Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code: U2805

B.E./B.Tech. DEGREE EXAMINATION, NOV 2022

Second Semester

Information technology

21UIT205- C Programming

(Regulations 2021)

Duration: Three hours   Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1. List the decision control statements used in 'C'? Summarize if-else statement with its syntax and a simple example.   CO1- U

2. Illustrate the purpose of while and for loop with their syntax   CO1- U

3. Write a program to request a whole number and print the number and its square.   CO2- App

4. The current year and the year in which the employee joined the organization are entered through the keyboard. If the number of years for which the employee has served the organization is greater than 3 then a bonus of Rs. 2500/- is given to the employee. If the years of service are not greater than 3, then the program should do nothing.   CO2- App

5. Define an array? How to declare array and access elements in an array?   CO3- U

6. How to declare and initialize 2-dimensional array with its syntax ?   CO3- U

7. How to represent self-referential structures?   CO4- U

8. How to access a member of a structure with its syntax?   CO4- U

9. Compare getc() and fgetc()   CO5- Ana

10. A floating-point array contains percentage marks obtained by students in an examination. To store these marks in a file 'marks.c', in which mode would you open the file and why?   CO5- Ana

PART – B (5 x 16= 80Marks)

11. (a) Summarize the Decision control statements and explain with its   CO1-U   (16)
        syntax and example program.

<div align="center">Or</div>

    (b) List the various types of operators and write a program with neat   CO1-App   (16)
        command line explanation about the program and the output
        specification in detail

12. (a) Illustrate the types of functions with the help of a C program and   CO2-U   (16)
        diagrammatical Representation

<div align="center">Or</div>

    (b) Define function? Illustrate with syntax and a program that how a   CO2-U   (16)
        function can be defined, declared and called.

13. (a) Develop a program that receives the month and year from the   CO3-App   (16)
        keyboard as integers and prints the calendar in the following
        format.

September 2004						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Note that according to the Gregorian calendar 01/01/1900 was
Monday. With this as the base the calendar should be generated.

<div align="center">Or</div>

    (b) To write a c program to check whether the given string is   CO3-App   (16)
        palindrome or not and also explain the program and output in detail

14. (a) Create a structure to specify data on students given below: CO4-App   (16)
        Roll number, Name, Department, Course, Year of joining Assume
        that there are not more than 450 students in the collage.
        (a) Write a function to print names of all students who joined in a
        particular year.
        (b) Write a function to print the data of a student whose roll
        number is given.

<div align="center">Or</div>

(b) Differentiate " Pointer of array" & "array of pointers" and also write an example program and show the difference based on the sample output. CO4-App (16)

15. (a) Explain the different operations on a file and also illustrate how a file can be accessed. Write a program to copy one file to another. While doing replace all lowercase characters to their equivalent uppercase characters. CO5- App (16)

Or

(b) Explain briefly on functions of error handling during file operations CO5- U (16)

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