R22 Regulation *Subject code: 4E1AJ*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech I Semester Regular/Supplementary Examinations, January 2024

C Programming for Problem Solving

(Common to EEE,ECE,CSE,CSE(AI&ML) and CSE(DS))

Maximum Marks: 60 Date:24.01.2024 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 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 (10x1M=10 Marks)			CO	Bloom Tx
1.	a	List any two rules to be followed while naming the identifier/variable name.	CO1	I
	b	Demonstrate the ternary operators with examples.	CO1	II
	c	Define array with its syntax.	CO2	I
	d	Construct a program to find the length of a string.	CO2	II
	e	Define pointer with its syntax.	CO3	I
	f	What is function prototype?	CO3	I
	g	What is structure variable?	CO4	I
	h	Define union with examples.	CO4	II
	i	List Input/Output functions in files.	CO5	I
	j	List error handling functions in files.	CO5	II

Part-B

Answer All the following questions. (5X10M=50Marks)				
2		Summarize various conditional statements with examples. (10M)	CO1	II
		OR		
3		Develop a program to prepare an EB Bill based on following conditions. (First 100 units Rs.2 per unit, unit 101 to 300 Rs 3 per unit, unit 301 to 500 Rs.4 per unit, above 500 units Rs 5 per unit) (10M)	CO1	III
4		Build a program to arrange the following values 56, 34, 23, 64, 12 in ascending order using bubble sorting technique. (10M)	CO2	III
		OR		
5		Build a program for binary search in detail. (10M)	CO2	III
6		Briefly explain about String manipulation functions with an example. (10M)	CO3	II
		OR		

7	a) Construct a program to display the factorial of a number using recursive function. (7M) b) Build a program for dynamic memory allocation. (3M)	CO3	III III
8	Explain structure vs union with suitable examples. (10M)	CO4	II
	OR		
9	Construct a program to read and print an employee's detail including Salary components using array of Structure. (10M)	CO4	IV
10	Explain briefly on all random-access file such as fseek(), ftell(), rewind() methods with a program. (10M)	CO5	IV
	OR		
11	Build a program to find the number of vowels, consonants, words and white spaces in a given text file. (10M)	CO5	V