

FIRST YEAR HIGHER SECONDARY MODEL EXAMINATION – 2021

Zoology Unofficial answer key

Qn no.	Scoring key	Score																
I. Answer any 3 questions from 1 to 6. Each carries 1 score.																		
1	Adipose tissue	1																
2	Aminoacids	1																
3	AB Blood group	1																
4	a)Tidal volume b)Residual Volume	0.5 0.5																
5	Cochlea	1																
6	a)Phylum Aschelminthes b)Phylum Mollusca	0.5 0.5																
II. Answer any 9 questions from 7 to 24. Each carries 2 scores																		
7	<u>Diphyodont dentition</u> Organisms have two sets of teeth during their life, a set of temporary milk or deciduous teeth replaced by a set of permanent or adult teeth. This type of dentition is called diphyodont <u>Thecodont dentition.</u> <u>Here each tooth is embedded in a socket of jaw bone, this type of attachment is called thecodont</u>	1 1																
8	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">A</th> <th style="width: 50%; text-align: center;">B</th> </tr> </thead> <tbody> <tr> <td>Reptilia</td> <td>Alligator</td> </tr> <tr> <td>Mammalian</td> <td>Pteropus</td> </tr> <tr> <td>Aves</td> <td>Corvus</td> </tr> <tr> <td>Amphibia</td> <td>Salamandra</td> </tr> </tbody> </table>	A	B	Reptilia	Alligator	Mammalian	Pteropus	Aves	Corvus	Amphibia	Salamandra	0.5 0.5 0.5 0.5						
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9	<p style="text-align: center;"><u>Difference between Chondrichthyes and Osteichthyes</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Class - Chondrichthyes</th> <th style="width: 50%; text-align: center;">Class - Osteichthyes</th> </tr> </thead> <tbody> <tr> <td>They are marine animals</td> <td>It includes both marine and fresh water fishes</td> </tr> <tr> <td>They have cartilaginous endoskeleton</td> <td>They have bony endoskeleton.</td> </tr> <tr> <td>Mouth is located ventrally</td> <td>Mouth is mostly terminal</td> </tr> <tr> <td>Gill slits are separate and without operculum (gill cover).</td> <td>They have four pairs of gills which are covered by an operculum on each side</td> </tr> <tr> <td>The skin minute placoid scales</td> <td>Skin is covered with cycloid/ctenoid scales</td> </tr> <tr> <td>Air bladder absent</td> <td>Air bladder is present</td> </tr> <tr> <td>many of them are viviparous</td> <td>They are mostly oviparous</td> </tr> </tbody> </table> <p><u>Examples chondrichthyes : (any one example)</u> Scoliodon (Dog fish), Pristis (Saw fish), Carcharodon (Great white shark), Trygon (Sting ray)</p> <p><u>Examples Osteichthyes ; (any one example)</u> Exocoetus (Flying fish), Hippocampus (Sea horse); Labeo (Rohu), Catla (Katla), Clarias (Magur); Betta (Fighting fish), Pterophyllum (Angel fish).</p>	Class - Chondrichthyes	Class - Osteichthyes	They are marine animals	It includes both marine and fresh water fishes	They have cartilaginous endoskeleton	They have bony endoskeleton.	Mouth is located ventrally	Mouth is mostly terminal	Gill slits are separate and without operculum (gill cover).	They have four pairs of gills which are covered by an operculum on each side	The skin minute placoid scales	Skin is covered with cycloid/ctenoid scales	Air bladder absent	Air bladder is present	many of them are viviparous	They are mostly oviparous	0.5+0.5 0.5+0.5
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10	a)Phylum Porifera b)Phylum Ctenophora c)Phylum annelida d)Phylum Arthropoda	0.5 0.5 0.5																

		0.5										
11	a)Electro cardiogram/Electro cardio graph b) P wave : The P-wave represents the electrical excitation (or depolarisation) of the atria,	1 1										
12	<table border="1"> <thead> <tr> <th>Bones in fore limb</th> <th>Bones in Hind limb</th> </tr> </thead> <tbody> <tr> <td>Humerus</td> <td>Femur</td> </tr> <tr> <td>Radius</td> <td>Tibia,</td> </tr> <tr> <td>Ulna</td> <td>Fibula</td> </tr> <tr> <td>carpals</td> <td>Tarsals, ,</td> </tr> </tbody> </table>	Bones in fore limb	Bones in Hind limb	Humerus	Femur	Radius	Tibia,	Ulna	Fibula	carpals	Tarsals, ,	1 1
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13	a)Loose connective tissu b)Skin/Tendon/Ligaments c)Bone/cartilage d)Bone/Cartlage	0.5 0.5 0.5 0.5										
14	<u>Synovial joints (Any four)</u> a)Ball and socket joint b)Hinge joint c)Pivot joint d)saddle joint e)gliding joint	0.5 0.5 0.5 0.5										
15	<table border="1"> <thead> <tr> <th>Ureotelic</th> <th>Uricotelic</th> </tr> </thead> <tbody> <tr> <td>The organism that excrete urea is called urecotelic</td> <td>The organism that excrete uric acid is called uricotelic</td> </tr> <tr> <td>Eg: Mammals Terrestrial amphibians Marine fishes (any one example)</td> <td>Eg: Birds Insects Reptiles Land Snails (any one example)</td> </tr> </tbody> </table>	Ureotelic	Uricotelic	The organism that excrete urea is called urecotelic	The organism that excrete uric acid is called uricotelic	Eg: Mammals Terrestrial amphibians Marine fishes (any one example)	Eg: Birds Insects Reptiles Land Snails (any one example)	1 1				
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16	a)Melatonin b)Pituitary gland c)Glucagon d)ANF/Atrial natri uretic factor	0.5 0.5 0.5 0.5										
17	a)Class : Cyclostomata b) Cyclostomes are marine but migrate for spawning to fresh water. After spawning, within a few days, they die. Their larvae, after metamorphosis, return to the ocean	1 1										
18	a)Key b)Herbarium	1 1										
19	Oesophagus----Crop--- Gizzard ----Ileum,-----Colon----Rectum,	2										
20	a)Dipetidase b)Glucose c)Lactase d)Fructose	0.5 0.5 0.5 0.5										
21	a)Nephrones b)a)Glomerular Filtration b)Tubular Reabsorption c)Tubular Secretion	0.5 0.5 0.5 0.5										
22	a)NO b)Collagen	1 1										
23	Eardrum----Ear ossicles -----Oval window-----Basilar membrane	0.5×4=2										

24	a)Thymus gland b)Thymosin	1 1															
III. Answer any 3 questions from 25 to 30. Each carries 3 scores																	
25	a)Oxygen dissociation curve b)pO ₂ ,pCO ₂ ,temperature, H ⁺ /pH (any four)	1 2															
26	a) A-Fore brain B)Hypothalamus C) Corpora quadrigemina D)Cerebellum b) Corpus callosum	0.5 0.5 0.5 0.5 1															
27	a)Oxidoreductase/Dehydrogenase b)Temperature, pH,Concentration of substrate, Chemical substance (Inhibitor)	1 2															
28	a) A-Crop B-Gizzard C-Hepatic caecae D-Malpighian tubule b)It secrete digestive juice	0.5 0.5 0.5 0.5 1															
29	a)Gnathostomata b)Cyclostoamata c)Osteichthyes d)Tetrapoda e)Reptilia f)Mammals	0.5 0.5 0.5 0.5 0.5 0.5															
30	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">A</th> <th style="width: 33%;">B</th> <th style="width: 33%;">C</th> </tr> </thead> <tbody> <tr> <td>Blood group</td> <td>Antigens on RBCs</td> <td>Antibodies in Plasma</td> </tr> <tr> <td>A</td> <td>A</td> <td>Anti – B</td> </tr> <tr> <td>AB</td> <td>A, B</td> <td>Nil</td> </tr> <tr> <td>O</td> <td>Nil</td> <td>Anti – A, B</td> </tr> </tbody> </table>	A	B	C	Blood group	Antigens on RBCs	Antibodies in Plasma	A	A	Anti – B	AB	A, B	Nil	O	Nil	Anti – A, B	1 1 1
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