Regulation R18 Subject code: 2O6BA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, June/July 2023

ENERGY STORAGE SYSTEM

(EEE)

Maximum Marks: 70 Date:05.07.2023 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
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=20 Marks)

1 What are the characteristics of electricity?
2 What are the roles of EES?
3 What is meant my smart grid?
4 What is the role of EES from the view point of consumers?
5 What is meant by secondary batteries?
6 Classify the Energy Storage Systems?
7 What is meant by double layer Capacitors?
8 What are the standards for EES?
9 Give four applications of EES?
10 Mention the applications of EES in UPS for large consumers?

Part-B

Answer All the following questions (5X10M=50Marks)

11 A. What is the need for continuous and flexible supply? [5]
B. Explain in brief about the long distance between generation and consumption? [5]

OR

12 A. What is meant by Congetion phenomena in power grids? [5]
B. How the congetion is eliminated during the peak load periods? [5]

13 What is the need for Electrical Energy Storage systems, explain in brief with four points? [10]

OR

14 What is the role of renewable energy systems in EES? [10]
15 Explain about the pumped hydro storage system with neat diagram? [10]

OR

16 What is the difference between primary and secondary batteries? [10]
17 A. Classify the EES according to the medium used to store the energy? [5]
B. Explain in brief about the thermal storage systems. [5]

OR

18 Explain about the super conducting magnetic energy storage systems? [10]

19 How the renewable energy is connected to the EES for the storage and applications? [10]

OR

20 What are the new trends in application in EES systems? [10]