

University of Mumbai
Semester – III Examination, 2018

Class: SYBSc

Course: Zoology VI

Course Code: USZO 302

Paper: II

Animal Physiology

Marks: 100

Date:

Time: 03

MODEL ANSWER KEY

- Q.1 A) Fill in the blanks by choosing the correct options given below** **05**
- a) Import
 - b) Omnivores
 - c) External respiration
 - d) SA node
 - e) Budding
- B) Match the columns I and II and rewrite** **05**
- | Column I | | Column II |
|--------------------------------|--------------|-------------------------------------|
| a) GVC | <i>Hydra</i> | |
| b) Ruminants | | <i>Herbivores</i> |
| c) 5000 - 9000 | | Leucocytes/mm ³ of blood |
| d) Bundle of His | | Heart of man. |
| e) Longitudinal binary fission | | <u><i>Euglena</i></u> |
- C) State whether True or False** **05**
- a) False
 - b) False
 - c) True
 - d) False
 - e) True
- D) Define the following.** **05**
- a) Excretion is essentially elimination of toxic nitrogenous wastes products of metabolism.
 - b) Inspiration 46Inspiration is the process of taking air into the lungs and involves the action of the intercostal muscle and diaphragm.
 - c) Thrombocytes 54 Thrombocytes are spindle shaped cells found in the blood of all vertebrates except mammals.
 - d) The ability of organism to receive and react to a stimulus is called irritability.
 - e) The process by which organisms replicate i=or give rise to new individuals of its own kind is called reproduction.

- Q.2 A) Describe the digestive system of cockroach in detail. 10**
1. Introduction 01
 2. Foregut/Stomodaeum, Midgut/Mesenteron, Hindgut/Proctodaeum 06
 3. Neat labeled diagram 03
- OR**
- A) Describe physiology of urine formation in man.**
1. Introduction 01
 2. a) Filtration b) Selective reabsorption c) Tubular Secretion 06
 3. Neat labeled diagram 03
- B) Explain any two from the following. 10**
- a) Types of nutrition.**
1. Introduction 01
 2. Description 04
- b) Wheel organ in *Amphioxus*.**
1. Description 04
 2. Diagram 01
- c) Uricotelic animals.**
1. Introduction 01
 2. Description 04
- d) Structure of Malpighian body.**
1. Description 03
 2. Diagram 02
- Q.3 A) Discuss the respiratory system in Pigeon. 10**
1. Introduction 01
 2. Description 06
 3. Diagram 03
- OR**
- A) Discuss blood as a circulating fluid.**
1. Introduction 01
 2. Description 06
 3. Diagram 03
- B) Explain any two from the following. 10**
- a) Book lungs in Spider.**
1. Description 04
 2. Diagram 01
- b) Respiration in frog.**
1. Introduction 01
 2. Description 04
- c) Open and closed circulatory system.**

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- 1. Description 03
- 2. Neat labeled diagram 02

- d) Lymph – a circulating fluid.
- 1. Introduction 01
- 2. Description 04

- Q.4 A) Comment on the types of neurons in detail. 10**
- 1. Introduction 01
 - 2. Description 06
 - 3. Neat labeled diagram 03

OR

- A) Comment on spermatogenesis in detail.**
- 1. Introduction 01
 - 2. Description 06
 - 3. Neat labeled diagram 03

- B) Explain any two from the following. 10**

- a) Nerve net in *Hydra*.
- 1. Description 04
 - 2. Neat labeled diagram 01

- b) Leg of cockroach.
- 1. Description 04
 - 2. Neat labeled diagram 01

- c) Fragmentation in *Planaria*.
- 1. Description 04
 - 2. Neat labeled diagram 01

- d) Structure of ovum in human.
- 1. Description 04
 - 2. Neat labeled diagram 01

- Q.5 Write short notes on any four 20**

- a) Food vacuole in *Amoeba*.
- 1. Description 04
 - 2. Neat labeled diagram 01

- b) Flame cells in *Planaria*.
- 1. Description 04
 - 2. Neat labeled diagram 01

- c) Double circulation.
- 1. Description 04
 - 2. Neat labeled diagram 01

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- d) Heart of cockroach
 - 1. Description 04
 - 2. Neat labeled diagram 01

- e) Structure of striated muscle fibre.
 - 1. Description 04
 - 2. Neat labeled diagram 01

- f) Classification of fertilization.
 - 1 Description 05
