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Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, MAY 2020

Fourth Semester

Faculty of Science

Branch V-B—Pharmaceutical Chemistry

PH4 E01—BACTERIOLOGY AND BIOCHEMISTRY

(2012 Admission onwards)

Time : Three Hours

Maximum Weight : 30

Section A

Answer any ten questions.

Each question carries weight 1.

1. Give the structure of ATP. How it differs from ADP ?
2. What is Respiratory Quotient ?
3. Cite the different types of interactions seen in Antigen-Antibody bindings.
4. What are Interferons ? Give an example.
5. How a blood serum is prepared ?
6. What are essential fatty acids ? Give an example.
7. Name the Purine and Pyrimidine bases seen in DNA.
8. What are Allosteric Enzymes ? Give an example.
9. Name *two* male sex hormones. Give their mode of action.
10. Define Calorific Value of food.
11. How Blood Cholesterol Level is determined ?
12. What is Diabetes Mellitus ?
13. What is Rh factor of blood ? What is its significance ?

(10 × 1 = 10)

Turn over





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Section B

*Answer any five questions.
Each question carries weight 2.*

14. Describe briefly the mechanism of blood clotting.
15. Explain briefly the citric acid cycle.
16. How blood sugar tested clinically ?
17. What are the important enzymes involved in the digestion of food ? Explain their action in the digestion process.
18. What are the important clinical uses of enzymes ?
19. What is Gene Therapy ? Explain its use in medical field.
20. List out the important C-terminus protecting groups. Explain how they are introduced and finally removed.
21. Explain the mechanism of action of enzymes.

(5 × 2 = 10)

Section C

*Answer any two questions.
Each question carries weight 5.*

22. (a) Explain the structures of different prostaglandins.
(b) Give the biosynthesis of PGE₁.
23. (a) Give the double helical structure of DNA.
(b) What is cloning of DNA ? What is its use in medical treatment ?
24. (a) What are primary, secondary, tertiary and quaternary structures of proteins ? Explain using suitable examples.
(b) What are Ramachandran Plots ? What is its utility ?
25. Explain solid phase peptide synthesis of proteins. What are its advantages over the classical synthesis ?

(2 × 5 = 10)

