



**DQ-003-1016027**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) (CBCS) (W.E.F. 2016) Examination**

**April – 2022**

**BS-IC-602 : Petrochemicals & Industrial  
Management**

**Faculty Code : 003**

**Subject Code : 1016027**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :**
- (1) Question paper carries 5 questions.
  - (2) All the questions are compulsory.
  - (3) All questions carry 14 marks each.
  - (4) Figures to the right indicate maximum marks.
  - (5) Draw labeled diagram wherever necessary.
  - (6) Assume suitable data.

1 (A) Answer the following questions : 4

- (1) Write structure of Ethylene.
- (2) What is naphtha?
- (3)  $Pd + 2 CuCl_2 \rightarrow$  \_\_\_\_\_
- (4) Give structure of ethylene glycol.

(B) Answer in brief : (Any **One** out of Two) 2

- (1) Write various catalysts used for various reforming processes with advantages.
- (2) Write a brief note on ethylene oxide.

(C) Answer in detail : (Any **One** out of Two) 3

- (1) Give a note on acetic acid manufacturing process.
- (2) Explain manufacturing of ethanol from ethylene.

- (D) Write a note on : (Any **One** out of Two) 5
- (1) Write production of Methane from naphtha cracking.
  - (2) Explain manufacturing of ethylene oxide with diagram.
- 2 (A) Answer the following questions : 4
- (1) Give structure of iso-butylene.
  - (2) Give structure of acrolein.
  - (3) IPA has how many methyl group in its structure?
  - (4) Butene has \_\_\_\_\_ number of double bond/s.
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Enlist various chemicals obtained from C3 fraction of hydrocarbon.
  - (2) Enlist various catalysts used in processing of C3 hydrocarbons.
- (C) Answer in detail : (Any **One** out of Two) 3
- (1) Write applications of isopropyl alcohol.
  - (2) Write applications of acrolein.
- (D) Write a note on : (Any **One** out of Two) 5
- (1) Write a note on separation of C4 fraction.
  - (2) Explain manufacturing of glycerol.
- 3 (A) Answer the following questions : 4
- (1) Dehydrogenation of cyclohexane gives \_\_\_\_\_
  - (2) Give structure of beta-naphthol.
  - (3) Write structure of dimethyl-terephthalate
  - (4) "Bisphenol-A can be synthesized from Acetone" True or false?
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Write various catalysts used for processing of C4 chemicals.
  - (2) Give reaction scheme for manufacturing of phthalic anhydride.

- (C) Answer in detail : (Any **One** out of Two) **3**
- (1) Give applications and reaction scheme for manufacturing of 2,4-toluene diisocyanate.
  - (2) Write applications of C4 chemicals.
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Explain manufacturing of terephthalic acid with diagram.
  - (2) Write a detailed note on caprolactam manufacturing process.
- 4 (A) Answer the following questions : **4**
- (1) Define: Management
  - (2) Enlist levels of Maslow's hierarchy of needs.
  - (3) Explain different managerial skills at all three level
  - (4) Enlist levels of management
- (B) Answer in brief : (Any **One** out of Two) **2**
- (1) Explain directing function of management
  - (2) Explain PEST analysis in detail
- (C) Answer in detail : (Any **One** out of Two) **3**
- (1) Write a note on inventory management with graph, terminologies and importance of inventory.
  - (2) Explain human resources management in detail with its importance and functions
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Write a detailed note on planning with its types, steps and examples
  - (2) Explain functions of management in detail with diagram

- 5 (A) Answer the following questions : 4
- (1) Write examples of consumer products with different brand names.
  - (2) Enlist advantages of establishing industries in India
  - (3) Enlist direct cost associated with production.
  - (4) Write any three good and bad areas for petroleum refinery plant location in India.
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Explain advantages of establishing industries in India
  - (2) Write examples of visions of industries.
- (C) Answer in detail : (Any **One** out of Two) 3
- (1) Explain factors affecting plant location.
  - (2) Explain factors affecting plant layout.
- (D) Write a note on : (Any **One** out of Two) 5
- (1) Write process layout of any chemical manufacturing company.
  - (2) Explain cost accounting and its components in detail.
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