

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: 14-05-2008

Session: AN

PART A

(10 x 2 = 20)

Answer all questions

1. Write about anion exchange resins and its uses.
2. What is known as sludges? How they are differ from scales?
3. What is meant by degree polymerization?
4. What is meant by compounding of plastics?
5. Write note on chemical species and particulates present in atmosphere.
6. What is green house effect?
7. Write the chemical composition of cement?
8. Define the term thermal spalling.
9. Write about plastic explosives.
10. Define the term sintering.

PART A

(5 x 12 = 60)

Answer all questions

11. How the hard water is softened by hot lime soda process?
Explain how it is more efficient than cold lime process?

(or)

12. Describe the internal treatment methods for boiler water.
13. (a) Describe the process injection moulding and extrusion moulding with neat diagrams. (8)

(b) What is number and weight average molecular weight?(4)

(or)

14. What is the difference between step growth and chain growth polymerization? Explain any one of the process with mechanism.

15. (a) Discuss the mechanism involved in the depletion of ozone.

(8)

(b) What is meant by COD and BOD?

(4)

(or)

16. Write the characteristic and bio chemical effects of CO, SO_x, Pb, Hg as Pollutants.

17. How the Portland cement is manufactured? Describe the process with necessary diagrams and equations.

(or)

18. (a) Give the properties and uses of various refractory bricks.

(b) Explain dimensional stability, electrical conductivity of a refractory material.

19. (a) How are rocket propellants are classified give some examples.

(b) What are the difference between liquid and solid propellants?

(or)

20. What is the need and advantages of powder metallurgy? Explain any two methods to prepare metal powders.