

[KV 872]

August - 2009

Sub. Code: 5002

**B.Sc. (Medical Laboratory Technology) DEGREE EXAMINATION**

**FIRST YEAR**

**Paper II – BASIC CHEMISTRY**

*Q.P. Code : 725002*

**Time : Three hours**

**Maximum : 100 marks**

**Answer All questions.**

**I. Essays :**

**(2X15=30)**

1. What is an indicator? Explain its function giving two examples. Why does the colour depend upon  $P^H$ ? What indicator should be used in i) Titration of  $H_2SO_4$  with  $Na_2CO_3$  and ii) Acetic acid with  $NaOH$ . **(2+3+5+5)**
2. What are nucleic acids? Discuss the structure of DNA. What is meant by replications of DNA? **(5+5+5)**

**II. Write Short Notes on :**

**(10X 5=50)**

1. Buffer solution.
2. Mutarotation of glucose.
3. Biological importance of carbohydrates.
4. Classification of proteins.
5. Two colour reactions of cholesterol.
6. N-terminal analysis of proteins.
7.  $\alpha$  - helix structure of protein.
8. Any one coenzyme and its functions.
9. Specificity of enzymes.
10. Mode of action of enzymes.

**III. Short Answer Questions:**

**(10X2 = 20)**

1. Define Lewis concept of acids and bases.
2. What are intracellular materials present in the animal cell?
3. What is golgi apparatus? Mentions two functions.
4. What is mitochondrion?
5. What are the classifications of carbohydrates?
6. What is meant by racemic modification?
7. Write any four types of lipids.
8. What is the sugar residue present in RNA?
9. How can you distinguish ketohexoses for aldohexoses?
10. What is the use of Ninhydrin test?

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