



Regulation R18

Subject code: 2P6BB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, February 2024

ELECTRICAL MEASUREMENTS & INSTRUMENTATION

(EEE)

Maximum Marks: 70

Date:17.02.2024 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.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

Table with 5 columns: Question No., Question, Marks, CO, Bloom Tx. Contains 10 questions related to electrical measurements and instrumentation.

Part-B

Table with 5 columns: Question No., Question, Marks, CO, Bloom Tx. Contains 5 questions for Part B, including an OR question.

	factor of the circuit of which the power is measured, is 0.866. Estimate the torque when the axis of the field and moving coil is 600.			
	OR			
16	What are the various types of errors in induction type energy meter? Explain the methods incorporated for their compensation.	10	CO-3	L-2
17	In Hay's bridge the four arms are arranged as under: AB is a resistance of 600Ω in series with an inductor of 0.18 H, BC and DA are non-inductive resistances of 1200Ω each and CD consists of a resistance R in series with a capacitor C. A potential difference of 3V at a frequency of 50Hz is applied between A and C. Determine the values of R and C. Derive the condition for bridge balance.	10	CO-4	L-6
	OR			
18	a) Discuss a method for measurement of low resistance	5	CO-4	L-6
	b) Show how the Wien's bridge can be used for the measurement of frequency in audio range. Derive the equation for frequency f.	5	CO-4	L-6
19	Explain the piezo electric transducers	10	CO-5	L-2
	OR			
20	a) What is the use of LVDT? Discuss its basic principle of operation.	5	CO-5	L-1
	b) Enumerate the differences between a PN diode and a Photo diode and briefly explain the working of Photo diode.	5	CO-5	L-5