DE BRITTO HIGHER SECONDARY SCHOOL, DEVAKOTTAI, SIVAGANGAI DIST.
HIGHER SECONDARY FIRST YEAR (+1) PUBLIC EXAM MARCH – 2025
BIO – ZOOLOGY - FINAL SCORING KEY

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PART - I **8 x 1 = 8**

Note: (1) Answer all the questions.
(2) Choose the most appropriate answer from the given four alternatives and write the Option code and the corresponding answer.

Q. NO	A - TYPE	MARK	Q. NO	B - TYPE	MARK
1	**C)** Ornamental breeds - silkie	1	1	**A)** Carbamino haemoglobin	1
2	**A)** Increased energy output for nerve impulse conduction	1	2	**MERE ATTEMPT (MA)**	1
3	**A)** Pheumatic bones	1	3	**A)** The Total surface area of the capillaries is larger than the total surface area of the arterioles	1
4	**B)** Areolar Tissuse	1	4	**A)** Increased energy output for nerve impulse conduction	1
5	**A)** Carbamino haemoglobin	1	5	**C)** Ornamental breeds - silkie	1
6	**MERE ATTEMPT (MA)**	1	6	**B)** Areolar Tissuse	1
7	**A)** The Total surface area of the capillaries is larger than the total surface area of the arterioles	1	7	**A)** Antidiuretic hormone	1
8	**A)** Antidiuretic hormone	1	8	**A)** Pheumatic bones	1

PART - II

Answer any four of the following questions **4 x 2 = 8**

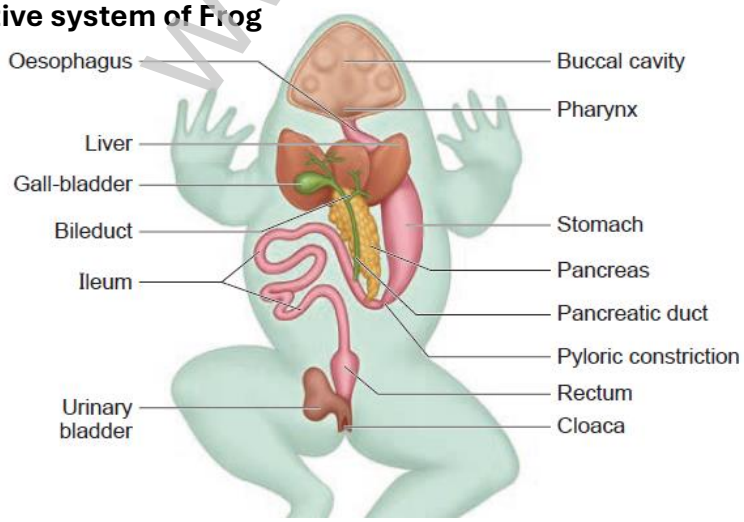
9	**Role of Charles Darwin** 1. Charles Darwin has written the book "Origin of Species" in 1859. 2. In this book, he has explained the relationship between evolution and the origin of species.	**1** **1** **2 Mark**
10	**Any two characters of Bon Fishes** **Any two (2 x 1 = 2)** 1. Both marine and freshwater fishes 2. Bony endoskeleton 3. spindle shaped body 4. Skin is covered by ganoid, cycloid or ctenoid scales. 5. Mouth is terminal 6. Ventrally placed two chambered heart. 7. Respiration - four pairs of filamentous gills 8. Covered by an operculum on either side. 9. Excretory organs are mesonephric kidneys 10. Ammoniotelic. 11. Presence of well-developed lateral line sense organ.	**2 MARK**

	12. Swim bladder is present. 13. Oviparous 14. Sexes are separate, 15. External fertilization is seen	
11	**Respiration in Earthworm** **1** Respiration takes place through the body wall. **(OR)** **2** The outer surface of the skin is richly supplied with blood capillaries which aid in the diffusion of gases. **(OR)** **3** Oxygen diffuses through the skin into the blood while carbon dioxide from the blood diffuses out. **(OR)** **4** The **skin is kept moist** by mucous and coelomic fluid and facilitates exchange of gases.	**2 MARK**
12	**Vital capacity:** **1.** The maximum volume of air that can be moved out during single breath following a maximal inspiration **(OR)** **2.** A person first inspires maximally the expires maximally. **(OR)** **3.** Vital capacity = Expiratory Reserve Volume + Tital Volume + Inspiratory Reserve Volume **(OR)** **4.** VC = TV+IRV+ERV	**2** **2 MARK**
13	In the nephron the maximum absorption is taking place in the proximal convoluted tubule (or) PCT of Nephron	**2** **2 Mark**
14	**Examples for steroid Hormone:** **Any Four 4 x ½ = 2** **1.** Cortisol, **2.** Aldosterone, **3.** Testosterone, **4.** Oestrogen, **5.** Progesterone **6.** FSH	**2 MARK**
PART - III **Answer any four of the following questions. Question NO. 19 is compulsory.** **3 X 3 = 9**		
15	**Significance of Air Bladder in fishes:** **1.** It helps in gaseous exchange (lung fishes) **2.** Maintaining buoyancy in most of the ray finned fishes.	**1 ½** **1 ½** **3 MARK**
16	**Both caecum and vermiform appendix are large in herbivorous animal.** 1. It acts as an important site for cellulose digestion with the help of symbiotic bacteria.	**3 MARK**

17	**Impotence of silk:** **Any 3 (3 x 1 = 3)** 1. Silk fibers are utilized in preparing silk clothes. 2. Silk is used to prepare ornamented fabrics. 3. Silk is used in industries and for military purposes. 4. It is used in the manufacture of fishing fibers, 5. Parachutes, 6. Cartridge bags, 7. Insulation coils for telephone, wireless receivers, 8. Tyres of racing cars, 9. Filter fibres, 10. In medical dressings and as suture materials.	**3 MARK**
18	**Functions of adrenalin:** **Any 3 (3 x 1 = 3)** **1** The **adrenal medulla** secretes the hormones adrenalin (epinephrine) and noradrenalin (norepinephrine) (fight, flight and fright hormone). **2** and are referred as "3F hormone" **3** Adrenalin increases liver glycogen breakdown into glucose and increases the release of fatty acids from fat cells. **4** During emergency it increases heart beat rate and blood pressure. **5** It stimulates the smooth muscles of cutaneous and visceral arteries to decrease blood flow. **6** It increases blood flow to the skeletal muscles thereby increases the metabolic rate of skeletal muscles, cardiac muscles and nervous tissue.	**3 MARK**
19	**Synovial joints or Diarthroses joints:** **Any 3 (3 x 1 = 3)** Pivot joint – between atlas and axis Plane/gliding joint – between the carpals Saddle joint – between the first carpal and metacarpal Ball and socket joint – between humerus and pectoral girdle Hinge joint – knee joint Condyloid or Angular or Ellipsoid – between radius and carpal	**3 MARK**

PART – IV

Answer all the questions **5 x 2 = 10**

20 A	**Digestive system of Frog**  **Diagram – 3 Mark** **Parts – 2 Mark**	**5 Mark**

OR

20. B

Mechanism of Blood Clotting:

STIMULUS
↓
Tissue damage
↓
Muscle spasm, platelet plug formation
↓
INTRINSIC CLOTTING MECHANISM
↓
Production of prothrombin activator substance
↓
Prothrombin converted to thrombin
↓
Thrombin acts enzymatically on fibrinogen
↓
Fibrinogen forms threads of fibrin
↓
Fibrin threads at the damaged site, traps blood cells and platelets.

5 Mark

21. A

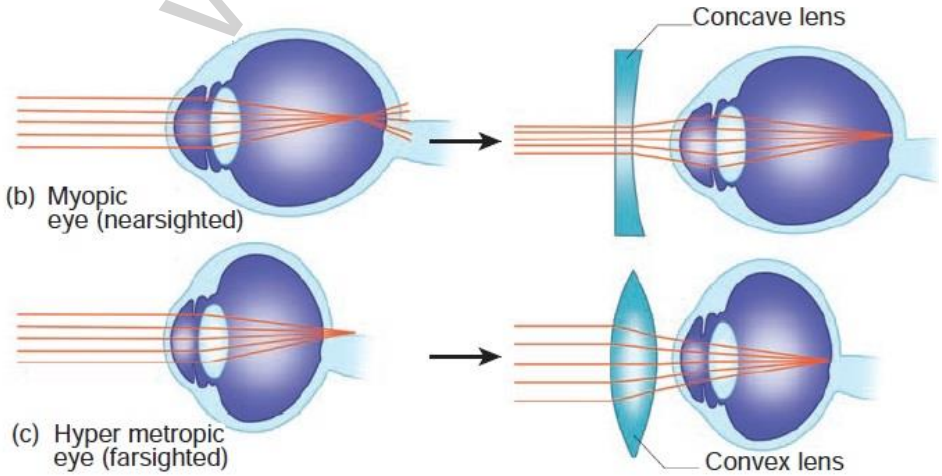
Refractive errors of eye

Myopia (near sightedness): **1 ½ Mrk**

1. The affected person can see the nearby objects.
2. Not the distant objects.
3. **Reason:** Elongated eyeball or thickened lens.
4. Defect: The image of distant object is formed in front of the yellow spot.
5. **Correction:** Corrected using concave lens. **½ Mark**

Hypermetropia (long sightedness): **1 ½ Mark**

1. The affected person can see only the distant objects clearly.
2. Not the objects nearby.
3. **Reason:** Shortened eyeball and thin lens.
4. The image of closest object is converged behind the retina.
5. **Correction:** using convex lens. **½ Mark**



3

Diagram ½ + ½

5 Mark

	OR	
21. B	**Economic importance of fish** **Any Five (5 x 1 = 5)** 1. Fish are protein rich food 2. Fish species such as sardines, mackerel, tuna, herrings have high amino acids. 3. **Amino acids:** Histidine 4. It is rich in fat such as omega 3 fatty acids. 5. **Minerals:** calcium, magnesium, phosphorus, potassium, iron, manganese, iodine and copper. Some of the fish by - products are: **Fish by product:** 1. Fish liver oil is derived from the liver which is rich in vitamin A and D. **Fish meal:** 1. The dried wastes are used to prepare food for pig, poultry and cattle. **Isinglass:** 2. it is primarily used for clarification of wine, beer and vinegar.	**5 Mark**

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