SM – 361

IV Semester B.Sc. Examination, May/June 2018
(CBCS) (Fresh + Repeaters) (2015-16 and Onwards)
BIOCHEMISTRY (Paper – IV)

Time : 3 Hours Max. Marks : 70

Instructions : *1) The question paper has **two** Parts. Part – **A** and Part – **B**.*
*2) Answer **any eight** questions from Part – **A** and **nine** questions from Part – **B**.*

PART – A

Answer **any eight** of the following questions. **Each** question carries **two** marks. **(8×2=16)**

1. Mention two functions of epithelial tissue.
2. Write the major cation and major anion of intracellular fluid.
3. What is Bohr's effect ?
4. Mention the functions of bile juice.
5. Name the constituents of normal urine.
6. Mention the role of any two hormones secreted by thyroid gland.
7. Differentiate between systolic and diastolic blood pressure.
8. Give an example for (a) Excitatory (b) Inhibitory neurotransmitter.
9. What are the features of cardiac muscle ?
10. Define SDA. Mention its significance.
11. What is Kwashiorkor ? Mention two symptoms of the same.
12. Write the deficiency disease of (i) Vitamin B_{12} (ii) Vitamin C.

P.T.O.

PART – B

Answer **any nine** of the following questions. **Each** question carries **six** marks. **(9×6=54)**

13. a) Discuss the structure and function of Elastin.
    b) Give a flow chart for the Extrinsic pathway in the formation of prothrombin activator. **(4+2)**

14. a) Explain the process of Erythropoiesis.
    b) What is the function of lymph ? **(4+2)**

15. a) Explain the mechanism of inspiration.
    b) What is the role of fibre in the diet ? **(4+2)**

16. a) Explain how kidneys bring about acid-base balance.
    b) How are nucleotides digested ? **(4+2)**

17. a) Describe briefly the process of urine formation.
    b) What is peritonial dialysis ? **(4+2)**

18. a) How are proteins digested and absorbed ?
    b) Why are proteases produced in inactive form ? **(4+2)**

19. a) What are local hormones ? Give one biological role of PGE_2, TXA_4 and LTA_4.
    b) Name any two hormones of hypothalamus. **(4+2)**

20. a) Discuss the mechanism of synaptic transmission.
    b) Give two functions of Myelin sheath. **(4+2)**

21. a) How is heart rate regulated ?
    b) What is refractory period ? **(4+2)**

22. a) Discuss the structure and function of Myosin.
    b) What are the sources of ATP during muscle contraction ? **(4+2)**

23. a) Define RQ. What is the RQ of carbohydrates and fats ? Give its significance.
    b) Define calorific value of food. **(4+2)**

24. a) Give four functions of fats.
    b) What are semi essential amino acids ? Name them. **(4+2)**

25. a) Give the source and deficiency symptoms of (i) Calcium (ii) Iron.
    b) What is Nitrogen balance ? **(4+2)**