

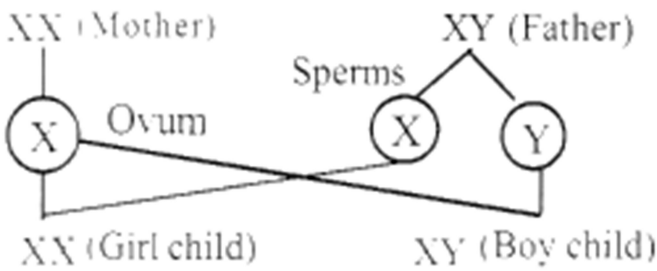
SSLC EXAMINATION, MARCH 2017

STD : X

Time: 1 ½ Hours

BIOLOGY

Total Score: 40

QN	INDICATORS	Marks
1	Lateral line	1
2	a) Deforestation, Environmental pollution, b) Extinction of organisms effect the food chain. Human are affected badly because each species in a food chain are inter con-nected. If any one of the tropic level is destructed it can effect the organism in the food chain directly or indirectly. Since man is a part of the chain, any change in the food chain will affect man	1 2
3	a) i. Promotes cell division, cell growth and cell differentiation. ii. Ethylene iii. Gibberellins iv. Controls dormancy of embryo in the seed, dropping of leaves and fruits, flowering, wilting of leaves etc. b) 2,4-D (2,4-Dichloro phenoxy acetic Acid)	2 1
4	a) Various reasons such as environmental factors, <u>smoking</u> , radiations, hereditary factors and alterations lead to the transformation of normal cells into cancer cells, b) Surgery, Chemotherapy, Radiation therapy etc.	1 ½ 1 ½
5	a) Phagocytes reach near pathogens → Engulf pathogen in membrane sac → A Membrane sac combines with lysosome → The enzymes in lysosome destroys the pathogens → Expels the remnants, b) Monocytes and Neutrophils.	2 1
6	Sex chromosomes are different. XX in female and XY in male. The XY chromosomes of father determines whether the child is male or female. There is 50:50 possibility to have a boy or girl child. 	2
7	(A) a) Beneficial effects of Genetic Engineering • Plants and animals that produce medicines. • Remedy for genetic diseases. Harmful effects of Genetic Engineering • Genetically modified varieties cause harm to indigenous varieties and may cause health issues to humans, • Application of genetically modified pathogens and pathogens multiplied through biotechnology upon enemies is called Biowar. b) Genetic Scissors – Restriction Endonuclease, Genetic glue – Ligases.	2 1

	<p>(B)</p> <p>a) Alec Jeffrey</p> <p>b)</p> <ul style="list-style-type: none"> Helpful to find out hereditary characteristics. To identify real parents in cases of parental disputes. To identify persons found after long periods of missing due to natural calamities or wars 	<p>1</p> <p>2</p>
8	<p>a) Though the finches look similar to one another they had differences in their beaks.</p> <p>b) Finches have beaks according to their food habits. Insectivorous finches have small beaks and those that feed on cactus plant have long and sharp beaks. Wood peckers that feed on worms from holes in tree trunks using small twigs taken with its finches have sharp beaks and the ground finches that feed on seeds have large beaks.</p>	<p>1</p> <p>1</p>
9	<p>(A)</p> <p>a) Reflex action</p> <p>b) Stimulus → Sensor Neuron → Intemeuron → Motor neuron Related Muscle.</p> <p>(B)</p> <p>a) A- Alzheimer's B- Parkinsons</p> <p>b) Alzheimer's -Loss of memory, inability to recognize friends and relatives. Parkinsons – Loss of body balance, shivering of the body.</p>	<p>1</p> <p>2</p> <p>2</p> <p>2</p>
10	Small hairs and wax inside the canal help to prevent dust and foreign particles from entering the ear.	1
11	The deficiency of thyroxine during foetal stage or infancy leads to mental retardation and stunted growth. This condition is called cretinism. The excessive production of thyroxine, leads to hyperthyroidism may lead to grave's disease characterised by bulging of eyeballs. Flence the increase or decrease in hormones adversely affects the bodily activities.	2
12	<p>A – Chicken pox</p> <p>B – AIDS</p> <p>C – Through mosquitoes</p> <p>D – Through Animals.</p>	1
13	<p>EEG – Records electric waves in Brain</p> <p>CT Scanner – Get 3D visuals of internal organs with help of computer using X – rays</p> <p>ECG- Records electric waves in heart much Ultrasound Scanner – Understands the structure of internal organs using Sound waves. MRI Scanner – Gets 3-D visuals of internal organs.</p>	2
14	<p>a) Protein Synthesis</p> <p>b)</p> <ul style="list-style-type: none"> mRNA forms from DNA mRNA reaches outside the nucleus mRNA reaches ribosomes Different kinds of amino acids reach ribosomes. Based on the information in mRNA protein is synthesized adding amino acids. 	<p>1</p> <p>2</p>
15	The electric impulses generated by stimuli reach the synaptic knob where certain chemical substances are secreted. They are called neurotransmitters. The neurotransmitter	2

	which is released in the synaptic cleft stimulates the adjacent dendrite and new electric impulses are formed.	
16	<p>a) Cornea</p> <p>b) Yellow spot</p> <p>c) Pupil</p> <p>a) Cornea – Refracts light rays to focus on the retina. b) Yellow spot – Part of the retina where plenty of photoreceptors are seen. Point of maximum visual clarity. c) Pupil – Adjusts its size according to the intensity of light.</p>	1 1 1 1



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