



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code:3E2AC

B.Tech II Semester Regular/Supplementary Examinations, October 2022

C PROGRAMMING FOR PROBLEM SOLVING

(Common to CE & EEE)

Maximum Marks: 70

Date:18.10.2022

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)

- 1 Define algorithm.
- 2 Write about Datatypes in C?
- 3 Define function and Write its uses.
- 4 How do you initialize one dimensional array? Give an example.
- 5 Write the memory allocations functions in C.
- 6 Define a pointer.
- 7 Compare and contrast structures and unions.
- 8 Give example of self referential structure.
- 9 What are binary files?
- 10 Write about rewind function.

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 Explain about different storage classes supported by C. [10]
OR
- 12 a) What is an identifier? What are the rules of an identifier?
b) Explain various operators in C with suitable examples. [5+5]
- 13 a) Write a C program to perform matrix multiplication.
b) What is recursion? Give advantages and disadvantages of recursion. [5+5]
OR
- 14 Write a C program for Binary search. [10]
- 15 a) What is a pointer? What are features of a pointer? Explain array of pointer with an example
b) Explain different String handling functions. [5+5]
OR
- 16 a) Explain about memory allocation functions in C.
b) Write a C program to calculate length of a string without using strlen(). [5+5]

- 17 a) Define a structure. How do you access a structure? Explain structure within structure with an example.
b) Write short notes on command line arguments. [5+5]
- OR
- 18 a) Illustrate how to pass structure to a function.
b) Explain in detail about preprocessor commands. [5+5]
- 19 a) Write a C program to copy the contents of one file into another.
b) Compare and contrast text file and binary file. [5+5]
- OR
- 20 a) Explain file input and output functions with an example.
b) Write a C program to count number of words, characters and white spaces in a given file. [5+5]