

Programme: 1 year Engineering

Course: Engineering chemistry - II

Reg. No.

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Model Examination – March 2020

(Time: Three Hours)
(Maximum Marks: 75)

- N.B.**
1. Answer any five questions in each of PART-A and PART-B.
 2. Answer any two divisions of each question in PART-C.
 3. Each question carries 2 (two) marks in PART-A, 3 (three) marks in PART-B and 5 (five) marks for each division in PART-C.

PART – A

(5 x 2 = 10 Marks)

1. Mention the names of pollutants responsible for depletion of ozone layer.
2. What are industrial effluents?
3. Give the composition of producer gas.
4. What are the types of liquid propellants?
5. Give two examples for synthetic abrasives.
6. What is electrolysis? Give an example.
7. Define- solar cell.
8. What is wet corrosion?

PART – B

(5 x 3 = 15 Marks)

9. What is the importance of ozone layer?
10. What is recycling? Give an example.
11. Give the composition and uses of CNG?
12. What are thermo plastics? Give an example.
13. What are the applications of composite materials?
14. What is secondary battery? Give an example.
15. Write a short note on filtration.
16. How is oil varnish prepared?

PART - C

(5 x 2 x 5 = 50 Marks)

17. (a) What is global warming? List its harmful effects. 5
(b) Define eutrophication? Mention their harmful effects. 5
(c) What is green chemistry? What are the goals of green chemistry? 5
18. (a) What are the advantages of gaseous fuels? 5
(b) Describe the flue gas analysis by Orsat's apparatus. 5
(c) What are the characteristics of rocket propellants? 5
19. (a) What are bio materials? Mention its uses. 5
(b) Give the preparation, properties and uses of Carborundum. 5
(c) What are the advantages of composite materials? 5
20. (a) Describe the galvanic cell with cell reactions. 5
(b) Explain the construction and working of fuel cell with example. 5
(c) Explain column chromatography. 5
21. (a) Explain the differential aeration theory with suitable examples. 5
(b) Explain cathodic protection method of prevention of corrosion. 5
(c) What are the components present in the paint? Explain their functions. 5
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PART – A

(5 x 2 = 10 Marks)

1. What is green house effect?
2. What is sewerage?
3. What is producer gas?
4. What is cracking process?
5. Define - hardness of abrasive in Moh's scale?
6. What is flow battery?
7. What is tinning?
8. What are the fire-retardant paints?

PART – B

(5 x 3 = 15 Marks)

9. How will you control of air pollution?
10. Write notes on incineration method for solid waste disposal.
11. What are the advantages of gaseous fuels?
12. What is vulcanization process?
13. Give any three applications of composite materials.
14. Write a note on solar cell.
15. Write a short note on chromatography.
16. What are the differences between varnish and paint?

PART - C

(5 x 2 x 5 = 50 Marks)

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|-----|---|---|
| 17. | (a) What are the harmful effects of some important air pollutants? | 5 |
| | (b) What is eutrophication? Mention their harmful effects. | 5 |
| | (c) List out the goals of green chemistry. | 5 |
| 18. | (a) Explain the fractional distillation of petroleum. | 5 |
| | (b) Explain the flue gas analysis by Orsat's apparatus. | 5 |
| | (c) Mention the characteristics of rocket propellants. | 5 |
| 19. | (a) Write a note on compounding of rubber. | 5 |
| | (b) Give the preparation, properties and uses of Boron carbide. | 5 |
| | (c) What are the advantages of composite materials? | 5 |
| 20. | (a) Explain Daniel cell with neat diagram. | 5 |
| | (b) Explain the construction, working and uses of lead-acid storage battery. | 5 |
| | (c) Write a note on chemical separation technique of fractional distillation. | 5 |
| 21. | (a) Explain the differential aeration theory of corrosion. | 5 |
| | (b) Explain cathodic protection method of prevention of corrosion. | 5 |
| | (c) Write notes on components of paints. | 5 |
