

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
 2. Answer any ONE question from each unit in PART-B (3 marks each)
 3. Answer any ONE question from each unit in PART-C (10 marks each)
 4. The question paper contains TWO Pages

PART-A (1x10=10)

1. Define pollution.
2. Write any two harmful effects of copper.
3. What are Rocket propellant?
4. Give any two uses of alumina bricks.
5. What is an alloy? Give one example.
6. What is the hardness of diamond?
7. What is grease?
8. Define adhesives.
9. Give the use of Bakelite.
10. What are composite materials?

PART-B (3x5=15)

UNIT-I

11. How is air pollution controlled?
12. Define recycling. Write any two advantages of recycling.

UNIT-II

13. How are fuels classified? Give examples.
14. Write any three requirements of good refractories.

UNIT-III

15. How is metal powder prepared by reduction method?
16. Give the composition and uses of Nichrome.

UNIT-IV

17. What is salt glazing?
18. Give the uses of PVC and phenol formaldehyde.

UNIT-V

19. Define polymerization. What are types of polymerization?
20. Define vulcanization of rubber. What is the purpose of vulcanization?

PART-C (10x5=50)

UNIT-I

21. a) What is global warming? What are its harmful effects?
b) What are industrial effluents? Write their harmful effects.
22. a) What are the problems caused by solid waste?
b) Define green chemistry. What are the goals of green chemistry?

UNIT-II

23. a) List out relative advantages of solid, liquid and gaseous fuel.
b) Explain the preparation of producer gas with diagram.
24. a) Explain Flue gas analysis using orsat apparatus.
b) List the essential properties of a good propellant.

UNIT-III

25. a) How is Tungsten extract from its ore?
b) Define powder metallurgy. Write applications of powder metallurgy.
26. a) Give the name, composition and uses of copper alloy.
b) Explain the manufacture, properties and uses of carborundum.

UNIT-IV

27. a) Give the manufacture of Portland cement.
b) What is lubricant? How are they classified? Give examples.
28. a) Give the manufacture of white pottery.
b) Mention the requirement of good adhesives.

UNIT-V

29. a) Tabulate the difference between thermoplastics and thermoset plastics.
b) Explain the compounding of rubber.
30. a) What are reinforced plastics? Write any three applications of it.
b) What are the advantage of composite materials over metals and polymers?
