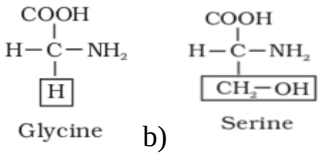
FIRST YEAR HIGHER SECONDARY EXAMINATION- 2023
ZOOLOGY

<table>
<tr><th>Q.No</th><th>SCORING KEY</th><th>SCORE</th></tr>
<tr><td colspan="3">I. Answer any 3 questions from 1-5. Each carries 1 score</td></tr>
<tr><td>1</td><td>carbonic anhydrase</td><td>1</td></tr>
<tr><td>2</td><td>Pericardium</td><td>1</td></tr>
<tr><td>3</td><td>a) Panthera leo</td><td>1</td></tr>
<tr><td>4</td><td>Renal calculi / Kidney stone</td><td>1</td></tr>
<tr><td>5</td><td>Synaptic Cleft</td><td>1</td></tr>
<tr><td colspan="3">II Answer any 9 questions from 6-16. Each carries 2 score.</td></tr>
<tr><td>6</td><td>a) SAN- Sino Atrial Node
b) It produce action potential without any external stimuli and helps in the conduction of nerve impulse and made the heart functions.</td><td>1
1
1</td></tr>
<tr><td>7</td><td><table><tr><th>A</th><th>B</th></tr><tr><td>• ADH</td><td>• Water reabsorption</td></tr><tr><td>• Angiotensin II</td><td>• Powerful Vaso Constrictor</td></tr><tr><td>• ANF</td><td>• Cause dilation of blood vessels</td></tr><tr><td>• Aldosterone</td><td>• Reabsorption of Na^+</td></tr></table></td><td>0.5
0.5
0.5
0.5</td></tr>
<tr><td>8</td><td>• A signal sent out by CNS
• Release of a Neurotransmitter
• Release of Ca^{++} into sarcoplasm
• Binding of Ca^{++} with troponin
• Remove the masking of active sites for myosin</td><td>
0.5
0.5
0.5
0.5</td></tr>
<tr><td>9</td><td>Poikilothermous Animals
• Rana
• Calotes
• Scoliodon
• Hippocampus</td><td>
0.5
0.5
0.5
0.5</td></tr>
<tr><td>10</td><td> 
a) Glycine b) Serine</td><td>1 + 1</td></tr>
<tr><td>11</td><td>a) Ball & socket joint, Hinge Joint, Pivot Joint, Gliding Joint, Saddle joint
b) • Ball and socket joint (between humerus and pectoral girdle),
• hinge joint (knee joint),</td><td>1
1</td></tr>
</table>

	• pivot joint (between atlas and axis), • Gliding joint (between the carpals) • saddle joint (between carpal and metacarpal of thumb (any two joints and its location (Write any 2)	
12	a) A- Apoenzyme B – Prosthetic group b) If an enzyme loss it co-factor, It loss its catalytic activity.	0.5+ 0.5 1
13	a) Electrocardiograph / Electrocardiogram b) **P-** Depolarisation of atrium **QRS-** Depolarisation of ventricles	1 0.5 0.5
14	a) Ctenophora b) Cnidaria/Coelenterata c) Echinodermata d) Hemichordata	0.5 0.5 0.5 0.5
15	a) Percentage saturation of haemoglobin with oxygen (Oxygen dissociation curve) b) **Factors favorable for the formation of haemoglobin** • Higher pH/Low H^+ concentration • Lower temperature • Lower pCO2 • Higher pO2 (Any 3 factors)	0.5 0.5 0.5 0.5
16	**Ostechtyes** / **Chondricthyes** a) Bony endoskeleton / Cartilaginous endoskeleton b) Terminal mouth / Ventral mouth c) Air bladder present / Air bladder absent d) Cycloid/Ctenoid scales / Placoid scales e) Oviparous / Mostly Viviparous f) Claspers absent / Claspers present g) Non -predacious / Predacious (Any 2 features)	1 1
III-Answer any 3 questions from 17-20. Each carries 3 score		
17	a) **Nucleoside** / **Nucleotide** Sugar + Nitrogen base / Sugar+ Nitrogen base+ Phospate b) **Primary Metabolites**: They have identifiable functions in physiological processes and necessary for life. E.g. amino acids, sugars, nucleic acids, lipids, vitamins etc **Secondary Metabolites**: They are not directly involved in normal growth, development or reproduction. They are found in plant, fungal and microbial cells. E.g. Alkaloids,toxins etc	1 1

<table>
<tr><td></td><td>c)
<table><tr><th>Lyase:</th><th>Ligase</th></tr><tr><td>Enzymes that catalyse removal of groups from substrates by mechanisms other than hydrolysis leaving double bonds</td><td>Enzymes catalysing the linking together of 2 compounds, e.g., enzymes which catalyse joining of C-O, C-S, C-N, P-O etc. bonds.</td></tr></table></td><td>1</td></tr>
<tr><td>18</td><td>a) coelomates :Animals possessing coelom are called coelomates, e.g., Annelida to chordata
b) Acoelmate : Animals without coelom Eg: Porifera, cnidaria, ctenophore, Platyhelminthes
c) Pseudocoelomates: In some animals, the body cavity is not lined by mesoderm, instead, the mesoderm is present as scattered pouches in between the ectoderm and endoderm. Such a body cavity is called pseudocoelom and the animals possessing them are called pseudocoelomates, e.g., Phylum aschelminthes
(Write any 2 with example)</td><td>1+ 0.5
1+ 0.5</td></tr>
<tr><td>19</td><td>a) Mid brain
b) Cerebrum
c) Cerebellum
d) Dura mater
e) Arachnoid mater
f) Pia mater</td><td>0.5
0.5
0.5
0.5
0.5
0.5</td></tr>
<tr><td>20</td><td>a) α cell and β cell
b) α cell – Produce glucagon
β cell – Produce Insulin
c) Pancreas</td><td>1
1

1</td></tr>
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