

RAGHUNATHPUR COLLEGE

SEM II MAJOR TEST EXAMINATION 2024

SUBJECT ZOOLOGY

PAPER NAME: CHORDATE AND PHYSIOLOGY, PAPER CODE: BZOOMAJ02C

FM 60

TIME 3 HOURS

1. Answer any ten from the following: 2x10=20

- a) Write down your systemic position.
- b) Distinguish between Cephalochordata and Urochordata.
- c) What is wheel organ? State the function.
- d) How solenocytes are involved in excretion in *Branchiostoma* sp.
- e) Why the name 'cyclostomata' is given to the class?
- f) Name two limbless Amphibia.
- g) Write the distribution of dipnoans.
- h) What are the four main features of Monotremata?
- i) What is tarsal spur? Write its functions.
- j) Write the composition of saliva.
- k) What is Bohr Effect?
- l) Write down two muscles assist in respiration
- m) Why chloride content of RBCs is more in venous blood than that of arterial blood?
- n) Write the name of two excitatory and inhibitory neurotransmitters.
- o) How does cobra venom affect the nervous system?
- p) Define electrical synapse
- q) State the importance of neuroglia.
- r) Distinguish between diabetes mellitus and diabetes insipidus.
- s) What is GFR? Write the ideal value of an adult.
- t) What is the function of the renin-angiotensin-aldosterone system?
- u) What are the components of conducting system of heart?
- v) What is LH surge?
- w) Name the hormone secreted from parafollicular cells in thyroid gland.

2. Answer any six from the following: 5x6=30

- a) Classify Class Amphibia up to living orders with suitable characters and examples. 5
- b) What is paedomorphosis? Write the Intrinsic and extrinsic factors involved in Neoteny with special reference to axolotl larva. 1+4
- c) Describe the mechanism of digestion of Proteins in stomach. 5
- d) What is O₂ dissociation curve? Draw the structure. Write down the effect of pH and carbon-di-oxide on it. 1+1+3
- e) Briefly describe about blood coagulation mechanism. 5
- f) Describe the process of counter current mechanism in urine formation. 5
- g) Explain depolarization and repolarisation of action potential during nerve impulse propagation. 2.5+ 2.5
- h) What is sliding filament theory? Explain it. 1+4
- i) Write about hormonal regulation of menstrual cycle. 5
- j) Compare the three cortical zones of adrenal gland with reference to structural and functional aspects. 5

3. Answer any one from the following: 10x1=10

- a) What do you mean by filter feeding method? Why is endostyle in *Branchiostoma* sp regarded as fore runner of vertebrate thyroid gland? Discuss the process of feeding and digestion in *Branchiostoma* sp with suitable diagram. (2+2) + 6
- b) Briefly describe the mechanism of cardiac cycle with diagram. What is cardiac output? 8+2
- c) What happened during spermiogenesis? Draw and label the structure of ovary? Differentiate between estrous and menstrual cycle. 4+4+2
- d) Describe the different types of cells in anterior pituitary with their function. Write the function of somatostatin hormone. What is Cretinism? 7+2+1