

**2020/TDC (CBCS)/ODD/SEM/
ZOODSC/GE-301T/031**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

ZOOLOGY

(3rd Semester)

Course No. : ZOODSC/ZOOG-301T

(Physiology and Biochemistry)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any *fifteen* of the following questions :

1×15=15

- 1. What is a monopolar neuron?**
- 2. State the function of Schwann cells.**
- 3. What do you understand by medullated neuron?**

(2)

4. What are dendrites?
5. What is the resting potential of neuron membrane?
6. What is action potential?
7. Define sarcomere.
8. Name the muscle proteins of skeletal muscle.
9. Name the digestive juice of small intestine (jejunum).
10. What are lacteals?
11. Name the different salivary glands in mouth.
12. What is oxyhaemoglobin?
13. What is RQ?
14. What do you understand by ventilation lung?
15. What is malpighian body?

(3)

16. What is duct of Bellini?
17. Define ultrafiltration.
18. Mention the effective pressure of glomerular filtration.
19. Write the formed component of blood.
20. What do you understand by SA node?
21. What is pericardium?
22. What do you understand by bundle of His?
23. What is the total time period of a complete cardiac cycle?
24. Define spermiogenesis.
25. What is Graafian follicle?
26. What do you understand by corpus albicans?
27. State the hormone secreted by median eminence of pituitary.

(4)

- 28. What is holoenzyme?
- 29. How many ATP molecules are produced during glycolysis?
- 30. What is allosteric modulation?

SECTION—B

Answer any *five* of the following questions : $2 \times 5 = 10$

- 31. What is saltatory conduction?
- 32. What do you understand by A-band and I-band?
- 33. Why carbohydrate digestion does not occur in stomach?
- 34. What are the three ways in which carbon dioxide is transported from the tissue to the lungs?
- 35. What do you understand by Colloidal Osmotic Pressure (COP) and Hydrostatic Pressure (HP) in Bowman's capsule?

(5)

- 36. What is Purkinje system? State the function.
- 37. Mention the different phases of menstrual cycle.
- 38. Explain double origin of pituitary.
- 39. What is Michaelis constant?
- 40. What do you understand by oxidation of pyruvic acid?

SECTION—C

Answer *any five* questions

- 41. Explain in detail the propagation of nerve impulse in non-medullated neuron with diagram. $4+1=5$
- 42. What do you understand by synaptic transmission? What are the types? Explain. $2+2+1=5$
- 43. Explain the transport of oxygen from the lung to the tissue. 5

(6)

44. What is absorption? State the process of absorption of protein in the alimentary system. 1+4=5
45. Describe the mechanism of urine formation. State the composition of urine. 4+1=5
46. What is cardiac cycle? Explain with schematic figure. 4+1=5
47. What are the functions of thyroid hormones? 5
48. Why is pancreas called a compound gland? State the functions of insulin and glucagon. 1+4=5
49. How are enzymes classified? Give examples of each type. 3+2=5
50. What is gluconeogenesis? Why is it important? 5

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