

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014

(UG-CCSS)

Complementary Course—Zoology

ZO 3C 05—PHYSIOLOGY, TOXICOLOGY AND ETHOLOGY

(2013 Admissions)

Time : Three Hours

Maximum : 30 Weightage

I. Answer *all* twelve questions. Each question carries $\frac{1}{4}$ weightage :

A. Objective Type questions :

1 The ion responsible for depolarization is

- (a) Na^+ . (b) K^+ .
(c) Ca^{++} . (d) Mg^{++} .

2 The difference between systolic and diastolic pressure is :

- (a) Heart rate. (b) Pulse pressure.
(c) Cardiac output. (d) Stroke volume.

3 Carbon monoxide combines with haemoglobin to form :

- (a) Carbaminohaemoglobin. (b) Carboxy haemoglobin.
(c) Oxyhaemoglobin. (d) Haemoglobinic acid.

4 Cardiac impulses are produced from :

- (a) AV node. (b) Purkinje fibres.
(c) SA node. (d) Chordae tendinae.

B. Name the following :-

5 The membrane potential of a depolarized neuron is

6 Name the cells that secrete HCl in stomach.

7 Name the largest leucocyte.

8 Name the hormone secreted by the kidney.

C. Fill in the blanks :

9 The process of formation of abnormal clot inside the blood vessel is called _____

10 The presence of excess urea in blood is called _____.

11 Rapid spasm of muscle due to accumulation of lactic acid is called _____

12 Gaps present in the myelin sheath are called _____

(12 x = 3 weightage)

Turn over

II. Short Answer questions. Answer *all* nine questions

- 13 Distinguish between unipolar and bipolar neurons.
- 14 What is Bohr effect ?
- 15 Write the functions of the following:
- (a) Gastrin. (b) Cholecystokinin.
- 16 What is Anorexia ?
- 17 Write the differences between Arteriosclerosis and Atherosclerosis.
- 18 What are Xenobiotics ?
- 19 What is meant by Imprinting ?
- 20 Write notes on Conditioned reflex.
- 21 What is Haemodialysis ?

(9 x 1 = 9 weightage)

III. Short Answer Questions. Answer any *five* questions

- 22 Describe the mechanism of absorption of nutrients.
- 23 Explain the physiology of Muscle contraction.
- 24 Describe the conducting system of Heart.
- 25 Explain the social organization in animals.
- 26 Describe the hormonal control of kidney function.
- 27 Explain the health hazards and method of disposal of radioactive wastes.
- 28 Give an account of the mechanism of blood coagulation.

(5 x 2 = 10 weightage)

IV. Essay questions. Answer any *two* questions

- 29 Explain the structure of plasma membrane with suitable diagram. Add notes on passive and active transport.
- 30 Describe the physiology of muscle contraction and add notes on the energetic of muscle contraction.
- 31 Explain the mechanism of nerve impulse generation and transmission. Add a note on all *or* none response.

(2 x 4 = 8 weightage)

**SECOND SEMESTER B.Sc. DEGREE EXAMINATION
MAY 2014**

(UG-CCSS)

Complementary Course – Zoology

ZO 2C 03 – ECONOMIC ZOOLOGY

(2013 Admissions)

Time : Three Hours

Maximum : 30 Weightage

I. Answer all *twelve* questions**A. Choose the correct answer**1. *Anopheles* transmits

- | | |
|-------------------|-----------------|
| (a) Chikungunya. | (b) Malaria. |
| (c) Dengue fever. | (d) Filariasis. |

2. The transmission of *Wuchereria bancrofti* is :

- | | |
|--------------------|----------------------|
| (a) Contaminative. | (b) Inoculative. |
| (c) Penetrative. | (d) Through contact. |

3. Black-headed coconut caterpillar is :

- | | |
|---------------------------------|--|
| (a) <i>Opisina arenosella</i> . | (b) <i>Rhynchophorus ferrugineus</i> . |
| (c) <i>Aceria guerreronis</i> . | (d) <i>Leptocorisa acuta</i> . |

4. Tussar silk is produced by :

- | | |
|--------------------------------|------------------------------------|
| (a) <i>Bombyx mori</i> . | (b) <i>Sarnia Cynthia ricini</i> . |
| (c) <i>Antheraea assamia</i> . | (d) <i>Antheraea paphia</i> . |

B. Name the following :

5. The dried shark skin used for polishing purposes.
6. The Indian pearl oyster.
7. Swimmer's itch is caused by.
8. The pork infested with cysticercus larvae of *Taenia solium*.

C. Fill in the blanks :

9. _____ is the only fertile female in a colony of honey-bees.
10. _____ is commonly called red palm weevil.

Turn over

11. Silk glands are the modified _____ glands.
12. The traditional brackish water prawn farming technique in Kerala is called _____

(12 x ¼ = 3 weightage)

IL Answer all *nine* questions

13. Differentiate between Primary host and Secondary host.
14. What is shellac? How is it obtained?
15. What is polyembryony? Give an example.
16. What are the parasitic adaptations of *Taenia solium*?
17. What are the damages caused by rice swarming caterpillar?
18. What is stake culture?
19. Comment on the sexual dimorphism of *Schistosoma haematobium*.
20. What are the uses of bee venom?
21. Give an account of the diseases transmitted by *Xenopsylla*.

(9 x 1 = 9 weightage)

III. Answer any *five* questions :

22. Explain the common physiological features and adaptations of parasites.
23. What is eye stalk ablation? How is it significant in prawn culture?
24. What is IPM? What are its merits?
25. Give an account of the nutritive value of fishes.
26. What are the modifications of worker honeybees?
27. Explain the pathogenicity of *Entamoeba histolytica*.
28. Illustrate the procedure of induced breeding in pisciculture and its advantages.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions :

29. Write an essay on fish byproducts.
30. Write an essay on the steps involved in peal culture.
31. Describe the morphology and life-cycle of *Wuchereria bancrofti*. Give an account of its pathogenicity and prophylactic measures that can be adopted to prevent its propagation.

(2 x 4 = 8 weightage)