



R20 Regulation Subject code: 3P4BE
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Supplementary Examinations, July 2024

Power System-I
(EEE)

Maximum Marks: 70

Date: 27.07.2024 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)		CO	Bloom Tx
1	What is a steam power station? Discuss its advantages.	1	L2
2	Explain the important components of a steam power station?	2	L2
3	Write short notes on load curve and load factor?	3	L3
4	Define connected load and maximum demand.	2	L3
5	What is a strain insulator and where it is used?	3	L2
6	Differentiate between overhead lines and underground cables	3	L2
7	What is corona?	4	L3
8	What are factors which effect corona?	4	L4
9	Explain Radial D.C distribution fed one end?	5	L3
10	Write a short note on Three-part tariff?	3	L1

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Explain power generation using steam power station with neat diagram. (10M)	1	L2
OR			
12	Draw a neat schematic diagram of a hydro-electric plant and explain the functions of various components. (10M)	1	L3
13	Write a short notes on: (10M) A. Base load B. Peak load C. Load curve D. Load duration curve	3	L4
OR			
14	What are the different types of tariff? Write the objectives of tariff. (10M)	3	L2
15	Explain the following methods of cable grading A. Capacitance grading (5M) B. Inter sheath grading (5M)	5	L2

	OR		
16	What is an insulator and explain its types? (10M)	3	L3
17	Derive an expression for the inductance of a single-phase overhead transmission line? (10M)	4	L3
	OR		
18	Derive an expression for the capacitance of a single-phase overhead transmission line? (10M)	4	L3
19	Describe briefly the different types of D.C distribution. (10M)	5	L5
	OR		
20	Write about 3-phase 4 wire system in AC distribution. (10M)	5	L5