Reg. No. | | | | | | | | | |

BCH 402

I Semester M.Sc. Degree Examination, December 2018
BIOCHEMISTRY
Biomolecules

Time : 3 Hours Max. Marks : 70

PART – A

1. Answer **any ten** of the following. **(10×2=20)**
   a) What are essential fatty acids ? Give example.
   b) What is Tm of DNA ? Which are the factors affecting Tm ?
   c) Write the similarities and differences of Starch and Cellulose.
   d) State Chargaff's rule.
   e) What is Hoogsten base pairing ?
   f) What are helix stabilizing amino acids ? Name any two.
   g) Write the structure of any two aromatic amino acids.
   h) What are epimers ? Write the structures of glucose epimers.
   i) How is DNA different from RNA ?
   j) Differentiate nucleoside and nucleotide.
   k) What are SnRNA and SiRNA ? Mention their importance and function.
   l) What is G-DNA ?

PART – B

Answer **any five** of the following. **(5×10=50)**

2. a) Explain the structure and classification of monosaccharides with suitable example.
   b) Explain the bacterial cell wall polysaccharides. **(6+4)**

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3. a) Give a detail account on types of classification of amino acids.
   b) Explain the tertiary structure of myoglobin. (**6+4)**

4. a) Write a note on blood group polysaccharides.
   b) Explain the Sanger method of sequencing of DNA. **(5+5)**

5. a) Write a note on prostaglandins.
   b) What are proteoglycans ? Explain the structure and their functions. **(5+5)**

6. a) Explain the determination of primary structure of protein by taking insulin as an example.
   b) Explain the classification of lipids. **(5+5)**

7. a) Write a note on isolation of nucleic acids.
   b) Explain Watson and Crick model of DNA. **(5+5)**

8. a) Give an account on the types of RNA and their significance.
   b) Explain the chemical method of synthesis of oligo nucleotides. **(5+5)**

9. Write short notes on the following :
   a) DNA modern rapid sequencing methods.
   b) Alzheimer's Disease.
   c) Ramachandran plot. **(3+3+4=10)**

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