

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – CHEMISTRY

SIXTH SEMESTER – APRIL 2010

CH 6611/CH 6005 - INDUSTRIAL CHEMISTRY

Date & Time: 22/04/2010 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

PART – A

Answer **ALL** Questions

(10 x 2 = 20 marks)

1. What are fuels? How are they classified?
2. Mention any four fertilizers used to improve agriculture crops.
3. Define calorific value of fuels.
4. What are the uses of natural gas?
5. Distinguish between super phosphate and triple superphosphate. Write their formula.
6. What do you mean by Global warming?
7. What are petro chemicals? Give examples.
8. What are zeolites?
9. How is Bordeaux mixture prepared?
10. What are the consequences of acid rain?

PART – B

Answer any **EIGHT** questions

(8 x 5 = 40 marks)

11. a) How is tetra ethyl lead prepared? (2)
b) Mention the properties and uses of different types of coal. (3)
12. Explain the production, composition and the uses of gobar gas. (3+1+1=5)
13. a) What are micronutrients? What is their role? Give examples. (2)
b) Explain double sulphitation process. (3)
14. a) What are fungicides? Give example. (1)
b) Discuss in details the environmental effect of pesticides. What is their role in wild life. (3+1=4)
15. Explain one method to determine the permanent hardness of water. (5)
16. Explain reverse osmosis. (5)
17. What is the function of ozone present in the troposphere? Explain clearly how oxides of nitrogen and fluorocarbons tend to deplete the ozone layer. What is the effect of this depletion?

(P.T.O.)

18. Give an account on the toxic effects of mercury and lead on enzymes. (2x2.5=5)
19. Give the approximate composition of portland cement. Give details of its manufacture.
20. Write a note on the following a) flint glass b) safety glass.
21. What are thermoplastics? How do they differ from thermosetting plastics?
22. What is BHC? How is it manufactured? Indicate its uses. (1+3+1=5)

PART – C

Answer any **FOUR** questions

(4 x 10 = 40 marks)

23. a) Write a note on the production and uses of ETBE & MTBE (2x2 $\frac{1}{2}$ =5)
b) Give an account on the refining of petroleum. (5)
24. Discuss in detail the primary, secondary and tertiary processes for depollution of the domestic waste water. (10)
25. Write a note on the manufacture and uses of the following insecticides.
a) DDT b) Pyrethrin c) Biopesticides (3+3+4)
26. How is ethanol manufactured from molasses by fermentation? (10)
27. a) Explain ISI specification. (3)
b) What is the purpose and procedures followed for getting patent right? (3+4)
28. Write a note on any two of the following:
a) Lubricants
b) Explosives
c) Abrasives
d) Ion exchange resins. (5+5)

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