M.Sc.—Chem-IVS(CC-512)

2019

Time : 3 hours

Full Marks : 80

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(BIO-ORGANIC CHEMISTRY)

SECTION – A

1. Answer any *four* of the following : 4 × 4

(*a*) Write a short note on Glycogenolis.

(*b*) Write the general chemical properties of peptides.

(*c*) Explain the primary structure of proteins.

(*d*) Write the chemical hydrolysis process of nucleic acids.

(*e*) Explain the structure of eukaryotic cells.

(*f*) Explain the chemical evolution of carbon.

Or

2. Answer *all* questions from the following : 2 × 8

(*a*) What are polysaccharides ? Give examples.

(*b*) What is a peptide bond ?

(*c*) What is meant by protein folding.

(*d*) Write the triplex helis structure of collagen.

(*e*) Write the biological functions of RNA.

(*f*) Explain the chemical basis of heredity.

(*g*) What are Prokaryotic cells ?

(*h*) Write the unique properties of carbon.

SECTION – B

Answer all questions : 16 × 4

3. (*a*) Discuss Kreb's cycle in detail.

Or

(*b*) Discuss the structure and biological functions of glucoaminoglycans.

4. (*a*) Explain the tertiary structure of proteins and metabolism degradation.

Or

(*b*) Write the biosynthesis of amino acids and explain enzymatic hydrolysis.

5. (*a*) Describe the structure of RNA.

Or

(*b*) Describe the replication of DNA.

6. (*a*) What are Biomolecules ? Discuss the building block of biomicromolecules.

Or

(*b*) Discuss the chemical evolution and rise of living system.
