

(A)

Priyadarshini College of Engineering, Nagpur
Sessional Examination (2023-24) Odd Semester
B.Tech. Third Semester (Information Technology) (C.B.C.S.)
Programming Logic and Design using C

P. Pages: 2

PCE/KW/23/BEIT302T

Time: Three Hours

Max. Marks: 70

- Notes:
1. All questions carry marks as indicated.
 2. Solve Question 1 or Question 2.
 3. Solve Question 3 or Question 4.
 4. Solve Question 5 or Question 6.
 5. Solve Question 7 or Question 8.
 6. Solve Question 9 or Question 10.
 7. Due credit will be given to neatness and adequate dimensions.
 8. Assume suitable data wherever necessary.
 9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.	Question	CO	BT	Marks
1.	a) What is flowchart? Explain different symbols involved in it.	CO1	2	04
	b) Write a 'C' program to find the factorial of a number.	CO1	3	06
	c) Write the difference between while & do-while statement.	CO1	2	04
	OR			
2.	a) What is an algorithm? Explain with example.	CO1	2	06
	b) Explain the following statement with proper syntax & example. i) For ii) While iii) Do-while iv) Switch.	CO1	2	08
3.	a) What do you mean by array? Why array is used? How array elements are accessed?	CO2	1	06
	b) What is pointer? What are advantages of pointers ?	CO2	1	03
	c) Write a program to search an element x in the list of integers of an element using binary search.	CO2	3	05
	OR			
4.	a) List various string functions with example of each.	CO2	1	06
	b) Write a C program to read a string & convert it into lowercase	CO2	3	06
	c) Distinguish between syntax and semantic error.	CO2	2	02
5.	a) Illustrate the concept of recursion using suitable example.	CO3	3	07
	b) Explain call by values and call by reference with suitable example.	CO3	2	05
	c) What are the advantages of Union?	CO3	1	02

OR

Q. No.	Question	CO	BT	Marks
6.	a) A blood bank stores the information about the donors as follows: Name, address, Age, Weight, Gender, blood group & contact no. Write a C program using structure for accepting records of 20 donors and display the details of donors with age less than 30 & blood group equals to 'O' in the list of 20 donors.	CO3	3	08
	b) Differentiate between structure & union with suitable example.	CO3	2	06
7.	a) Explain different file opening modes.	CO4	2	04
	b) Explain the following functions with proper syntax and use: i) fseek() ii) fflush() iii) fopen	CO4	2	06
	c) Write short notes on command line arguments.	CO4	2	04
OR				
8.	a) Write a C program to count the number of characters and number of lines from input file.	CO4	3	08
	b) Write short notes on: i) Bitwise operator ii) Enumerated data types iii) Typedef	CO4	2	06
9.	a) Write a program using graphics. The program should be Menu Driven program and have the following options: i) Draw Line ii) Draw Circle iii) Draw Arc iv) Draw Rectangle	CO5	3	08
	b) Illustrate the use of following functions and also write syntax for each function: i) initgraph () ii) closegraph () iii) ellipse ()	CO5	2	06
OR				
10.	a) Justify importance of dynamic memory allocation and explain malloc (), calloc (), realloc () and free () along with its syntax.	CO5	2	08
	b) Explain getimage (), putimage () and imagesize () with example along with its syntax.	CO5	2	06
