



DQ-003-2016027

Seat No. _____

B. Sc. (Sem. VI) (CBCS) (W.E.F. 2019) Examination

April – 2022

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

Faculty Code : 003

Subject Code : 2016027

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) For decreasing _____ hydrogenation processes can be used. (saturation/unsaturation)
- (2) What is called pyrolysis?
- (3) "Naphtha is hydrocarbon" True or False?
- (4) Draw structure of ethylene.

(B) Answer in brief : (Any **one** out of two) 2

- (1) Write a brief introduction of ethylene glycol.
- (2) Write manufacturing of ethanol from hydrocarbon.

(C) Answer in detail : (Any **one** out of two) 3

- (1) Give a short note on vinyl acetate monomer.
- (2) Explain production of HCN with diagram.

- (D) Write a note on : (Any **one** out of two) **5**
- (1) Explain manufacturing of ethanol from ethylene.
 - (2) Explain detailed note on acetylene manufacturing process.
- 2** (A) Answer the following questions : **4**
- (1) Write structure of glycerin.
 - (2) Write structure of propylene oxide.
 - (3) Write structure of acrolein.
 - (4) Which is nitrile functional group?
- (B) Answer in brief : (Any **one** out of two) **2**
- (1) Enlist various chemicals obtained from C3 fraction of hydrocarbon.
 - (2) Write reaction schemes to manufacture propylene oxide.
- (C) Answer in detail : (Any **one** out of two) **3**
- (1) Write a note on acrylic acid.
 - (2) Explain separation of C4 Fraction.
- (D) Write a note on : (Any **one** out of two) **5**
- (1) Write a note on manufacturing of methacrylic acid.
 - (2) Explain manufacturing of IPA.
- 3** (A) Answer the following questions : **4**
- (1) Write structure of terephthalic acid.
 - (2) Write structure of p-Xylene.
 - (3) "Addipic acid is mineral acid" True or False?
 - (4) Methane + Water gives Carbon monoxide + _____
- (B) Answer in brief : (Any **one** out of two) **2**
- (1) Write conversion of benzoic acid into caprolactam.
 - (2) Give a brief idea on applications and synthesis of terephthalic acid.

- (C) Answer in detail : (Any **one** out of two) **3**
- (1) Write a brief note on naphthalene.
 - (2) Explain manufacturing of toluene diisocyanates (TDI)
- (D) Write a note on : (Any **one** out of two) **5**
- (1) Explain production of toluene in detail.
 - (2) Write a note on BTX separation.
- 4 (A) Answer the following questions : **4**
- (1) Enlist steps of staffing function.
 - (2) Enlist levels of management
 - (3) Explain in brief conceptual skills of manager
 - (4) Explain in brief operational skills of manager
- (B) Answer in brief : (Any **one** out of two) **2**
- (1) Enlist types of inventories
 - (2) Write typical structure of business plan
- (C) Answer in detail : (Any **one** out of two) **3**
- (1) Draw graph of economic order quantity, write any one example of it.
 - (2) Explain in brief: Supplier assistance & Cost associated with inventory.
- (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) Write detailed note on decision making process and its importance.

- 5 (A) Answer the following questions : 4
- (1) Enlist factors affecting plant location.
 - (2) Give full form of PLC
 - (3) Enlist direct cost associated with production
 - (4) Enlist indirect cost associated with production
- (B) Answer in brief : (Any **one** out of two) 2
- (1) What companies can do if they predict decline stage for their product?
 - (2) What is time value of money?
- (C) Answer in detail : (Any **one** out of two) 3
- (1) Explain interest and investment costs associated with any one product
 - (2) Write importance of ports and transportation facilities in determining plant location
- (D) Write a note on : (Any **one** out of two) 5
- (1) Explain cost accounting and its components in detail.
 - (2) Write product development stages in detail with cost and challenges.
-