



24900146

Name:.....

First Semester

(2024 ADMISSION ONWARDS)

Maximum Marks: 50

Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability.

[Learning Domain][CO No(s)]

Multiple Choice Questions

Each question carries one mark.

- | | | | |
|---|---|-------------------------------|-----------|
| 1 | Smaller the grain size, corrosion is | [U] | [1] |
| | a) Greater | b) Lower | |
| | c) Constant | d) Doesn't affected | |
| 2 | How can the selectivity of a chemical reaction be improved? | [An] | [1, 2] |
| | a) By increasing the temperature | b) By decreasing the pressure | |
| | c) By using a more selective catalyst | d) All of the above | |
| 3 | Which of the following compounds is commonly used as an antiknock additive in gasoline? | [K] | [2, 4] |
| | a) Tetra ethyl lead | b) Benzene | |
| | c) Hexane | d) Cetane | |
| 4 | Which form of alumina is widely used as a catalyst support due to its high | [A] | [1, 2, 3] |

a) Delta alumina b) Alpha alumina
c) Beta alumina d) Gamma alumina

- $$(10 \times 1 = 10)$$

Short Answer Type Questions
Answer any four questions.
Each question carries three marks

- 2

chemicals?

- 14 What is the primary chemical structure of cellulose? [K] [1, 2, 4]
- 15 What types of nanomaterials can be synthesized using CVD? Provide two examples. [U] [5]
- 16 How would you apply pollution control technologies to reduce emissions in a chemical manufacturing plant? [A] [1, 2]

(4 × 3 = 12)

Part C

Short Essay Type Questions

Answer any four questions.

Each question carries seven marks

- 17 Evaluate the impact of isomerization on fuel quality and engine performance. [An] [2, 4]
- 18 "Analyze how fluctuations in raw material prices and energy costs affect the economics of a chemical process. What strategies can be used to mitigate these impacts?" [An] [1, 2]
- 19 Evaluate the diverse applications of mica in modern industries and assess how its properties influence these uses. [U] [1, 2, 3]
- 20 Explain the Kroll process for titanium extraction. [U] [1, 3]
- 21 Explain the importance of pollution control measures in industrial processes and how they contribute to sustainable development. [U] [1, 2]
- 22 Classify nanomaterials based on their dimensions and by citing suitable examples. [U] [5]

(4 × 7 = 28)

END OF THE QUESTION PAPER
