

**INDIAN SCHOOL MUSCAT**  
**SECOND PRE-BOARD EXAMINATION**

**FEBRUARY 2020**

**CLASS X**

**Marking Scheme – SCIENCE [THEORY]/BIOLOGY**

<b>SECTION - A</b>		
<b>Q.NO.</b>	<b>ANSWER</b>	<b>MARKS</b>
2	Abscisic acid	1
8	14 OR wings in butterfly and bat	1
9	two	1
10	Tall plant with round seeds	1
11	To involve the community in forest conservation efforts.	1
<b>SECTION - B</b>		
18	HCl (1/2 mark) Provides an acidic medium for the pepsin to act. (1 mark) Kills the harmful microorganisms in the food. (1 mark) Over secretion leads to acidity. (1/2 mark) OR Pulmonary vein (1 mark) Veins – with valve, thin walled (1/2 X4=2marks) Artery- without valve, thick walled.	3
19	Second trophic level- grass hopper (1/2 mark) Third trophic level-frog (1/2 mark) According to ten percent law 10% each is available in each consumer level, so for peacock it will be 1 J. (calculation and answer – 2 marks)	3
20	1. Determining the age of the fossil 2. Trace the evolutionary tree 3. Trace the relationship between nearest organisms. 4. Tells us about the climate of that age. (any three points) 1X3=3 marks.	3
21	Drawing- (Nephron and associated parts.) 1mark Labelling- 1/2 X 4=2 marks.	3
<b>SECTION - C</b>		

2	Actively participate in the forest conservation programs.	1
8	14 OR Wings in butterfly and bat	1
9	two	1
10	tall plant with round seeds	1
11	Rapid cell division in the tendrillar cells that are away from the support	1
<b>SECTION - B</b>		
18	HCl (1/2 mark) Provide an acidic medium for the pepsin to act. (1 mark) Kills the harmful microorganisms in the food. (1 mark) Over secretion leads to acidity. (1/2 mark) OR Pulmonary vein (1 mark) Veins – with valve, thin walled (1/2 X 4 = 2 marks) Artery- without valve, thick walled.	3
19	Second trophic level- grass hopper (1/2 mark) Third trophic level- frog (1/2 mark) According to ten percent law 10% each is available in each consumer level, so for peacock it will be 1 J. (calculation and answer – 2 marks)	3
20	Since the experiences earned during lifetime does not have any effect in the DNA of that person, it will not get inherited. These characters are called acquired traits. (2 marks) Examples- $\frac{1}{2} \times 2 = 1$ mark	3
21	Presence of alkaline medium (1 mark) Bile is not released. (1 mark). Emulsification of fat is not happened. (1 mark)	3
<b>SECTION- C</b>		
27	<b>Ans.</b> Synapse is the gap between nerve ending of one neuron and dendrites of another. At synapse, the electrical impulse generated at dendrites of a neuron is passed on to dendrite of another neuron in the form of chemicals by the end of the first neuron. Synapse ensures that nerve impulse travels only in one direction. A similar synapse allows the delivery of impulse from the neuron to the other cells, like muscle cells. (2 marks) (a) Involuntary actions They occur in response to internal stimuli. They relate to functioning of internal body parts. It occurs without the will of the organism. E.g., heartbeat, breathing, etc. These are regulated by medulla oblongata (hind brain).  (b) Reflex action They operate against harmful stimuli which are generally external. They relate to emergency i.e., response to stimuli. Some reflexes involve the brain, rather than the spinal cord. Reflex action is generally controlled by spinal cord. (any three points- 3 marks)	5
28	Diagram- 1 mark labellings- $\frac{1}{2} \times 4 = 2$ marks	5

	<p>OR</p> <p>Fragmentation-body divide into fragments and each fragment develop into an organism.</p> <p>1 mark</p> <p>Spirogyra- 1 mark</p> <p>Regeneration- definition- 1mark</p> <p>Diagram-2 marks</p>	
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