Enrollment No. _____

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION APRIL - 2018

B.Voc. Chemical Technology

BVCT 402 – CHEMISTRY OF POLYMER & COMPOSITE MATERIALS

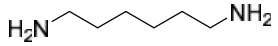
Duration of Exam – 2.30 hrs ***Semester – IV*** ***Max. Marks – 70***

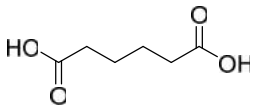
Que. 1 (A) – Answer the following Questions **[10]**

1. Give any 2 examples of synthetic polymers.
2. Which types of solvents are used in anionic and cationic polymerization?
3. Which monomer is required to prepare Polyvinyl acetate?
4. Enlist any 2 applications of polyvinyl chloride.
5. Which monomer repeating unit is present in PHBV?
6. Define flame retarders and give any one example.
7. What is a fiber?
8. Define composite.
9. What are additives in composite?
10. Define fillers in composite.

Que. 1 (B) – Answer the following Questions **[20]**

1. What is natural polymer? Give any 2 examples.
2. What is addition polymerization? Give any 1 example.
3. Write applications of Phenol-formaldehyde resin.
4. Give the name of following monomers:

1. 

2. 

5. Give any two applications of PVC.
6. Enlist any four effect of oxidation on polymers.
7. Enlist types of composite.
8. Enlist the effect of fillers on polymer.
9. Discuss spray laying with schematic diagram.
10. Which type of solvent can be used for ionic and free radical polymerization respectively?

Que. 2 Answer the following Questions (Any Four) **[20]**

1. Give a detailed explanation of condensation polymerization.
2. Write a short note on classification of polymers.
3. Give synthesis and uses of Nylon-66 and PHBV.
4. Describe fiber manufacturing techniques for making composite.
5. Explain the classification of additives.
6. Write a note on carbon fiber and aramid fiber with manufacturing reaction and application.

Que. 3 Answer the following Questions (Any Four) **[20]**

1. Write a note on free-radical polymerization process.
2. Explain nomenclature of polymers in detail.
3. Give synthesis and uses of Polyurethane and Teflon.
4. Explain pultrusion and filament winding for composite manufacturing with schematic diagram.
5. Enlist the requirements of additives.
6. Write a note on lubricants its types and application.