

U.G. 5th Semester Examination - 2020

CHEMISTRY

[HONOURS]

Discipline Specific Elective (DSE)

Course Code : CHEM(H)-P-DSE-1A/PR

[PRACTICAL]

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*Answer any **four** questions:

5×4=20

1. a) Write full name and structure of AIBN.
- b) Show how dibenzoyl peroxide generates radicals on heating.
- c) What are inhibitors? Give examples. 2+2+1
2. a) Define relative viscosity, η_{rel} and specific viscosity, η_{sp} .
- b) Describe that how intrinsic viscosity of a polymer can be determined. 2+3
3. Write the theory and experimental procedure to determine formaldehyde in formalin solution. 2+3

4. a) Describe the procedure that how polyacrylamide is synthesized by radical polymerization process.
- b) Write the equations and the experimental conditions for the preparation of nylon-66.

3+2

5. Write the principle and theory to estimate the number average molecular weight by end group analysis of PEG.

 $2\frac{1}{2}+2\frac{1}{2}$

6. a) Discuss how molecular weight of a polymer is related with its viscosity.
- b) Write the equations for the preparation of polystyrene in presence of benzoyl peroxide.

2+3

[Turn over]