



R18 Regulation

Subject code:2P5BA

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, November 2025

## POWER SYSTEM - I

(EEE)

Maximum Marks: 70

Date: 18.11.2025

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.  
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)		Marks	CO	BTL
1	What is feed water in thermal power plant?	2M	1	L1
2	What are the classifications of the nuclear reactors?	2M	1	L1
3	Mention water turbines which are used in hydro power plant?	2M	2	L1
4	What is Thermal runaway?	2M	2	L1
5	What is Ring Main Systems?	2M	3	L1
6	What is A.C distributor?	2M	3	L1
7	What is the utility of instrument transformers (PT) in substations?	2M	4	L1
8	What are underground cables?	2M	4	L1
9	What is Tariff?	2M	5	L1
10	What is power factor tariff?	2M	5	L1

### Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain power generation using gas turbine plant with neat diagram.	10M	1	L2
OR				
12	Explain the classification of Hydro electric plants according to Quantity of Water available.	10M	1	L2
13	Explain the Hybrid Power system with neat diagram?	10M	2	L2
OR				
14	Mention advantages and disadvantages of solar power plant.	10M	2	L2
15	Explain Primary distribution system with neat diagram.	10M	3	L2
OR				
16	Derive the expression for Dielectric stress in a single core cable.	10M	3	L2
17	Explain terminal and through sub-stations and What is their purpose in the power system?	10M	4	L2

	OR			
18	What is the six difference between indoor and outdoor substation.	10M	4	L2
19	Derive expressions for cost of electrical energy.	10M	5	L2
	OR			
20	Describe characteristics of a tariff and types of tariffs.	10M	5	L2