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Question Paper Code	12936
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B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Seventh Semester

Electrical and Electronics Engineering

20EEEL701 - POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

	Marks	K – Level	CO
1. Mention the limitations of fossil fuels.	2	K1	CO1
2. List the types of solar cells.	2	K1	CO1
3. Classify wind turbines.	2	K2	CO2
4. Write the basic test required for wind turbine blades.	2	K1	CO2
5. What are the advantages of energy storage technologies?	2	K1	CO3
6. List the main mechanical energy storage technologies.	2	K1	CO3
7. Define super capacitor.	2	K1	CO4
8. Name the different types of pseudocapacitor.	2	K1	CO4
9. Outline the applications of nanomaterial.	2	K2	CO5
10. Define Beer Lambert law.	2	K1	CO5

PART - B (5 × 16 = 80 Marks)

Answer Any FIVE Questions

1. Describe the main sources of energy with its advantages and limitations.	16	K2	CO1
2. Explain the construction and working of solar water heater.	16	K2	CO1
3. Describe the construction and working of hydro-electric power plant.	16	K2	CO2
4. Explain the harnessing of tidal power.	16	K2	CO2
5. Write short notes on a) Parabolic trough collector and b) central receiver.	16	K2	CO3
6. Describe electric double layer capacitor (EDLC) with its characteristics.	16	K2	CO4
7. Explain the construction and working of fuel cell.	16	K2	CO4
8. Explain the chemical vapour deposition method used in the synthesise of nanoparticle.	16	K2	CO5