

Reg. No. :

Name :

Fourth Semester B.Sc. Degree Examination, August 2022

Career Related First Degree Programme Under CBCSS

Biochemistry and Industrial Microbiology

Core Course III

**IM 1441 PHYSIOLOGICAL ASPECTS OF BIOCHEMISTRY AND
ENZYMOLGY**

(2020 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in a word or **one** or **two** sentences. Each question carries **1** mark.

1. What is induced fit theory?
2. Name three hormones involved in parturition.
3. What are neurotransmitters?
4. What is the Renin-Angiotensin system?
5. Comment on metallo enzymes.
6. Mention sliding filament theory.
7. An inherited blood disorder that causes our body to have less hemoglobin is

P.T.O.

8. What is Bohr effect?
9. Distinguish between type I and II diabetes.
10. What is Micturition?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks. Answer not to exceed **one** paragraph.

11. Discuss the specificity of enzymes with example.
12. Briefly write about cofactors.
13. Name the enzymes involved in carbohydrate digestion.
14. Write short note on plasma proteins.
15. Explain briefly reflex action.
16. Differentiate between mechanical and chemical digestion.
17. Write down the functions of skeletal muscles.
18. What are the underlying causes of Cushing syndrome?
19. Differentiate between bone and cartilage.
20. Give an account of the protein present in bone.
21. What is the role of coenzymes in enzymatic reactions?
22. Write about the significance of K_m and V_{max} .
23. Discuss the functions of epinephrine and norepinephrine.
24. Distinguish between acidosis and alkalosis.

25. Write briefly on chloride shift.
26. Name the enzymes involved in lipid digestion.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks. Answer not to exceed **120** words.

27. Write about the different factors affecting enzyme activity.
28. How is enzyme activity controlled by covalent modifications?
29. Describe the stages of erythropoiesis.
30. Write briefly on cardiac muscles and their functions.
31. Give an account of thyroid hormone disorders.
32. Write a note on regurgitation.
33. Write in detail about the mechanism of enzyme catalysis.
34. Illustrate the structure of hemoglobin.
35. What causes peptic ulcers and how can they be treated?
36. Write briefly about the role of the salivary gland in digestion.
37. Give an account of vitamin D and its role in bone formation.
38. Write a note on allosteric enzymes.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks. Answer not to exceed **three** pages.

39. Write briefly about the blood composition.
 40. With a neat diagram explain the structure and function of neurons.
 41. Write in detail about the intrinsic and extrinsic pathways of blood clotting.
 42. Elaborate on the digestion and absorption of proteins.
 43. Explain in detail the formation of urine.
 44. Write an essay on the nomenclature and classification of enzymes.
- (2 × 15 = 30 Marks)**