

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – CHEMISTRY

SIXTH SEMESTER – NOVEMBER 2016

CH 6617 – INDUSTRIAL CHEMISTRY

Date: 16-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART A

ANSWER ALL QUESTIONS

(10 x 2 = 20 Marks)

1. Classify the following as primary or secondary fuel. i) Gasoline ii) Diesel iii) Producer gas
iv) Charcoal.
2. Mention any four primary solid fuels.
3. What are the advantages of urea over other Nitrogen containing fertilisers?
4. Mention any two inorganic insecticides.
5. Distinguish temporary hardness from permanent hardness.
6. What is mitigation?
7. What do you mean by global warming?
8. Expand the abbreviations i) SPM ii) CFC.
9. What is Quartz? Mention the structural formula of Quartz.
10. What is Teflon? Mention the advantages of Teflon.

PART B

ANSWER ANY EIGHT QUESTIONS

(8 x 5 = 40 Marks)

11. List all the renewable and non-renewable energy sources available for mankind.
12. Match the following:

a) C ₂₀ -C ₃₀	-	Petroleum gas
b) C ₁₈ -C ₁₂	-	Paraffin wax
c) C ₁₁ -C ₁₄	-	Asphalt
d) C ₁ -C ₄	-	Vaselene
e) < C ₃₀	-	Kerosene.
13. What are the ill effects of fertilisers?
14. Classify the following as insecticides or Herbicides or Fungicides. i) Carbamates ii)
Dithiocarbamates iii) Nitrophenols iv) Organophosphates v) Dipyridyl
15. Draw the structure of i) DDT ii) gammaxene iii) Methoxychlor iv) 2,4-D.
16. a) What parameters are the necessary criteria for potable water?
b) Distinguish Oligotrophic from Eutrophic water.
17. What are the common water pollutants present in domestic sewage water? Mention their effects.

18. Explain in brief about the determination of Hardness of water by complexometric titration.
19. Mention the ill effects of mercury and lead poisoning.
20. Explain the following terms. i) Photochemical smog ii) Haze ii) Acid rain.
21. What are the constituents of glass? How are they classified based on their colour and composition?
22. Mention the steps involved in the manufacture of Ethanol form Molasses.

PART C

ANSWER ANY FOUR QUESTIONS

(4 x 10 = 40 Marks)

23. a) What are the structural features of hydrocarbons and octane rating. (6)
b) Write a note on the classification of Coal based on the carbon content and calorific value. (4)
24. a) Write a note on the classification of organic pesticides. (5)
b) How do you classify fertilisers based on their properties and constituents? (5)
25. a) Write a note on direct fertilisers and stimulant fertilizers with suitable example (5)
b) Explain any one method adopted for destroying bacteria and harmful pathogens in water. (5)
26. Explain in brief about the waste water treatment by flocculation method.
27. What are the general aspects of mechanism of metal ion toxicity?
28. a) Explain the following terms i) thermoplastics ii) thermosetting plastics iii) Natural rubber. (6)
b) What is meant by setting of cement? (4)
