



Regulation R20

Subjectcode:3B2AM

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech II Semester Supplementary Examinations, September 2023
Applied Chemistry

(ECE)

Maximum Marks: 70

Date:16.09.2023 Duration: 3 hours

- Note: 1.This question paper contains two parts A andB.
2. Part A is compulsory which carries 10 marks. Answer all questions in PartA.
3. Part B consists of 5 Units. Answer any one full question from eachunit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20Marks)

- 1 What is the magnetic nature of N₂ molecule?
- 2 What is doping?
- 3 What is meant by hardness of water
- 4 How temporary hardness can be removed from water?
- 5 Define single electrode potential and standard electrode potential
- 6 What is electrochemical series write any two applications
- 7 What is polarogram ?
- 8 What is Migration current ?
- 9 What are the applications of UV-visible Spectroscopy?
- 10 What is the finger print region of IR?.

Part-B

Answer All the following questions.

(5x10M=50Marks)

- 11 Write about postulates of MOT and Construct the molecular orbital energy level diagram of CO molecule? 10M

OR

- 12 Explain the effect of doping in semiconductors. 10M
- 13 Describe the estimation of hardness of water by EDTA method. 10M

OR

- 14 Explain the various steps involved in the treatment of potable water. 10M
- 15 Explain the construction, working and applications of Li-ion battery. 10M

OR

- 16 Derive Nernst equation. 10M
- 17 Explain about the Working of Droppin mercury electrode? 10M
- OR
- 18 Explain about types of Current in Polarography. 10M
- 19 Explain the principle of NMR Specroscopy with the application of MRI. 10M
- OR
- 20 Explain about the Transitions involved in Uv spectroscopy 10M