



**2021/TDC/CBCS/ODD/
CHMSEC-301T/292**

**TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022**

CHEMISTRY

(3rd Semester)

Course No. : CHMSEC-301T

(Analytical Clinical 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 as directed :

1×15=15

1. Give one example of monosaccharide.
2. Write the full form of NADH.
3. Name one non-reducing disaccharide.
4. What is the end product of aerobic glycolysis?



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5. What is the function of enzyme urease?
6. Give one example of coenzyme.
7. What is prosthetic group?
8. What information we may get from the primary structure of protein?
9. Simple lipids on hydrolysis with dilute acids give ____ and ____.
(Fill in the blanks)
10. Give one characteristic of hormone.
11. What are lipoproteins?
12. Give one example of carbohydrate containing lipid.
13. Name few electrolytes present in normal human blood.
14. What are the types of cells found in normal human blood?
15. Name one anticoagulant used for sampling of blood.

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(Continued)

(3)

16. Give one important function of blood.
17. What is blood serum?
18. Determination of blood urea is the diagnostic indication for which organ of human being?
19. Which disease may cause due to high cholesterol level in blood?
20. Hyperglycemia can be detected by what analysis of blood?

SECTION—B

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

21. Write the steps of carbohydrate metabolism.
22. Write the names of the end product formed during anaerobic glycolysis process in human body.
23. Discuss briefly the denaturation of protein.
24. Why are enzymes important for proper growth of human body?
25. What are lipids? How are they classified?

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(Turn Over)



(4)

26. Mention two properties of hormone.
27. Mention two important functions of blood.
28. How are urine samples preserved for pathological analysis?
29. Write the functions of RBC and WBC.
30. What are the causes and treatment of anaemia?

SECTION—C

Answer any *five* of the following questions : 5×5=25

31. Outline the reaction sequences occurred in the anaerobic glycolysis process.
32. Why is ATP considered as the universal currency of energy? Write the structure of ATP molecule. 3+2=5
33. Discuss briefly the biological importance of protein. How are proteins classified? 3+2=5
34. What do you understand by stereospecificity of enzyme? Discuss the 'lock and key' model of enzyme action with the help of schematic diagram. 2+3=5

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(Continued

(5)

35. Discuss the biological importance of phosphoglycerides. What is rancidity of fats and oils? 3+2=5
36. What are hormones? Discuss briefly the disorders due to imbalance of specific hormones in human being. 1+4=5
37. Discuss briefly the composition of normal blood. 5
38. Discuss different methods of collection of blood sample for pathological purpose. 5
39. Discuss how the blood sugar data be interpreted for a healthy and unhealthy human being. 5
40. Discuss how the urea and creatinine levels in blood help in diagnosis of kidney disease. 5

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