

B.Sc. (Honours) Examination, 2019
Semester–IV(CBCS)
Zoology
Course – CC-9
(Physiology: Life Sustaining Systems)

Time: Three Hours

Full Marks: 40

Questions are of value as indicated in the margin.

Answer *any five* questions.

1. Mention with suitable diagram various histological layers of oesophageal wall. Comment on the composition of gastric juice. Discuss the functional aspects of the different cell types of Crypts of Lieberkuhn. Add a note on Payers' Patches. 2+2+3+1=8
 2. How is the absorption of glucose in the intestinal epithelium taken place? Describe the chemical digestion of dietary protein in stomach. Why is emulsification of lipid necessary before lipid digestion? 3+3+2=8
 3. Comment on the mechanism of gaseous exchange across the alveolar wall with special emphasis on the role of partial pressure of oxygen and carbon dioxide. Describe different pulmonary capacities. Discuss the factors influencing the oxygen haemoglobin dissociation curve. 4+2+2=8
 4. Describe the structure of mammalian kidney with suitable diagram. Distinguish two types of nephrons according to their position in kidney. Give a brief account of forces involved in glomerular filtration. 3+2+3=8
 5. What are the major renal processes helping in urine formation? Elaborate the role of rennin-angiotensin-aldosterone system in tubular reabsorption. 3+5=8
 6. What do you mean by erythropoiesis? Describe the role of a hormone and a vitamin responsible for genesis and maturation of RBC. How mismatch of D-antigens cause erythroblastosis foetalis? 1+3+4=8
 7. Write short notes on *any two* of the following: 4×2=8
 - (a) Bombay phenotype.
 - (b) Functional localization of heart valves.
 - (c) Coronary circulation.
 - (d) Components of conducting system in heart muscles.
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