



1st Semester Examination –2021-22

Subject : Programming for Problem Solving Roll No :

Course : B.Tech ME/CSE

Full Marks : 70 Time : 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 12 multiple choice questions.
- Part- B containing SIX questions out of which FOUR questions are to be answered.
- Part C containing FOUR questions out of which TWO questions are to be answered.
- Do not write anything except your Roll No. on the question paper.
- Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under Unfair Means and will Result in the Cancellation of the Papers.

PART A

MULTIPLE CHOICE QUESTIONS

(12x1=12)

1. Which of the following is not a valid C variable name?
a. int number; b. float rate; c. int variable count; d. int \$rate;
2. Which of the following typecasting is accepted by C language?
a. Widening conversions c. Narrowing conversions
b. Widening & Narrowing conversions d. None of them
3. % operator in C Language is known as:
a. percentage operator c. Quotient operator
b. modulus d. division
4. Choose the correct option:
int a = 5/2;
int b = 5.0/2;
int c = 5 / 2.0;
int d = 5.0/2.0;
a. a = 2, b = 2, c = 2, d= 2 c. a = 2, b = 2.0, c = 2, d= 2.0
b. a = 2, b = 2.5, c = 2.5, d= 2.5 d. a = 2.5, b = 2.5, c = 2.5, d= 2.5
5. The C code 'for(;;)' represents an infinite loop. It can be terminated by ____
a. break b. exit(0) c. abort() d. terminate
6. What will be the output of the following C code?
#include <stdio.h>
void main()
{
int k = 0;
for (k < 3; k++)


```
printf("Hello");  
}
```

- a. Compile time error
- b. Nothing is printed
7. Which keyword can be used for coming out of recursion?
 - a. Break
 - b. Return
 - c. Exit
 - d. Void
8. The keyword 'break' cannot be simply used within:
 - a. if else
 - b. for
 - c. while
 - d. do-while
9. Which of these best describes an array?
 - a. A data structure that shows a hierarchical behavior
 - b. Container of objects of similar types
 - c. Arrays are immutable once initialized
 - d. All of them
10. In general, the index of the first element in an array is
 - a. 0
 - b. -1
 - c. 1
 - d. 2
11. Elements in an array are accessed
 - a. Sequentially
 - b. Exponentially
 - c. Randomly
 - d. logarithmically
12. Which keyword is used to come out of a loop only for that iteration?
 - a. Break
 - b. Continue
 - c. Goto
 - d. Return

PART B

ANSWER ANY FOUR OUT OF SIX

(4x7=28)

1. Differentiate between algorithm, flowchart, and program. Write a pseudo code to show volume of a cylinder ($V = \pi * r^2 * h$).
2. What is a function? Write down its syntax. Also give an example of parameterized function.
3. What is an array and where do we use it? Write a program to show the sum of all the elements in an array.
4. Define operators in C programming. Write a program to show the use of nested if.
5. Mention any 4 features of C language. Write a program to show the use of math.h header file.
6. What is a loop? Where do we use it? Give the syntax of for loop and do-while loop.

PART C

ANSWER ANY TWO OUT OF FOUR

(2x15=30)

1. What is a data type? Explain all data types used in C. Write a program to perform swapping of numbers using parameterized function.
2. Differentiate between break and continue with example. Write a program to print all the prime numbers up to 100.
3. What are the string handling functions available in C. Write a program to show the use of length, copy and substring functions.
4. What is a header file? Why do we use conio.h? Write a program to find the largest and smallest element in an array.



1st Semester Examination –2021-22

Subject : Programming for Problem Solving Roll No :
Course : B.Tech ME/CSE
Full Marks : 70 Time : 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 12 multiple choice questions.
- Part- B containing SIX questions out of which FOUR questions are to be answered.
- Part C containing FOUR questions out of which TWO questions are to be answered.
- Do not write anything except your Roll No. on the question paper.
- Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under Unfair Means and will Result in the Cancellation of the Papers.

PART A

MULTIPLE CHOICE QUESTIONS

(12x1=12)

1. Which of the following is not a valid C variable name?
a. int number; b. float rate; c. int variable count; d. int \$rate;
2. Which of the following typecasting is accepted by C language?
a. Widening conversions c. Narrowing conversions
b. Widening & Narrowing conversions d. None of them
3. % operator in C Language is known as:
a. percentage operator c. Quotient operator
b. modulus d. division
4. Choose the correct option:
int a = 5/2;
int b = 5.0/2;
int c = 5 / 2.0;
int d = 5.0/2.0;
a. a = 2, b = 2, c = 2, d= 2 c. a = 2, b = 2.0, c = 2, d= 2.0
b. a = 2, b = 2.5, c = 2.5, d= 2.5 d. a = 2.5, b = 2.5, c = 2.5, d= 2.5
5. The C code 'for(;;)' represents an infinite loop. It can be terminated by ____
a. break b. exit(0) c. abort() d. terminate
6. What will be the output of the following C code?
#include <stdio.h>
void main()
{
int k = 0;
for (k < 3; k++)

