

**GS-314**

IV Semester B.Sc. Examination, May/June - 2019

BIOCHEMISTRY**Biochemistry - IV****(CBCS) (F+R) (2015-16 & Onwards)**

Time : 3 Hours

Max. Marks : 70

- Instructions :** (i) The question paper has **two** parts : Part A and Part -B
(ii) Answer **any eight** questions from Part A
(iii) Answer **any nine** questions from Part B

PART - A

Answer **any eight** of the following questions. Each question carries **two** marks. **8x2=16**

1. What are zymogens ? Give an example.
2. Mention the role of osteoblast and osteoclast cells.
3. Give any two functions of plasma proteins.
4. What is Bohr's effect ?
5. Mention any two hormones involved in regulation of heart rate.
6. Give any two functions of parathyroid hormone.
7. What is insulin clearance test ?
8. Give the classification of neurons with an example for each.
9. What is respiratory quotient ? Calculate the RQ of carbohydrates.
10. What are macro minerals ? Give any two examples.
11. What are dietary fibers ?
12. Give the role of Creative phosphate in muscle.



**PART - B**

Answer **any nine** of the following questions. Each question carries **six** marks. **9x6=54**

13. (a) Discuss the structure and functions of collagen. **4+2**
(b) Give any two functions of hormones of adrenal cortex.
14. (a) Outline the extrinsic pathway of blood coagulation. **4+2**
(b) Draw a neat labelled diagram of human respiratory system.
15. (a) Give the composition and functions of gastric juice. **4+2**
(b) What is myelin sheath ? Mention its significance.
16. (a) Discuss the role of Kidneys in maintenance of acid base balance. **4+2**
(b) Give the composition of lymph.
17. (a) Describe the sliding filament theory of muscle. **4+2**
(b) What are muscular dystrophies ? Give an example.
18. (a) Describe the various steps involved in tubular reabsorption and secretion. **4+2**
(b) What is erythropoiesis ?
19. (a) Describe the mechanism of transmission of action potential. **4+2**
(b) What is renal failure ?
20. (a) Define RDA. Mention its significance. **4+2**
(b) Mention any two factors that affect BMR.
21. (a) Discuss the digestion and absorption of lipids. **4+2**
(b) What are haemorrhages ?
22. (a) Mention the source, daily requirement, functions and deficiency symptoms of potassium. **4+2**
(b) Give the sources and function of Vitamin B₁₂.





23. (a) Give the role of any four anterior pituitary hormones. 4+2
(b) What is fortification of foods ? / Mention the advantages.
24. (a) What is nitrogen balance ? Give its significance. 4+2
(b) What is cardiac output ?
25. (a) Give the principle and procedure for energy measurement by indirect calorimetry. 4+2
(b) How are neurotransmitter receptors classified ?

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