

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – CHEMISTRY**

**SIXTH SEMESTER – NOVEMBER 2015**

**CH 6611/CH 6605 - INDUSTRIAL CHEMISTRY**

Date : 25/09/2015

Dept. No.

Max. : 100 Marks

Time : 09:00-12:00

**PART – A**

Answer ALL the questions:

(10 x 2 = 20 marks)

1. State the principle of cracking of hydrocarbons.
2. Define Calorific value of fuel.
3. How is Bordeaux mixture prepared?
4. What are octane numbers?
5. Explain the anti knocking agents citing some examples.
6. Write about the classification of glasses.
7. In which unit is hardness expressed? Distinguish between temporary and permanent hardness.
8. What is meant by Non-renewable source of energy?
9. What is BOD?
10. Mention two applications of petrochemicals.

**PART – B**

Answer any EIGHT questions:

(8 x 5 = 40 marks)

- 11.a) What is meant by the term 'Octane number'?
- b) Explain the production and uses of tetraethyl lead.
12. How are the herbicides 2, 4 – D and 2, 4, 5 – T manufactured?
13. How is ethanol manufactured from molasses?
14. Explain the synthesis of saccharin. How is it used as sugar substitute?
15. How is fluidized bed catalytic cracking carried out?
16. How is total hardness estimated using EDTA?
17. Explain ion exchange process
18. Mention any five methods used for controlling air pollution.
19. Explain the biological effects of the toxic elements (a) lead & b) mercury.
20. What are acid refractories? Explain.
21. Write about the classification and application of each class of dyes.
22. Mention briefly on the infernal standards for water and air quality and their regulations.

**PART - C**

Answer any FOUR questions:

(4 x 10 = 40 marks)

23. Explain a) Zeolite process    b) photochemical oxidants.
24. Write about the production, composition and uses of natural gas and gobar gas.
25. a) Explain the biological action of cyanides.  
b) What is enhanced green house effect?
26. What are the different types of coal? Explain the properties and uses of each class.
27. How are DDT and BHC manufactures? Mention their uses.
28. Write a note on the following:  
a) Rubber industry    b) Ceramic industry    c) Bio pesticides.

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