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Question Paper Code: U3826

B.E./B.Tech. DEGREE EXAMINATION, MAY 2024

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 mean 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) Outline the structure of C program with a neat sketch with an example program to illustrate. CO1- U (16)
- Or
- (b) Explain the various types of operators used in C with necessary program. CO1- U (16)

12. (a) Write a C Programming for the following. The marks obtained by a student in 5 different subjects are input through the keyboard. The student gets a percentage as per the following rules:
 Percentage above or equal to 85 – First Class with Distinction
 Percentage between 60 to 84 – First Class
 Percentage between 50 to 59 – Second Class
 Percentage less than 50 – Fail
 Explain the output in detail. CO2- App (16)
- Or
- (b) At a football match, tickets are sold in three categories: reserved, 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. CO2- App (16)
13. (a) Explain in detail array and its type with an example program. CO1- U (16)
- Or
- (b) Explain in detail call by value and call by reference by using function with an example program. CO1- U (16)
14. (a) Write a C program to perform matrix addition and multiplication between two given matrixes. CO2- App (16)
- Or
- (b) Write a C Program to sort N numbers in ascending order using bubble sort and explain the output in detail. CO2- App (16)
15. (a) Write a C program using structures to prepare the student mark statement. The number of records is created based on the user input. CO2- App (16)
- Or
- (b) Write a C program that defines a structure employee containing the details such as empno, empname, department name and salary. The structure has to store 5 employees in an organization. Use the appropriate method to define the above details and define a function that will display the contents. CO2- App (16)