DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Regular Winter Examination – 2024

Course: B. Tech	Branch: Common to all Branches	Semester: I

Subject Code & Name: 24AF1000ES106 & Programming for Problem Solving

Max Marks: 60	Date:13/02/2025	Duration: 3 Hr.

Instructions to the Students:
1. Each question carries 12 marks.
2. Question No. 1 will be compulsory and include objective-type questions.
3. Candidates are required to attempt any four questions from Question No. 2 to Question No. 6.
4. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
5. Use of non-programmable scientific calculators is allowed.
6. Assume suitable data wherever necessary and mention it clearly.

		(Level/CO)	Marks
Q. 1	**Objective type questions. (Compulsory Question)**		**12**
1	Which generation of computers introduced the use of integrated circuits (ICs)?	Remember	1
	a. First Generation / b. Second Generation / c. Third Generation / d. Fourth Generation		
2	Which of the following is a primary function of an operating system?	Understand	1
	a. Word processing / b. Understand / c. Image editing / d. File encryption		
3	Which component acts as the brain of a computer system?	Understand	1
	a. Input device / b. Processor / c. Output device / d. Memory		
4	Which of the following is not a valid C data type?	Remember	1
	a. int / b. char / c. bool / d. string		
5	What is the output of the following expression in C? int x = 10, y = 5; printf ("%d", x > y && y < 10);	Apply	1
	a. 0 / b. 1 / c. 5 / d. 10		
6	Which operator is used for bitwise AND operation in C?	Remember	1
	a. && / b. & / c. | / d. ||		
7	What is the correct syntax for a do-while loop in C?	Understand	1
	a. do {...} while(condition); / b. do { ... } while(condition) / c. while(condition) {...} do; / d. do { while(condition); }		
8	Which statement is used to exit a loop prematurely in C?	Remember	1
	a. exit / b. break / c. continue / d. return		
9	What will be the output of the following code? int x = 5; if(x == 5) printf("Hello"); else printf("World");	Apply	1
	a. Hello / b. World / c. HelloWorld / d. Compilation Error		
10	What is the index of the first element in a C array?	Remember	1
	a. 1 / b. 0 / c. -1 / d. Depends on the		

					array	Understand	1
11	What does the following pointer declaration mean? int *ptr;					Understand	1
	a. ptr is a pointer to an integer	b. ptr is an integer	c. ptr is a pointer to a float	d. None of the above			
12	Which of the following is used to write data to a file in C?					Understand	1
	a. fread	b. fwrite	c. fprintf	d. All of the above			
Q. 2	Solve the following.						12
A)	What are the steps involved in programming? Briefly describe each step.					Understanding	6
B)	What is the role of memory management in a computer system? Differentiate between primary and secondary memory.					Analyze	6
Q.3	Solve the following.						12
A)	What is operator precedence? Write an expression and explain how it is evaluated.					Understand & Apply	6
B)	Describe the conditional (ternary) operator and write a program to find the maximum of two numbers using it.					Understand & Apply	6
Q. 4	Solve Any Two of the following.						12
A)	Differentiate between while, for, and do-while loops with example programs.					Understand & Apply	6
B)	Write a c program to demonstrate the use of break and continue in loops.					Apply	6
C)	Describe the basics of user-defined functions and write a function to calculate the factorial of a number.					Understand & Apply	6
Q.5	Solve Any Two of the following.						12
A)	Explain the initialization of arrays in C with examples.					Understand & Apply	6
B)	Write a program to create and display a 3x3 matrix using a two-dimensional array in C.					Apply	6
C)	Write a c program to demonstrate the use of a pointer to an array.					Understand & Apply	6
Q. 6	Solve Any Two of the following.						12
A)	What is an array of structures? Write a c program to store and display details of 5 students.					Understand & Apply	6
B)	Discuss file opening and closing in c with examples of different modes.					Understand & Apply	6
C)	Write a c program to read and write data to a file using fprintf() and fscanf().					Understand & Apply	6
*** End ***							

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular Semester Examination – Summer 2022

Course: B. Tech. **Branch : First Year(Group A)** **Semester : II**

Subject Code & Name: BTES204 & Computer Programing in C

Max Marks: 60 **Date: 26-08-2022** **Duration: 3.45 Hrs.**

Instructions to the Students:
1. *All the questions are compulsory.*
2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Assume suitable data wherever necessary and mention it clearly.*

		(Level)	Marks

Q. 1 Solve any two from the following

A) Define Error ? Enlist and Explain various types of error in C Programming (Understand) **6**

B) Define operator ? What is Criteria for operator classification ? Explain ternary operator with suitable example . (Understand) **6**

C) Define flowchart? draw a flowchart for following algorithm (Synthesis) **6**
1. Start
2. Read the values for B(base) & H (height)
3. Calculate area = 1/2 *B*H
4. Display area
5. Stop

Q.2 Solve any two from the following

A) What will be output of the following program segment in C and choose the correct option : (Application) **6**

I) int a =-1 , b=1 ,c,d=2;
    c= a++ + ++b - --d ;
    printf("a=%d b=%dc=%d d=%d", c,a,b,d);

   a) a=0 b=1 c=1 d= 1   b) a=-1 b= 0 c=1 d=1
   c) a= 0 b= 0 c=2 d=1   d) a=0 b= 2 c= 0 d=1

II) int main()
       {
           char x='X';
           char a= ++x + 1;
           printf("%c", a);
           printf("%d",a);
       }

    a) Z 90   b) 90 Z   c) error   d) none

III) #include <stdio.h>

```
int main()
 {
      int a=-2;
      ++a;
      if ( a)
     printf("Hi this is CPC ");
     else
     printf("C is Programming language ");
 }
```

a) Hi this is CPC b) error c) C is Programming language d) None

B) Define variable ? Define constant ? Give the difference between   (Understand)   **6**

variable & constant with suitable example .

C) Write a Program to a read a number & display its reverse using   (Synthesis)   **6**

while loop.

Q. 3 **Solve any two from the following**

A) write a program to accept two numbers & compute quotient and   (Synthesis)   **6**

remainder display the same.

B) Define function ? explain function signature with suitable example.   (Understand)   **6**

{ Hint: function signature is also called as function prototype)

C) Explain the following with proper example   (Understand)   **6**

 i) extern variable   ii) Static variable   iii) size qualifier

Q.4 **Solve any two from the following**

A) Define string ? Write a program to copy first 16 characters from   (Synthesis)   **6**

"Cpc is very easy programming language" into string abc.

{ Hint : consider "Cpc is very easy programming language" as a

string with valid name}

B) Define Array ? Define one subscripted variable ? explain Dynamic   (Analysis)   **6**

initialization of one subscripted variable with suitable program

{ Hint : one subscripted variable is also known as 1dimensional

array }

C) why one should use goto statement in a c programming ?   (Synthesis)   **6**

Explain with suitable program.

Q. 5 **Solve any two from the following**

A) Define Structure ? Explain how one should access structure fields   (Understand)   **6**

explain with suitable program.

B) write a program to display folllowing pattern   (Application)   **6**

* * * * *

* * * *

* * *

* *

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C) Define union ? How memory is allocated for union and structure   (Analysis)   **6**
in C Programming with suitable example .

*** End ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular Semester Examination – Summer 2022

Course: B. Tech.   **Branch : First Year(Group A)**   **Semester : II**

Subject Code & Name: BTES204 & Computer Programing in C

Max Marks: 60   **Date: 26-08-2022**   **Duration: 3.45 Hrs.**

Instructions to the Students:
1. *All the questions are compulsory.*
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		(Level)	Marks

Q. 1 Solve any two from the following

A) Define Error ? Enlist and Explain various types of error in C Programming   (Understand)   **6**

B) Define operator ? What is Criteria for operator classification ? Explain ternary operator with suitable example .   (Understand)   **6**

C) Define flowchart? draw a flowchart for following algorithm   (Synthesis)   **6**
1. Start
2. Read the values for B(base) & H (height)
3. Calculate area = 1/2 *B*H
4. Display area
5. Stop

Q.2 Solve any two from the following

A) What will be output of the following program segment in C and choose the correct option :   (Application)   **6**

I) int a =-1 , b=1 ,c,d=2;
c= a++ + ++b - --d ;
printf("a=%d b=%dc=%d d=%d", c,a,b,d);

   a) a=0 b=1 c=1 d= 1   b) a=-1 b= 0 c=1 d=1
   c) a= 0 b= 0 c=2 d=1   d) a=0 b= 2 c= 0 d=1

II) int main()
    {
       char x='X';
       char a= ++x + 1;
       printf("%c", a);
       printf("%d",a);
    }

   a) Z 90   b) 90 Z   c) error   d) none

III) #include <stdio.h>

```
int main()
 {
      int a=-2;
      ++a;
      if ( a)
     printf("Hi this is CPC ");
     else
     printf("C is Programming language ");
 }
```

a) Hi this is CPC b) error c) C is Programming language d) None

B)	Define variable ? Define constant ? Give the difference between variable & constant with suitable example .	(Understand)	**6**
C)	Write a Program to a read a number & display its reverse using while loop.	(Synthesis)	**6**

Q. 3 Solve any two from the following

A)	write a program to accept two numbers & compute quotient and remainder display the same.	(Synthesis)	**6**
B)	Define function ? explain function signature with suitable example. { Hint: function signature is also called as function prototype)	(Understand)	**6**
C)	Explain the following with proper example i) extern variable ii) Static variable iii) size qualifier	(Understand)	**6**

Q.4 Solve any two from the following

A)	Define string ? Write a program to copy first 16 characters from "Cpc is very easy programming language" into string abc. { Hint : consider "Cpc is very easy programming language" as a string with valid name}	(Synthesis)	**6**
B)	Define Array ? Define one subscripted variable ? explain Dynamic initialization of one subscripted variable with suitable program { Hint : one subscripted variable is also known as 1dimensional array }	(Analysis)	**6**
C)	why one should use goto statement in a c programming ? Explain with suitable program.	(Synthesis)	**6**

Q. 5 Solve any two from the following

A)	Define Structure ? Explain how one should access structure fields explain with suitable program.	(Understand)	**6**

B) write a program to display folllowing pattern   (Application)   **6**

```
* * * * *

* * * *

* * *

* *

*
```

C) Define union ? How memory is allocated for union and structure   (Analysis)   **6**
in C Programming with suitable example .

*** End ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Regular Summer Examination – 2023

Course: B. Tech. **Branch : Civil/Chemical/Petrochemical/Mechanical** **Semester :II**

Subject Code & Name: Computer Programming in C [BTES204]

Max Marks: 60 **Date:** **Duration: 3 Hr.**

Instructions to the Students:
1. All the questions are compulsory.
2. The level of question expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level / Marks CO)

Q. 1 Solve Any Two of the following. [12]

A) Write note on Program Process Development.

B) Write an algorithm and draw a flowchart for a program to print sum and average of 'n' natural numbers.

C) Write a short note on the Tokens in C Language

Q.2 Solve Any Two of the following. [12]

A) Write a program to find the maximum number from 3 numbers enter by user.

B) Explain any three types of operators along with it's precedence and associativity.

C) Write a program to create simple calculator to perform addition, subtraction, division, and multiplication operations.

Q. 3 Solve Any Two of the following. [12]

A) Write a program to print area of square using function.

B) Write a program to print factorial of a given number using while and also, write the program using do….while loop.

C) Differentiate between while and do…..while loop

Q.4 Solve Any Two of the following. [12]

A) Write a program to perform and to print the addition and subtraction of the two Matrices.

B) Write a program to perform the following operations on the string (With and without using library function)

1. find length of string   2. copy   3. concatenation   4. reverse.

C) Write syntax of following Concepts of C:
1 Array   2 Switch   3. Function

Q. 5 Solve Any Two of the following. [12]

A) Write a program in C to create a structure of student with fields such as Student Name, Roll Number and Marks of two subjects as its members. Calculate average of two subjects. Read the details of 'n' students from user and then display the data in this format.
Roll No. Name Sub1 Sub2 Total Average

B) Write a program in C to create a structure having named as Books consists of title, author, subject, book id as its members. Read the details of five books from user and then display the data entered by the user on Screen (Use array of structure)

C) Define structure with suitable example. What is difference between structure and Union?

*** End ***