PVP 20

Code: 20BS1102

I B.Tech - I Semester – Regular / Supplementary Examinations
FEBRUARY - 2023

ENGINEERING CHEMISTRY
(Common for EEE, ECE, AIML, DS)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Define EMF and explain importance of Nernst equation.	L2	CO2	7 M
	b)	Make use of a neat diagram to explain working and applications of Hydrogen electrode.	L3	CO2	7 M
OR					
2	a)	Make use of a neat diagram to explain working and applications of Electrolytic Concentration cell.	L3	CO2	7 M
	b)	Define electrode potential and explain its measurement.	L2	CO1	7 M
UNIT-II					
3	a)	List out the advantages and disadvantages of Dry and Modern cells.	L4	CO4	7 M
	b)	Construct the Li-MnO_2 cell and explain its working and uses.	L3	CO2	7 M

OR					
4	a)	List out the Challenges of Battery technology.	L4	CO4	7 M
	b)	Construct the Hydrogen-Oxygen fuel cell and explain its working and applications.	L3	CO2	7 M
UNIT-III					
5	a)	Make use of Silicon explain ‘p’ & ‘n’ type doping.	L3	CO2	7 M
	b)	Discuss the synthesis of solar grade Silicon from Quartz.	L2	CO1	7 M
OR					
6	a)	Construct the Photo voltaic cell and explain its working.	L3	CO2	7 M
	b)	Discuss the manufacture of Pv cell by CVD method.	L2	CO1	7 M
UNIT-IV					
7	a)	Distinguish between electro plating & electro less plating with examples.	L4	CO4	7 M
	b)	Apply metal finishing techniques to describe the manufacture of printed circuit board.	L4	CO4	7 M
OR					
8	a)	List out the Electro chemical techniques and explain each one.	L4	CO4	7 M
	b)	Make use of a neat diagram explain electro plating of Gold.	L3	CO3	7 M

UNIT-V					
9	a)	Differentiate thermoplastics and thermosetting resins.	L4	CO4	7 M
	b)	List out the properties and uses of Polyphosphazines and briefly explain their preparation.	L4	CO4	7 M
OR					
10	a)	Make use of a neat flow chart explain synthesis of Nano material by Sol-gel method.	L3	CO3	7 M
	b)	Distinguish between TEM and SEM and mentions two uses each.	L4	CO4	7 M