Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Tech (First Semester - Regular) Examinations, December 2025

25FYES11003 – Programming for Problem Solving

(Common to all Branches)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

		CO #	Blooms Level
Q.1.	Answer ***ALL*** questions		
a.	Write an example on usage of conditional operator.	CO1	K1

b.	What will be the output and why?
	#include<stdio.h>
	#define int char int
	void main()
	{
	int i=65;
	printf("size =%d",sizeof(i));
	return 0;
	}
		CO1	K1

c.	Write down the syntax and an example for strncpy() function.	CO2	K2

d.	Write the output of the below code with proper justification.
	void main()
	{
	int x,y; x=10; y=10;
	if(x/x%x)
	printf("It is summer");
	else
	printf("it is rainy");
	}
		CO2	K2

e.	Find the output:
	#include<stdio.h>
	int main()
	{
	int arr[]={10,20,30};int i; int *ptr=arr;
	for(i=0; i<3;i++)
	printf("%d",*(ptr+i)+10);
	return 0;
	}
		CO3	K2

PART – B **(10 x 5 = 50 Marks)**

		Marks	CO #	Blooms Level
	Answer ***ALL*** the questions			
2. a.	List out all the classification of data types and state their usage with examples	5	CO1	K1
b.	Write a program to accept Fahrenheit and calculate its equivalent Celsius. [formula is: Celsius= ((Fahrenheit-32)*5)/9]	5	CO2	K2

(OR)

c.	Write a program to solve below problems: i. Find the area and perimeter of a circle when radius is given input ii. Input two numbers and swap them using a 3rd variable.	5	CO2	K2
d.	Elaborate the usage of: i. Format specifiers ii. Escape sequence characters	5	CO2	K2
3.a.	Differentiate between **while... do** and **do … while** loop using proper example.	5	CO3	K3
b.	Write a program to input a positive number and test whether it is Armstrong number or not.	5	CO3	K3
	(OR)			
c.	Write the syntax of while loop. Write a program to print a series of odd numbers from 1,3,5…..99 using do while loop.	5	CO3	K3
d.	Differentiate between **break** and **continue** statement with proper example.	5	CO2	K2
4.a.	Write a program to input a string and display the reverse string of it.	5	CO2	K3
b.	Write a program to input 10 elements into an array. Input an element and search whether the element is existed in the array or not.	5	CO2	K2
	(OR)			
c.	Write a program to input values into two 3X3 matrices, perform addition and display the resultant matrix.	5	CO3	K3
d.	Write a program to accept a strings and check whether the string is palindrome or not.	5	CO3	K3
5.a.	Differentiate between formal parameter and actual parameter with proper example.	5	CO2	K3
b.	Write a program to create a user defined function which accepts a number and check whether it is prime number or not.	5	CO3	K3
	(OR)			
c.	Differentiate between call by value and call by reference with proper example.	5	CO2	K3
d.	Write a program to store 10 numbers in a 1D array and find summation of all numbers of the array using pointer.	5	CO3	K4
6.a.	What is structure? Explain the syntax to declare a structure and structure variable. Also explain how to access the structure members using structure variable with example.	5	CO3	K3
b.	Write a program to create a structure for storing 10 books details of a library using structure having members: book id, book name, and price. Then display the details of that book which is having maximum price.	5	CO3	K3
	(OR)			
c.	Write a program to create a structure for 5 football players details using structure having members: player name, goal score, country name. Use a pointer to display the all the player details.	5	CO3	K3
d.	Write a program to create a structure called complex to represent a complex number. Perform addition of two complex numbers using UDF.	5	CO3	K3

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