Or

(*b*) Discuss the molecular assembly in supra-molecular chemistry.

M.Sc.–Chem-IVS(CC-513)

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-INORGANIC AND SUPRAMOLECULAR CHEMISTRY)

SECTION – A

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

(*a*) Write about blood clotting mechanism.

(*b*) Write the biological functions of Na^+ and K^+.

(*c*) Explain nitrogen fixation.

(*d*) Write a short note of Iron enzymes.

(*e*) Write the importance and need of vitamin B-12.

(*f*) Explain supra molecular recognition.

Or

2. Answer *all* questions : 2×8

(*a*) Write about the role of calcium in muscle contraction.

(*b*) What is photo synthesis I ?

(*c*) Write briefly on oxygen uptake process.

(*d*) What is biological calcification ?

(*e*) Write the functions of myoglobin.

(*f*) Write briefly on Mg enzymes.

(*g*) What are Co-receptor molecules ? Give examples.

(*h*) Explain spherical recognition of supra-molecules

SECTION – B

Answer **all** questions : 16×4

3. (*a*) Describe sodium pump and its importance.

Or

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

4. (*a*) Describe the structure and biological functions of haemoglobin.

Or

(*b*) Describe the structure and biological functions of hemyrythrin.

5. (*a*) Explain the process of carboxy peptidase.

Or

(*b*) Explain the process of cytochrome P-450.

6. (*a*) Write the special properties of supra molecules. Explain their Tetrahedral recognition.