Roll No. : .....

Total No. of Questions : **11**] [Total No. of Printed Pages : **3**

BPF–2203

M.Sc. (Final) Examination, 2022

CHEMISTRY

Paper – VII (B)

(Group–A)

CH–504

(Metal Complexes, Polymers and Ceramics)

*Time : **3** Hours*] [*Maximum Marks : **75***

Section–A **(Marks : 2 × 10 = 20)**

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

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.

Section–C **(Marks : 10 × 3 = 30)**

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

Section–A

1. (i) Define Quenching.

   (ii) What is singlet state ?

   (iii) What are metal complex sensitizers ?

   (iv) Define metal colloid system.

   (v) Write composition of cement.

   (vi) What is Zirconia ?

   (vii) Define crystalline melting point.

   (viii) What is Reinforcing ?

   (ix) What is artificial kidney ?

   (x) Give *two* examples of phenolic resins.

Section–B

2. Explain quantum yield with a suitable example.

Or

How dipole moment affects the properties of polymers.

3. Explain electron relay.

Or

Explain water photolysis.

4. Explain chemical nature or characteristic of silicates.

Or

What are the raw materials used for the manufacture of different types of glasses ?

5. Describe molecular weight concept in polymers.

Or

Explain relationship in between Tm and Tg.

6. Write uses of silicone polymers.

Or

Explain materials used for contact lenses.

Section–C

7. Describe methods for obtaining charge transfer spectra.

8. Discuss nitrogen fixation and carbon dioxide reduction.

9. Describe types of liquid chromatography.

10. Explain different types of molding *i.e.* injection, blow, extrusion etc.

11. Discuss general applications of biomedical polymers.