

SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech – Common to ALL Branches

Title of the paper: Applied Chemistry/ Applied Chemistry - I

Semester: I

Max. Marks: 80

Sub.Code: 6C0004/ET104/3ET104/4ET104/5ET104 Time: 3 Hours

Date: 08-12-2007

Session: FN

PART – A

(10 x 2 = 20)

Answer All the Questions

1. What is the principle of the lime soda process?
2. Define: degree of hardness of water.
3. What are thermosetting polymers? Give one example.
4. How is Bakelite obtained?
5. What are the harmful effects of ozone depletion?
6. What is green house effect?
7. What are the disadvantages of using excess of lime during manufacture of cement?
8. Mention two causes of thermal spalling.
9. What is a mono propellant? Give an example.
10. Give two important advantages of powder metallurgy.

PART – B

(5 x 12 = 60)

Answer All the Questions

11. (a) With a neat diagram, describe the reverse osmosis method of desalination of brackish water.
(b) Describe the treatment method for municipal water supply.
(or)
12. (a) How is hardness of water determined by EDTA method? Explain.
(b) Describe lime soda process of water softening.

13. (a) How is PVC prepared? State its important uses.
(b) Differentiate addition from condensation polymerization. Give atleast two examples.
- (or)
14. (a) Mention the ingredients used in compounding of plastics? What are their functions?
(b) With a neat diagram explain extrusion moulding.
15. (a) Explain the sources and harmful effect of any three air pollutants.
(b) What is COD? How is it determined?
- (or)
16. (a) Discuss the biochemical effects of Pb and Hg.
(b) How will you treat sewage using trickling filter method? Explain with a neat diagram.
17. (a) Discuss the chemistry of setting and hardening of Portland cement.
(b) What are special cements? Write an account on any two special cements.
- (or)
18. (a) What are refractories? Explain any three important properties of a good refractory material.
(b) Give an account on the classification refractories. Give examples.
19. (a) Define an explosive. How are explosives classified?
(b) Mention the important characteristics of a good propellant.
- (or)
20. (a) Discuss the following methods involved in powder metallurgy.
(i) Chemical reduction
(ii) Electrolytic process
(b) Explain the following terms
(i) Compacting
(ii) Sintering