



Engineering Chemistry - I (101102)

P. Pages : 2

Time : Three Hours

Max. Marks :80

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** sub - questions from each unit.
5. Assume suitable data wherever necessary and state the assumptions made.
6. Diagrams / sketches should be given wherever necessary.
7. Use of drawing instruments and non programmable calculators is permitted.
8. Figures to the right indicate full marks.

UNIT - I

1. a) Explain Hot Lime - soda process with suitable diagram. 8
b) Describe reverse osmosis method with suitable sketch. 8
c) i) Give advantages and disadvantages of Zeolite process. 4
ii) Write in short caustic embrittlement. 4

UNIT - II

2. a) Differentiate between Addition and condensation polymerization. 8
b) Define plastic. Explain different constituent of plastic with their function. 8
c) i) Give preparation, properties and uses of Teflon. 4
ii) What are the drawbacks of natural rubber. 4

UNIT - III

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| 3. | a) | Explain classification of cement with their properties and uses. | 8 |
| | b) | Explain Dry process of cement with flowsheet diagram. | 8 |
| | c) | i) Explain setting and hardening of cement. | 4 |
| | | ii) What are the raw materials used in the manufacture of cement. | 4 |

UNIT - IV

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|----|----|--|---|
| 4. | a) | Explain mechanical properties of ceramics material. | 8 |
| | b) | Explain Drying and Firing of ceramics wave. | 8 |
| | c) | i) Draw the flow sheet diagram of manufacturing of ceramics. | 4 |
| | | ii) Explain basic raw materials for preparation of ceramics. | 4 |

UNIT - V

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|----|----|--|---|
| 5. | a) | Explain the purpose of making alloys. | 8 |
| | b) | Give composition, properties and uses of. | 8 |
| | | i) Gun metal | |
| | | ii) Dutch metal. | |
| | c) | Define Alloy. Explain fusion method of preparation of alloy. | 8 |
