

Total No. of Questions—8]

[Total No. of Printed Pages—3

BE-I/11(A)

236189

(New Course)

ENGINEERING CHEMISTRY—COURSE NO. BSC-103

Time Allowed—3 Hours

Maximum Marks—100

Note:— Attempt any five questions in all, selecting at least two questions from each section. All questions carry equal marks.

Section-A

1 (a) Write short notes on :

(i) Enantiomerism

(ii) Diastereoisomerism

5,5

(b) Write the structure and action of the following drugs :

(i) Paracetamol

(ii) Luminal

(iii) Pencillin

(iv) Morphine

10

2 (a) What is Latex ? How are Crepe and Gutta percha rubber isolated from Latex ?

10

2 (b) What are the properties and functions of different constituents of paint ?

10

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3. (a) Differentiate between thermoplastic and thermosetting plastics, giving examples. . 10

(b) Write notes on :

(i) Importance of plastics

(ii) Requisites of a good paint 5,5

4. (a) Explain the principle and applications of IR spectroscopy in organic chemistry. 12

(b) Explain why a uv spectrum consists of bands and not peaks.

8

Section-B

5. (a) What are the broad categories of water pollutants ? Explain.

12

(b) Discuss the adverse effects of air pollutants on humans, plants and buildings.

8

6. (a) Describe briefly the various segments of environment.

12

(b) What are the sources of Lead in atmosphere ? Why is Pb^{2+} highly toxic ?

8

7. (a) State different varieties of brasses. Give their engineering properties and applications. 10

(b) Describe with a neat diagram, how portland cement is manufactured by wet process. 10

8. ✓ (a) How is hard water softened by ion-exchange process ? Explain. 10

(b) Write short notes on :

✓ (i) Scale and Sludge

(ii) Priming and Foaming 3,3

✓ (c) Write four points of comparison between the zeolite process and the lime-soda process. 4