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 SUPPLEMENTARY EXAMINATIONS – FEB. / MAR. 2020
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. Mention the types of Hardness in water.
2. Define Demineralization.
3. Draw and define Block copolymer.
4. How the polymers are classified based on Tacticity?
5. Optical property of nano particles differs with bulk materials. Justify.
6. Mention any two applications of Carbon Nano tubes.
7. What is nuclear chain reactions?
8. State any two applications of H_2-O_2 fuel cell.
9. State Galvanic Corrosion with an example.
10. Mention the constituents of Paints.

PART – B

(5x 16 = 80 Marks)

11. a) Focus your attention on the Boilers troubles when impure water is fed into the boilers.

(OR)

b) Explain the reactions involved during demineralization and Zeolite process with a neat diagram.

12. a) i. Predict the Free radical mechanism of addition polymerization. (8)
ii. Distinguish between Thermoplastics and Thermoseting plastics. (8)

(OR)

b) i. How Bakelite and PET were prepared? Give its uses. (8)
ii. Compare HDPE and LDPE with examples. (8)

13. a) i. Discuss and Compare the top-down and bottom-up processes of the synthesis of Nano particles. (8)
ii. Enlighten the electromagnetic property of nano particles. (8)

(OR)

b) i. Confer in detail about the chemical vapour deposition and laser ablation method of synthesizing nano particles. (10)
ii. Point out any 6 applications of nano materials. (6)

14. a) i. Distinguish between nuclear fission and nuclear fusion. (8)
ii. Draw a neat diagram of light water nuclear power plant and explain its components with working principle. (8)

(OR)

b) i. Explain the construction and working principle of Ni-CAD batteries with uses. (8)
ii. Give a brief note on Solar Cells with applications. (8)

15. a) i. Discuss the types of differential aeration corrosion with suitable example. (8)
ii. Assess a suitable method and explain how it prevents the underground pipeline from corrosion. (8)

(OR)

b) i. Discuss the reaction mechanism of metal bar exposed to acidic and neutral environment. (10)
ii. Write a short note on the Electroplating technique with suitable diagram. (6)