FY-326

FIRST YEAR HIGHER SECONDARY EXAMINATION, MARCH 2025

ZOOLOGY UNOFFICAL ANSWER KEY

<table>
<tr><td colspan="3">I Answer any 3 questions from 1 to 5.Each correct answer carry1 score</td></tr>
<tr><td>Qn No.</td><td>Scoring Key</td><td>Score</td></tr>
<tr><td>1</td><td>a) International Code of Zoological Nomenclature
b) International Code for Botanical Nomenclature</td><td>½
½</td></tr>
<tr><td>2</td><td>a)Cutaneous respiration
b)Pulmonary respiration</td><td>½
½</td></tr>
<tr><td>3</td><td>Fructose</td><td>1</td></tr>
<tr><td>4</td><td>A)An actin filament/Thin filament
B)Myosin monomer/Meromyosin</td><td>½
½</td></tr>
<tr><td>5</td><td>Corpus callosum</td><td>1</td></tr>
<tr><td colspan="3">II Answer any 9 questions from 6 to 16.Each carries 2 score</td></tr>
<tr><td>6</td><td><table><tr><th>Male Frog</th><th>Female Frog</th></tr><tr><td>Male frogs have vocal sacs</td><td>Female frog lacks vocal sacs</td></tr><tr><td>Male frogs have a copulatory pad on the first digit of their forelimbs,</td><td>Females frog lacks copulatory pad</td></tr></table></td><td>1
1</td></tr>
<tr><td>7</td><td>a) SA Node—AV node—Bundle of His— Purkinje fibres
b) The SAN is responsible for initiating and maintaining the rhythmic contractile activity of the heart</td><td>1
1</td></tr>
<tr><td>8</td><td>A)Nerve cord
B)Notochord
C) Gill slits
D)Post anal part</td><td>½
½
½
½</td></tr>
<tr><td>9</td><td>a)Phylum Mollusca
b)Phylum Annelida
c)Phylum Ctenophora
d)Phylum Echinodermata</td><td>½
½
½
½</td></tr>
</table>

10

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

½ ½ ½ ½

(Any four difference)

11

A)Eosinophils ½
B)0.5-1% ½
C)Phagocytic ½
D)Inflammatory response ½

12

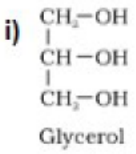
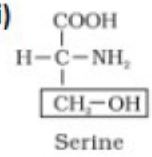
a)Ribs have two articulation surfaces on its dorsal end and is hence called bicephalic. ½
b) Thoracic vertebrae, ribs and sternum 1½

13

a)A-Afferent arteriole B-Bowman's capsule ½ + ½
b)(Any two difference)

Difference between cortical and juxta medullary nephron	
Cortical Nephron	**Juxta medullary nephron**
Majority of our nephrones are cortical nephrones	Juxta medullary nephrones are few in number
the loop of Henle is too short and extends only very little into the medulla	the loop of Henle is very long and runs deep into the medulla
Vasa recta is **absent or highly reduced** in cortical nephrones	It contain large network of vasa recta

½ ½

14	a)Insulin b)PTH/ parathyroid hormone c) Adrenaline or Epinephrine and noradrenaline or norepinephrine. d) vasopressin/ADH	½ ½ ½ ½
15	i)  Glycerol ii)  Serine b)iii)Collagen iv) Tyrosine, Phenylalanine, Tryptophan **(Any two Aromatic amino acids)**	½ ½ ½ ½
16	a) 1.Oxidoreductases/dehydrogenases: 2.Transferases 3.Hydrolases: 4.Lyases: 5.Isomerases: 6.Ligases:**(Any 2 classes)** b) The non protein part of enzyme is called cofactor. Catalytic activity is lost when the co-factor is removed from the enzyme	½ ½ ½ ½
III Answer any 3 questions from 17 to 20.Each carries 3 score		
17	a)A-Polyp B-Medusa b) **(Any 2 Difference)** c) Alternation of generation/polyps produce medusae asexually and medusae form the polyps sexually	½ + ½ ½ ½ **1**
18	a) i) Renin converts angiotensinogen in blood to angiotensin I and further to angiotensin II ii) ANF can cause vasodilation (dilation of blood vessels) and thereby	½ ½

Polyp	Medusa
Sessile	Free swimming type
Cylindrical form	Umbrella shape
It produce medusa by asexual reproduction	It produce polyp sexual reproduction
Eg: Hydra, Adamsia	**Eg:Aurelia (Jelly fish)**

	decreases the blood pressure b)<u>Lung:</u> Lungs remove large amounts of CO_2 (200ml /minutes) and also significant quantities of water everyday <u>Liver,</u> Liver secretes bile-containing substances like bilirubin, biliverdin, cholesterol, degraded steroid hormones, vitamins and drugs. Most of these substances ultimately pass out along with digestive wastes	1 1
19	a)A-Nucleus B-Axon C-Node of ranvier D-Synaptic Knob b) i)Embryonic stage ii)Retina of eye	½ ½ ½ ½ ½ ½
20	<u>a) Inspiratory Reserve Volume (IRV):</u> Additional volume of air, a person can inspire by a forcible inspiration. This averages 2500mL to 3000 mL <u>Expiratory Reserve Volume (ERV):</u> Additional volume of air, a person can expire by a forcible expiration. This averages 1000mL to 1100 mL. <u>b)Residual Volume (RV):</u> Volume of air remaining in the lungs even after a forcible expiration. This averages 1100 mL to 1200 mL <u>Functional Residual Capacity (FRC):</u> Volume of air that will remain in the lungsഠ after a normal expiration/ FRC=ERV+RV. c) <u>Expiratory Capacity (EC):</u> Total volume of air a person can expire after a normal inspiration/ This includes tidal volume and expiratory reserve volume/ EC=TV+ERV <u>Inspiratory Capacity (IC):</u> Total volume of air a person can inspire after a normal expiration./ This includes tidal volume and inspiratory reserve volume / IC =TV+IRV	½ ½ ½ ½ ½