



Date: 09-04-2019
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART -A

Answer ALL the questions

(10 x 2 =20 marks)

1. Define Integrated pest management
2. Mention any two non-renewable sources of energy
3. What is NPK?
4. Zeolites are used in water treatment. Explain
5. Give the composition of Natural gas and biogas
6. What is the composition of Portland cement?
7. What is total hardness of water?
8. Give the consequences of acid rain
9. What is Plaster of Paris?
10. Give the structure of DDT

PART –B

Answer any EIGHT questions

(8 x 5 = 40 marks)

11. Define calorific value. Explain higher & lower calorific value.
12. Give the uses of i. tetraethyl lead ii. ETBE and MTBE
13. What are benefits of using biofertilizers?
14. List the uses of a) Urea b) Aspartame
15. Mention the steps involved in the refining and grading of sugar
16. Describe the various stages involved in a waste water treatment plant
17. Define the following terms i. octane Number ii. Total organic carbon
18. Draw the structure of EDTA and outline the principle involved in the estimation of hardness of water using EDTA.
19. Match the following

| | |
|------------|-----------------------|
| A | B |
| Alkalinity | Salts of Ca&Mg |
| BOD | Biological impurities |
| Hardness | OH ⁻ |
| TDS | Salts of Na,K ,Ca,Mg |
20. What is the difference between a perfume and cologne?
21. Explain the harmful effects of lead and mercury poisoning
22. Distinguish between thermoplastic and thermosetting plastic

PART – C

Answer any FOUR questions

(4 x 10=40 marks)

23. Discuss the industrial importance of the following materials i. Abrasives ii. Pharmaceuticals
iii. Dyes iv) Plastics

24. Write short notes on the following

i. Photochemical smog and its adverse effects.

ii. CFC's – consequences and alternatives **(5+5)**

25. a) How Metallurgical coke is manufactured? Explain the role of coal as a solid fuel

b) Explain the following (i) Compressed natural gas (CNG) (ii) Liquid petroleum gas. (LPG)

(5+5)

26. a) How is triple phosphate of lime obtained? How is it better than superphosphate

b) Describe the role of any two micronutrients in the growth of plants

(5+5)

27. a) What are the measures to be taken to control the emission of NO_x and SO_x .

b) Discuss the importance of BIS certification in the industry

28. Discuss the various steps involved in the treatment of municipal and domestic waste water

