Seat No. _____

HA-003-2016027

B. Sc. (Sem. VI) (CBCS) Examination

April - 2023

Petrochemicals & Industrial Management : BS-IC-602

Faculty Code : 003
Subject Code : 2016027

Time : $2\frac{1}{2}$ / Total Marks : **70**

Instructions :

(1) Question paper carries total 5 questions.
(2) All the questions are compulsory & carry 14 marks each.
(3) Draw labeled diagram wherever necessary & Assume suitable data.

1 (A) Write answers : **4**

(1) What temperature is required to produce ethylene by cracking ?
(2) Methane can be converted into Methanol by ___ process.
(3) Write full form of ICI.
(4) Which product is available as intermediate product during production of acetic acid from ethylene ?

(B) Answer in brief (any One) : **2**

(1) Elaborate the word 'Petroleum'.
(2) Give applications of carbon disulfide.

(C) Answer in detail (any One) : **3**

(1) Give chemical reaction for manufacturing of vinyl acetate monomer.
(2) Describe manufacturing of ethylene glycol with neat diagram.

(D) Write a note on (any One) : **5**

(1) Discuss manufacturing of hydrogen cyanide with neat diagram.
(2) Write a detailed note on production of acetylene with diagram.

2 (A) Write answers : **4**

(1) Which catalyst is used to convert allyl alcohol to glycerol ?

(2) In production of cumene, mole ratio of benzene to olefin stream maintained is ____.

(3) Draw the correct chemical formula of acrylonitrile.

(4) Which catalyst is used to produce maleic anhydride from butane ?

(B) Answer in brief (any One) : **2**

(1) Give properties of propylene oxide.

(2) Write properties of butadiene.

(C) Answer in detail (any One) : **3**

(1) Describe manufacturing of methacrylic acid with diagram.

(2) Enlist various C3 and C4 chemicals used as petrochemicals.

(D) Write a note on (any One) : **5**

(1) Explain production of isopropanol with neat diagram.

(2) Discuss manufacturing of styrene with diagram.

3 (A) Write answers : **4**

(1) Give full form of LABS.

(2) Which carbon fraction range is available in kerosene ?

(3) Bisphenol is monomer for the production of ___.

(4) α-naphthol is used as insecticide named ___.

(B) Answer in brief (any One) : **2**

(1) Write chemical reaction for manufacturing of adipic acid.

(2) Give properties of toluene disocyanate.

(C) Answer in detail (any One) : **3**

(1) Draw only diagram of naphtaha steam reforming process.

(2) Describe BTX separation with diagram.

(D) Write a note on (any One) : **5**

(1) Discuss SNG production via partial oxidation method with diagram.

(2) Write a detailed note on caprolactum with suitable diagram.

4 (A) Write answers : **4**

(1) Need of conceptual skills are high in ____ level management.

(2) ____ is a component of functions of management.

(3) Strategic planning is done by ____.

(4) What is P and E is PEST Analysis ?

(B) Answer in brief (any One) : **2**

(1) Enlist levels of management.

(2) Enlist levels of Maslow's hierarchy of needs.

(C) Answer in detail (any One) : **3**

(1) Explain SWOC analysis in detail.

(2) Explain importance of planning in detail.

(D) Write a note on (any One) : **5**

(1) Write detailed note on decision making process and its importance.

(2) Write a note on inventory management with graph, terminologies and importance of inventory.

5 (A) Write answers : **4**

(1) Lead time is time between _____ & arrival of new stock.

(2) Total cost of inventory in EOQ = _____ + _____

(3) Write the full form of EOQ.

(4) _____ is not the proper way to raise capital.

(B) Answer in brief (any One) : **2**

(1) Explain interest and investment costs associated with any one product.

(2) How PEST analysis helps in determination of plant location ?

(C) Answer in detail (any One) : **3**

(1) Write importance of ports and transportation facilities in determining plant location.

(2) Write examples of consumer products with different brand names.

(D) Write a note on (any One) : **5**

(1) Explain capital formation in detail.

(2) Explain product life cycle in detail with any one example and graph.
