

Code No. 1569

FACULTY OF SCIENCE

B.Sc. (Regular & Vocational) III – Year Examination, March / April 2014

**Subject : Industrial Chemistry
Paper – III**

Time : 3 hours

Max. Marks : 100

Section – A (4 x 15 = 60 Marks)

(Essay Answer Type)

Note : Answer any two bits from each question. Each bit carries 7 ½ marks.

- 1 a) Write the manufacture of Nylon – 6 and Nylon – 66.
b) Explain free radical polymerization with example.
c) Explain the differences between the weight average and number average molecular weights of a polymer.
d) Write a note on resin manufacture and resin compounding.
- 2 a) Explain : i) Capital investment ii) Production scheduling
b) Define i) Depreciation ii) P/V ratio iii) Tax policy
c) Explain “Time value of Money – Equivalence”.
d) Discuss the salient features of material management with respect to any chemical industry.
- 3 a) Explain about i) Inventory control ii) Directing and control
b) Explain i) Planning ii) Organising
c) Describe the important components of scientific management in Industry.
d) Describe briefly about the concepts of welfare of employees.
- 4 a) Write a short note on “Margin of Safety”.
b) Describe capital formation and pricing policy.
c) What are thermosetting and thermoplastics? List out the difference between them.
d) What are elastomers? Write difference between natural and synthetic rubber, giving examples.

Section – B (8 x 5 = 40 Marks)

(Short Answer Type)

- 5 a) Explain tacticity of polymers.

OR

 - b) Explain condensation polymerization with a suitable example.
- 6 a) Write the structures of Buna-S and Buna-N rubbers.

OR

- b) What do you mean by i) Acetate rayon ii) Viscose rayon
- 7 a) Mention two uses of i) Polyethylene ii) Polypropylene

OR

- b) How can we prepare the artificial silk by cupra ammonium process?
- 8 a) Write a short note on profitability criteria.

OR

- b) What are the various elements of cost accounting?
- 9 a) Write a note on management of human resource.

OR

- b) Write a note on decision making.
- 10 a) Write a note on production scheduling.

OR

- b) Write the variation of cost with capacity.
- 11 a) How is safety important in an industry? What are the most common safety considerations taken in the industry?

OR

- b) What are the factors governing the location of Industry?
- 12 a) How are phenol formaldehyde and urea formaldehyde resins prepared?

OR

- b) Write different types of polymerization reactions with examples.
