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**RM-7021**

**B. E. - III (Sem. VI) (Chemical) Examination**

**May / June - 2010**

**Gen. Chemical Tech. - II**

Time : 3 Hours]

[Total Marks : 100

**Instructions :**

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<b>B. E. - 3 (Sem. 6)</b>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<b>Gen. Chemical Tech. - 2</b>	<input type="text"/>
Subject Code No. : <input type="text"/> 7 <input type="text"/> 0 <input type="text"/> 2 <input type="text"/> 1	Section No. (1, 2,.....): <input type="text"/> 1&2
Student's Signature	

- (2) Figures to the right indicate full marks.
- (3) Draw neat labelled flow diagrams whenever required.
- (4) Answer each section **separately**.

**SECTION - I**

- 1 (a) Answer the following : 10  
(Que. 1-2, 1 mark each, Que 3-6 2 marks each)
  - (i) Basic Chemistry of PVC.
  - (ii) Define Petrochemicals
  - (iii) Important physical properties of Rubber Products.
  - (iv) Additives used in gasoline to enhance octane number.
  - (v) Enlist methods for production of LPG.
  - (vi) Enlist methods of treatment of Lubes.
- (b) Discuss raw materials for petrochemicals. 5
- (c) Explain solution polymerization and emulsion polymerization. 5

**2** Attempt any **two** : **7×2=14**

- (i) Explain Ethanolamine treatment.
- (ii) Discuss ASTM distillation test method with characteristic curve.
- (iii) Discuss furfural extraction process for lube oils.

**3** Attempt any **two** : **8×2=16**

- (i) Discuss viscous rayon production.
- (ii) Explain manufacturing of SBR with neat flow diagram.
- (iii) Chemicals from C<sub>3</sub> compounds.

## SECTION - II

**4** (a) Answer the following : **10**

- (i) Write the complete chemical reaction for ascorbic acid, Vitamin C
  - (ii) Give the uses of
    - (a) Disperse dyes
    - (b) Salicylic acid
  - (iii) Write the complete chemical reaction for Aspirin.
  - (iv) Define chromophores with examples.
  - (v) Write structural formula :
    - (a) Diazepam
    - (b) Barbitol
- (b) Discuss the manufacture of anilin from crude nitrobenzene with chemical reaction and neat-clean flow diagram. **8**

- 5** Attempt any **two** : **16**
- (a) What is antibiotics? Discuss manufacture of penicillin with neat-clean flow sheet.
  - (b) Describe in detail manufacture of H-acid reaction and neat-clean flow diagram.
  - (c) What is bio-synthesis? Compare bio-synthesis and chemical synthesis of insecticide.
- 6** Attempt any **two** : **16**
- (a) What is dye? Give detail classification of dye based on their application giving example.
  - (b) Discuss the manufacture of Reboflavin and Thiamin hydrochloride.
  - (c) Discuss growth of micro-organisms in an aerobic batch fermentor.
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