

Roll No :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

SP-677

M.Sc. (Final) Examination, 2021

CHEMISTRY

Paper - VI (CH-502)

(Recent Trends in Life Science)

(For Due and Imp. Students Only)

Time : 1½ Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी **दस** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा **50** शब्द)। प्रत्येक प्रश्न **2** अंक का है।

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

(खण्ड-ब)

(अंक : 5 × 5 = 25)

नोट :- सभी **पाँच** प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा **200** शब्द)। प्रत्येक प्रश्न **5** अंक का है।

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

(खण्ड-स)

(अंक : 10 × 3 = 30)

नोट :- पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा **500** शब्द)। प्रत्येक प्रश्न **10** अंक का है।

BI-318

(1)

SP-677 P.T.O.

Section–A

2 each

1. (i) What is Hemocyanin ?
- (ii) Give the use of Na^+/K^+ pump.
- (iii) What is Fischer's lock hypothesis ?
- (iv) Give one function of Iron-Sulphur Protein.
- (v) What is Micelles ?
- (vi) What is the use of Enzyme in Food ?
- (vii) What is Helix coil transition ?
- (viii) What is the role of ATP in Biological Systems ?
- (ix) What is Photo Correlation Spectroscopy ?
- (x) What is Electrophoresis ?

Section–B

5 each

2. Describe the structure and function of Chlorophyll.

Or

Discuss the structure and function of Hemoglobin.

3. Explain the Enzyme mechanism of Chymotrypsin.

Or

Describe the Michaelis-Menten Plots.

4. Discuss the Application of immobilized enzyme.

Or

Explain the Nucleophilic displacement on Phosphorus Atom.

5. Explain the chain configuration of macromolecules.

Or

Describe the force involved in biopolymer interactions.

6. Describe the thermodynamics of Biopolymer solutions.

Or

Explain the ion transport through the cell membrane.

Section–C

10 each

7. Explain the Photosystem-I and Photosystem-II in cleavage of water.
8. Explain the structure and function of cytochromes.
9. Describe the structure and function of Vitamin-B₁₂.
10. Explain the function and structure of DNA in living system.
11. Describe the extent of hydration of Biopolymers by various experimental techniques.