

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. THIRD SEMESTER EXAMINATION, MARCH 2022

SECOND YEAR [BATCH 2020-23]

ZOOLOGY (HONOURS)

PAPER : VI [CC6]

Date : 05/03/2022

Time : 11 am – 1 pm

Full Marks : 50

Answer all the questions:

Group A

1. a) Write down the difference between dye and stain.
b) Give the functions of Sertoli cells.
c) What is blood-testis barrier? (2+2+1)
2. Describe the histology of thyroid gland with proper diagram. (3+2)

Group B

3. Write in details how the synaptic transmission is operated to influence altered behavior/ mood of an individual? (5)
4. a) State the importance of hair cells in auditory transmission.
b) Mention how human eye creates the colour vision. (2+3)

Group C

5. a) What is the significance of lower intrapleural pressure (756 mmHg) than intra alveolar pressure (760 mm Hg)?
b) In two allometry equations, the coefficient (α) values are 0.89 and 0.41. What will be your interpretations in terms of growth measure?
c) What is 'Ondine's curse'? (2+2+1)
6. a) How does a catadromous fish maintain its osmolarity while doing respective migration?
b) How does pontine center regulate breathing?
c) What is TNZ? (2+2+1)

Group D

7. a) What is excitation-contraction coupling?
b) How does the countercurrent multiplier system help in the formation of concentrated urine? (2+3)
8. a) What is prothrombin activator and how it is formed?
b) Explain the cardiac cycle in brief with a suitable diagram. (2+3)

Group E

9. a) “Portal lobules and portal acini are distinctive in both structure and function” – justify with reason (Add figure). [(3+1)+1]
- b) State the function of intercalated duct in human pancreas.
10. Explain why the positive and negative regulation of Gastrin is important for digestion of food in stomach (Add schematic diagram). (3+2)

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