



SF-7021

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

May / June - 2011

General Chemical Technology : Paper - II

Time : Hours]

[Total Marks :

Instructions :

(1)

| | |
|---|----------------------|
| नीचे दर्शायेव 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. E. - III (Sem - VI) (Chemical) | <input type="text"/> |
| Name of the Subject : | <input type="text"/> |
| ☛ General Chemical Technology : Paper - II | <input type="text"/> |
| ☛ Subject Code No. : <input type="text"/> 7 <input type="text"/> 0 <input type="text"/> 2 <input type="text"/> 1 | <input type="text"/> |
| ☛ Section No. (1, 2,.....): Nil | <input type="text"/> |
| | Student's Signature |

(2) Attempt all the questions.

(3) Draw neat-clean labelled diagram wherever necessary.

(4) Figures to the right indicate full marks.

1 (a) Answer the following :

10

(1) What are the reasons for hike in price of petroleum and its products ?

(2) Define petrochemicals.

(3) State percentage of hydrogen and carbon in hydrocarbon.

(4) Name six grades of LPG.

(5) What is salty crude ?

(6) Define octane number.

(7) Draw structure of Nylon - 6 and Nylon - 66.

(8) What is asphalt ?

(9) Name additives used in gasoline to prevent ice formation.

(10) Flash point of marketable kerosene is _____.

(b) Discuss ASTM distillation test method with

8

characteristics curve.

- 2** Attempt any **two** : **16**
- (a) Discuss present scenario of Indian petroleum industry.
 - (b) List general methods for dehydration and desalting of crudes. Explain electric desalting of crude in brief.
 - (c) What is cracking ? Discuss in detail fluid catalytic cracking.
- 3** Attempt any **two** : **16**
- (a) Explain formaldehyde manufacture from methanol. Discuss major engineering problems.
 - (b) Discuss basic chemistry of viscous rayon process.
 - (c) Discuss in brief suspension polymerization. Explain catalytic reforming in detail.
- 4** (a) Answer the following : **10**
- (1) Give the uses of salicylic acid and vat dyes.
 - (2) Write structural formula :
 - (i) Hexyl resorcinol
 - (ii) Codeine.
 - (3) Discuss the structure of dye.
 - (4) Define with example :
 - (i) Analytic drugs
 - (ii) Antibiotics.
 - (5) Write down complete chemical reaction for thiamine hydrochloride.
- (b) What is dye ? Give detail classification on their application giving example. **8**
- 5** Attempt any **two** : **16**
- (a) Discuss in detail production of insulin.
 - (b) Discuss growth of micro-organism in continuous aerobic fermentor.
 - (c) Discuss the manufacture process of chrome blue black- U dye with chemical reaction and neat-clean flow diagram.

6 Attempt any **two** :

16

- (a) What is fermentation ? Discuss various parameters affecting fermentation.
 - (b) Describe manufacture of indanthrene yellow dye.
 - (c) Discuss the production of technical salicylic acid with chemical reaction and neat-clean flow sheet.
-