricity was passed through the gaseous mixture in the glass flask. Then, this gaseous mixture was cooled with the help of a condenser. The sediment substances were separated and when observed, organic molecules such as amino acids, were found.		1 1 2	4
19	a) Action of genes/ Protein synthesis b) X= mRNA forms from DNA, Y= Based on the information in mRNA, protein is synthesized by adding amino acids c) tRNA brings different kinds of amino acids to ribosome.		1 1+1 1	4
20	a) Sickle cell anaemia b) The defects in genes may also cause deformities in the sequencing of amino acids which are the building blocks of haemoglobin c) The oxygen carrying capacity of red blood cells decreases. The sickle shaped RBCs get collected in the blood vessels and block the flow of blood in them.		1 1 2	4
21	a) Germs enter through wounds, Chemicals are produced Blood capillaries dilate. White blood cells reach the wound site through the walls of the capillaries Neutrophils and monocytes engulf and destroy germs.. b) monocytes and neutrophils c) Dilate the capillaries thereby increasing the blood flow. Blood plasma and more white blood cells reach the wound site		2 $\frac{1}{2}+\frac{1}{2}$ 1	4
22	a) Fluid 'A'= Aqueous humor, Fluid 'B'= Vitreous humor b) Fluid 'A' is formed from blood. c) Glaucoma d) Fluid 'B' helps in maintaining the shape of the eye		1 1 1 1	4

23	 <p>The diagram shows a neuron with a cell body (soma) on the left containing a nucleus. Branching out from the cell body are several tree-like structures labeled 'c) DENDRITE'. A long, thin projection labeled 'a) AXON' extends to the right, covered by a myelin sheath. At the end of the axon are small bulbous structures labeled 'b) SYNAPTIC KNOB'. A label 'd) DENDRON' points to the cell body.</p>		5
24	<p>a) Gibberellin b) & c) Cell growth/cell elongation/promoting the growth of terminal buds/fruit formation(ANY TWO) d) Absciscic acid e) Ripening of leaves and fruits, /excess amount of ethylene causes dropping of leaves and fruits.(ANY ONE)</p>	5x1	5

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