

ANSWER KEY

FIRST... YEAR HIGHER SECONDARY EXAMINATION ...JUNE 2022

PART-I/II/III

SUBJECT: ...ZOOLOGY.....

CODE NO: ...FY-26

VERSION: ....

...30... SCORES

...1... HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
I.		I. Answer any three questions from 1 to 4 Each carries 1 score.		
1.		Pepsinogen.	1	1
2.		Corpus luteum	1	1
3.		Collagen.	1	1
4.		Oxygen dissociation curve.	1	1
II.		II. Answer any 9 questions from 5 to 17. Each carries 2 scores		
5.	(a)	Respiration / Exchange of gases	$\frac{1}{2}$	2
		Excretion / removal of metabolic waste/ nitrogenous waste removal.	$\frac{1}{2}$	
	(b)	Osmoregulation / maintain water and ionic balance	$\frac{1}{2}$	
		Excretion / removal of metabolic waste/ removal of nitrogenous waste	$\frac{1}{2}$	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
6.		Exocrine glands have ducts / their secretion is passed through ducts	$\frac{1}{2}$	2
		Endocrine glands are ductless glands / they produce hormones / hormones are directly introduced into blood.	$\frac{1}{2}$	
		Mucus / Saliva / Ear wax / oil / wax / digestive Enzymes (Any two Exocrine secretion carries 1 score)	$2 \times \frac{1}{2} = 1$	
7.	(a)	phagocytic destruction of foreign organisms	$\frac{1}{2}$	2
	(b)	Secrete histamine	$\frac{1}{2}$	
	(c)	Allergic reactions	$\frac{1}{2}$	
	(d)	Immune responses of body	$\frac{1}{2}$	
8.	(a)	A - Villi B - Lacteal / capillaries	$\frac{1}{2} + \frac{1}{2}$	2
	(b)	villi - increases the surface area / helps increase absorption / absorption of nutrients. Lacteal - Chylomicrons are transported into lacteals / absorption of digested lipids. capillaries - Absorption of nutrients	$\frac{1}{2} + \frac{1}{2}$	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
9.		Respiratory rhythm centre in the medulla / Respiratory rhythm centre	$\frac{1}{2}$	2
		Pneumotaxic centre in the Pons / Pneumotaxic centre	$\frac{1}{2}$	
		Pneumotaxic centre moderate the functions of respiratory rhythm centre / control the respiratory rhythm centre	$\frac{1}{2}$	
		Respiratory rhythm centre receives signals from chemosensitive areas or receptors about change in $CO_2$ concentration and $H^+$ concentration and take remedial action (Any relevant Explanation)	$\frac{1}{2}$	
10.	(a)	Generic name : Musca Specific Epithet : domestica	$\frac{1}{2} + \frac{1}{2}$	2
	(b)	Phylum : Arthropoda class : Insecta	$\frac{1}{2} + \frac{1}{2}$	
11.	(a)	Compound Epithelium. Function: protection against chemical & mechanical stresses / Protection	$\frac{1}{2}$ $\frac{1}{2}$	2
	(b)	Cover the dry surface of the skin / the moist surface of buccal cavity / moist surface of pharynx / inner lining of ducts of salivary glands / Pancreatic ducts (Any two)	$2 \times \frac{1}{2}$ = 1	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
12.		A - Tympanum B - Ear Ossicles C - Basilar membrane D - Tectorial Membrane	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
13.		<p>The nervous system of cockroach is spread throughout the body / major part of nervous system is situated along the ventral part of its body / major part is situated in other parts of body.</p>	1	2
		<p>The head holds only a bit of the nervous system / the brain is represented by supra-oesophageal ganglion.</p>	1	
14.		<p><u>Generation of action potential</u>          Receives stimulus</p> <p>membrane becomes permeable to <math>\text{Na}^+</math> ions / membrane permeability changes</p> <p>Rapid influx of <math>\text{Na}^+</math> / <math>\text{Na}^+</math> moves in.</p> <p>Reverse the polarity at the site / inside become +ve and outside become -ve / membrane gets depolarised.</p>	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
15.		A - Filarial Worm B - Bombyx C - Earth-worm D - Apis	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
16.		Diabetes Insipidus : caused due to deficiency of ADH or vasopressin / Diminished ability of kidney to conserve water / leads to water loss and dehydration. (Any two)	$2 \times \frac{1}{2}$ $= 1$	2
		Diabetes mellitus : caused due to deficiency of Insulin / loss of glucose through urine / formation of ketone bodies / ketone bodies in urine / hyperglycemia. (Any two)	$2 \times \frac{1}{2}$ $= 1$	
17.		<u>Symmetry</u> :- Porifera : Asymmetrical Echinodermata : Adults are radially symmetrical / Larvae are bilaterally symmetrical. (Any one)	$\frac{1}{2}$ $\frac{1}{2}$	2
		<u>System of Transport</u> Porifera : Water transport system / Water Canal system (Any one) Echinodermata : Water Vascular system	$\frac{1}{2}$ $\frac{1}{2}$	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
III.		III. Answer any 3 Questions from 18 to 22. Each carries 3 scores.		
18.		P wave - Electrical excitation or depolarisation of the atria / contraction of both the atria. (Any one)	$\frac{1}{2} + \frac{1}{2} = 1$	3
		QRS complex - Depolarisation of the ventricles / ventricular contraction / beginning of the systole. (Any one)	$\frac{1}{2} + \frac{1}{2} = 1$	
		T wave - Repolarisation of ventricles / End of systole. (Any one)	$\frac{1}{2} + \frac{1}{2} = 1$	
19.		Red muscle fibre      White muscle fibre		3
		myoglobin High      myoglobin low	$\frac{1}{2} + \frac{1}{2}$	
		Red in colour      Appear pale or whitish	$\frac{1}{2} + \frac{1}{2}$	
		plenty mitochondria      Few mitochondria	$\frac{1}{2} + \frac{1}{2}$	
		Depend on aerobic process      Depend on anaerobic process		
	sarcoplasmic reticulum low      Sarcoplasmic reticulum High. (Any 3 differences)			
20.	(a)	Tertiary structure	$\frac{1}{2}$	
	(b)	Primary structure Secondary structure	$\frac{1}{2} + \frac{1}{2}$	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score	
	(c)	Haemoglobin	$\frac{1}{2}$	3	
		Haemoglobin consists of 4 subunits/ Two subunits of $\alpha$ type and two sub units of $\beta$ type constitutes the haemoglobin (Any one)	1		
21.		Chordates		3	
		non chordates			
		Notochord present	Notochord absent		$\frac{1}{2} + \frac{1}{2}$
		Central Nervous system is dorsal, hollow & single (Dorsal / hollow / single - any one)	Central nervous system is ventral, solid and double (ventral / solid / double - any one)		$\frac{1}{2} + \frac{1}{2}$
		pharynx perforated by gill slits	Gill slits are absent.		$\frac{1}{2} + \frac{1}{2}$
		Heart is ventral	Heart is dorsal (if present)		
		A post-anal part is present	post-anal tail is absent.		
		(Any three)	(Any three)		



Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
22		<p>A - Ammonotelic</p> <p>B - Uricotelic</p> <p>C - Urea</p> <p>D - Uric acid</p> <p>E - Bony fish</p> <p>F - Mammals.</p>	<p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p>	3
		<p>Scheme finalised by :</p> <p>1. Gireesh Kumar. A. PEN: 234170</p> <p>2. SANDHYA. S.R PEN 414026</p> <p>3. PRRM KUMAR P PEN 156077</p> <p>4. DR. SUSHIL KUMAR. C PEN - 399624</p> <p>5. SHANTO MATHEW PEN - 413035</p> <p>6. JOJU WILSON. P. PEN 210140</p> <p>7. Saji kumar - G.S 423228</p> <p>8. Basheer S FR 156491</p> <p>9. Hameed V H 232509</p> <p>10. RAJESH KUMAR. R PEN: 704070</p>	<p><i>[Signatures]</i></p>	