

B.Sc. ZOOLOGY
FOURTH SEMESTER (SPECIAL REPEAT)
PHYSIOLOGY: LIFE SUSTAINING SYSTEM
BSZ-402

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- Inactive Pepsinogen is converted into the active enzyme Pepsin by:
 - Enterokinase
 - Trypsin
 - HCL
 - Chymotrypsin
- Substances of low molecular weight filter from the blood into the Bowman's Capsule due to:
 - GHP
 - BCOP
 - CHP
 - EFP
- The most important bile pigment/pigments is/are:
 - Bilirubin
 - Biliverdin
 - Both Bilirubin and Biliverdin
 - None of these
- Filtration of blood plasma take place in:
 - Bowman's capsule
 - Afferent arteriole
 - Efferent arteriole
 - Glomerulus
- The protein splitting action of pancreatic juice is due to trypsin and chymotrypsin, which attack native protein, proteoses and peptones from the stomach, converting them into:
 - Amino acid
 - Only di-peptides
 - Only tri-peptides
 - Di-peptides and Tri-peptides
- The axon bifurcates and the end twig is called:
 - Boutons
 - Nissle Bodies
 - Nerve fibre
 - Telodendria
- In peripheral nerve fibre the myelin sheath is interrupted at regular intervals; this interruption is called:
 - Synapse
 - Nodes of Ranvier
 - Incisures
 - Terminaux
- Which is directly concerned with the transmission of nerve impulse?
 - Dendrites
 - Axon hillock
 - Axolemma
 - Cleft
- Which neuron carries impulses from higher centres in brain and spinal cord to the working cell?
 - Sensory neurons
 - Motor neurons
 - Both Sensory and Motor neurons
 - None of these

10. Telodendria ends with a knob like structure called:
 - a. Boutons terminaux
 - b. Nodes of Ranvier
 - c. Internode
 - d. Schwann cells
11. Anaerobic respiration in animals produces:
 - a. CO₂
 - b. Lactic acid & H₂O
 - c. Glucose & O₂
 - d. C₂H₅OH & CO₂
12. The exchange of respiratory gases in the lungs occurs in:
 - a. Alveoli
 - b. Trachea
 - c. Bronchi
 - d. Broncholi
13. Hamburger's phenomenon explains:
 - a. Chloride shift
 - b. Breathing mechanism
 - c. Oxygen saturation of haemoglobin
 - d. Formation of HCO₃⁻
14. End product of anaerobic respiration in human is:
 - a. Ethyl alcohol
 - b. Lactic acid
 - c. Ethyl alcohol + CO₂
 - d. Lactic acid + CO₂
15. Chlorocruorin is a copper containing blood pigment found in some annelids like Sabella. Its colour in both oxygenated & deoxygenated state is:
 - a. Blue
 - b. Red
 - c. Green
 - d. Bluish Red
16. SA node is located in:
 - a. Upper lateral wall of right atrium
 - b. Lower lateral wall of left atrium
 - c. Lower lateral wall of right atrium
 - d. Upper lateral wall of left atrium
17. In human being the duration of cardiac cycle is:
 - a. 0.008 sec
 - b. 0.5 sec
 - c. 0.8 sec
 - d. 8 sec
18. What is the first phase in cardiac cycle?
 - a. Passive filling
 - b. Ventricular Isovolumic contraction
 - c. Atrial contraction
 - d. Ventricular ejection
19. Which of the following WBC is capable of phagocytosis?
 - a. Basophil
 - b. Eosinophil
 - c. Lymphocyte
 - d. Neutrophil
20. What prevents clotting of blood in blood vessels?
 - a. Serotonin
 - b. Fibrinogen
 - c. Heparin
 - d. Fibrin

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Describe the mechanism of formation of urine. | 10 |
| 2. What is cardiac cycle? Explain the various phases of Cardiac cycle. | 2+8=10 |
| 3. Write a descriptive note on the blood clotting mechanism in human. | 10 |
| 4. Explain with necessary diagram the mechanism of origin & conduction of heart beat. | 10 |
| 5. Describe briefly: | 5+5=10 |
| a) Composition and function of saliva. | |
| b) Write a short note on types of heart. | |
| 6. a) Define cephalic phase and gastric phase of secretion of gastric juice. | 3+7=10 |
| b) Describe the composition and function of Gastric Juice. | |
| 7. Describe the propagation of nerve impulse in a Non-Myelinated Nerve Fibres. | 10 |
| 8. Write short notes: | 5+5=10 |
| a) Uriniferous Tubule | |
| b) Blood pressure & factors affecting it. | |

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