

( 4 )

Total Pages—4

M.Sc—Chem-IVS (CC-512)

6. (a) Discuss the structure of pro-karyotic cells.

Or

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

2018

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* questions from the following : 4 × 4
  - (a) Write the biological functions of carbohydrates.
  - (b) Explain the secondary structure of proteins.
  - (c) Draw the structures of DNA and RNA.
  - (d) Explain the building block of bio-micro-molecules.

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- (e) Explain catabolism briefly.  
(f) Write the applications of genetic code.

Or

2. Answer all the questions from the followings : 2 x 8

- (a) Define glycolysis.  
(b) What are polysaccharides? Give examples.  
(c) Write the tertiary structure of proteins.  
(d) Write the basic functions of RNA.  
(e) Write the principle of biosynthesis.  
(f) Write the biological importance of enzymes.  
(g) What is meant by gene sequencing?  
(h) What is ATP?

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SECTION--B

Answer all questions : 16 x 4

3. (a) Discuss the mechanism of Glycogenolysis in details.

Or

- (b) Explain the structure and functions of glucoamino glycans.

4. (a) Make a comparison between the properties and functions of peptides and proteins.

Or

- (b) Discuss the Quaternary structure of proteins.

5. (a) Describe the structure of DNA in detail.

Or

- (b) Explain gene Translation and gene Transcription.