D 12054   (Pages : 2)   Name..

Reg. No...................................

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2021

Zoology

ZOL 3C 03T—PHYSIOLOGY AND ETHOLOGY

(2019—2020 Admissions)

Time : Two Hours   Maximum : 60 Marks

Section A (Short Answer Questions)

Answer at least **eight** *questions.*
Each question carries 3 marks.
All questions can be attended.
Overall Ceiling 24.

1. Distinguish between phagocytosis and pinocytosis.

2. What is the role of HCl in digestion ?

3. What is CO poisoning ?

4. Write any *two* physiological adaptations of diving mammals.

5. What is SA node ?

6. Distinguish between hemostasis and hemolysis.

7. Distinguish between ureotelism and uricotelism.

8. What is muscle fatigue ?

9. What are glial cells ? Mention the types.

10. What is meant by circadian rhythm ?

11. Distinguish between aestivation and hibernation.

12. Define the terms taxis and kinesis.

$(8 \times 3 = 24$ marks)

Turn over

Section (Paragraph Questions)

Answer at least **five** *questions.*
Each question carries 5 *marks.*
All questions can be attended.
Overall Ceiling 25.

13. Briefly explain the transmembrane transport.

14. Describe the digestion and absorption of lipids in man.

15. Describe the conducting system of heart.

16. Give an account of hormonal control of kidney function.

17. Explain the mechanism of muscle contraction.

18. What is meant by resting potential ? How is it maintained in neurons ?

19. Write an account of social behaviour of elephants.

(5 × 5 = 25 marks)

Section C (Essay Questions)

Answer any **one** *question.*
The question carries 11 *marks.*

20. Explain the mechanisms of transport of respiratory gases.

21. Describe different forms of learning behaviour in animals.

(1 × 11 = 11 marks)

D 72408

Name......................

Reg. No......................

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 ¼ 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 × ¼ = 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 ?

$(9 \times 1 = 9$ 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.

$(5 \times 2 = 10$ 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.

$(2 \times 4 = 8$ weightage)