Question Paper Code: U3826

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Third Semester

Electronics and Communication Engineering

21UIT326– FUNDAMENTALS OF C PROGRAMMING

(Regulation 2021)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	Define variable with example.	CO1- U
2.	Why do we include <stdio.h> in a program?	CO1- U
3.	What do you meant by conditional or ternary operator?	CO1- U
4.	Write a C program to find average marks obtained by the students in a test.	CO2- App
5.	Write a C program to find the sum of all elements of the array.	CO2- App
6.	Write a C program to find the maximum and minimum element in an array.	CO2- App
7.	Define pointer and Illustrate with example.	CO1- U
8.	Define pointer to pointer and Illustrate with example.	CO1- U
9.	Summarize the various dynamic memory allocation functions with example.	CO1- U
10.	Write a syntax that defines a structure employee containing the details such as empno, empname, department name and salary.	CO2- App

PART – B (5 x 16= 80 Marks)

11. (a) Explain the basic data types available in C with an example.   CO1- U   (16)

Or

(b) Explain the various types of operators used in C with necessary   CO1- U   (16)
program.

12. (a) Write a C program to calculate overtime pay of 10 employees. CO2- App (16) Overtime is paid at the rate of Rs. 12.00 per hour for every hour worked above 40 hours. Assume that employees do not work for fractional part of an hour and explain the output in detail.

Or

(b) At a football match, tickets are sold in three categories: reserved, CO2- App (16) stands, and grounds. For each of these categories, you are given the ticket price and the number of tickets sold. Write a program to prompt for these values and print the amount of money collected from each category of tickets. Also print the total number of tickets sold and the total amounts of money collected and explain the output in details.

13. (a) Explain the different types arguments used in function with an CO1- U (16) example program.

Or

(b) Explain in detail call by value and call by reference by using CO1- U (16) function with an example program.

14. (a) Write a menu-driven program to read and display an m * n CO2- App (16) matrix. Also find the sum, transpose and product of two m * n matrices.

Or

(b) Write a C Program to sort N numbers in ascending order using CO2- App (16) bubble sort and explain the output in detail.

15. (a) Explain the pointers in C with an example program. CO1- U (16)

Or

(b) Explain the structure in C with an example program. CO1- U (16)