

B.Sc. I (With Credits)-Regular-Semester 2012 Sem II
2SBT-T1-Biotechnology-I (Biochemistry) Paper-I

P. Pages : 2

Time :



GUG/W/16/5564

Max. Marks : 50

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1. a) Explain the concept of Molarity and normality with suitable examples in detail. **5**
b) Explain various types of bond in biomolecules. **5**

OR

Explain the Watson and crick model of DNA in detail. **10**

2. a) Explain classification of carbohydrates with suitable examples. **5**
b) Give Bloors classification of lipids in detail. **5**

OR

What are proteins? Explain different structural levels of proteins with suitable structure. **10**

3. a) Explain buffer and give suitable examples. **2¹/₂**
b) What is c-value paradox? Explain. **2¹/₂**
c) What are steroids? Give examples. **2¹/₂**
d) Discuss tertiary structure of Myoglobin. **2¹/₂**

OR

- e) Explain solute, solvent and solution. **2¹/₂**
f) Describe the structure of t-RNA. **2¹/₂**
g) What are vitamins? Enlist types of vitamins. **2¹/₂**
h) Explain primary and secondary bonds involved in proteins. **2¹/₂**

4. a) Explain hypertonic, hypotonic and isotonic solutions. **2¹/₂**
b) Explain the structure of chromatin. **2¹/₂**
c) Explain the structure of glucose. **2¹/₂**
d) Explain chemical properties of amino acids. **2¹/₂**

OR

- e) Explain active and passive diffusion. **2¹/₂**

- f) Explain the concept of split gene. 2¹/₂
- g) What are triglycerides? Explain with example. 2¹/₂
- h) Explain the structure of Haemoglobin. 2¹/₂

5. Solve **any ten** of the following.

- i) Give invention of Pehr Edman. 1
- ii) Where ninhydrin is used? 1
- iii) What is β -structure of proteins? 1
- iv) Draw structure of glyceraldehyde. 1
- v) What is MUFA and PUFA? 1
- vi) What are vitamins? 1
- vii) What is Chargaff's rule? 1
- viii) What is intron? 1
- ix) Give two differences between DNA and RNA. 1
- x) What are atoms? 1
- xi) What is molality? 1
- xii) Define pH. 1
