

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.



Question Paper Code: 4002

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – DECEMBER 2019

First Semester

Electrical and Electronics Engineering

U19CH101 – CHEMISTRY FOR ELECTRICAL AND ELECTRONICS
ENGINEERS

(Common to Electronics and Communication Engineering)

(Regulation 2019)

Time : Three Hours

Maximum : 100 Marks

Answer ALL the questions

PART – A

(10 x 2 = 20 Marks)

1. What do you mean by reverse osmosis treatment of water?
2. Mention the constituents of alkaline water.
3. What is graft copolymer? Give example.
4. What is the product obtained in the synthesis of PMMA?
5. Define nanowire and mention any two applications of nanowires.
6. State the principle of chemical vapour deposition method.
7. Mention any two differences between battery and fuel cell.
8. State the principle of a solar cell.
9. Define pilling bedworth rule.
10. Why a ship deteriorates rapidly under sea water?

PART – B

(5 x 16 = 80 Marks)

11. a) Discuss zeolite process and ion exchange process with suitable chemical reactions and neat diagrams.

(OR)

- b) If the industry is having hard water supply then what methods should be used to pretreat boiler feed water? Describe the methods in detail with suitable chemical reactions.
12. a) i. Differentiate between thermoplastic and thermosetting plastics with examples. (6)
ii. Discuss the synthesis of PET and Bakelite with properties and applications. (10)
- (OR)
- b) Discuss the free radical mechanism of addition polymerization with suitable examples.
13. a) i. Compare the laser ablation and electrodeposition technique with neat diagrams. (10)
ii. How nanotubes can be obtained from hydrothermal method of synthesis? Point out three applications of nanotubes. (6)
- (OR)
- b) Give a detailed account on molecules, nanoparticles and bulk materials based on their size with properties and applications.
14. a) i. Discuss in detail about the construction and working principle of Lithium ion battery with uses. (10)
ii. Write a note of Ni-cd battery. (6)
- (OR)
- b) Enumerate the construction and working principle of nuclear reactor power generator with neat diagram.
15. a) i. Confer in detail about prevention of corrosion by sacrificial anodic protection method. (8)
ii. Impressed current cathodic protection method with neat diagrams. (8)
- (OR)
- b) Discuss in detail about the factors influencing corrosion based on the nature of environment.
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