



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Principles of Programming using C – BPOPS203

MODULE- 2 QUESTION BANK

C123.2 - Apply programming constructs of C language to solve the real world problem

1. Explain the following conditional statements with syntax and example program for each. **(RBT – Level 2)**
 - i) if
 - ii) if-else
 - iii) else-if ladder
 - iv) nested if -else
2. Explain in detail conditional operator with an example program. **(RBT – Level 2)**
3. Explain switch statement with syntax and an example program. **(RBT – Level 2)**
4. Compare while and do-while looping statements with an example program for each. **(RBT – Level 2)**
5. Explain the following looping statements with syntax and example. **(RBT – Level 2)**
 - i) while
 - ii) do-while
 - iii) for
6. Explain the following jump statements (unconditional branch statements) with syntax and example program for each. **(RBT – Level 2)**
 - i) go to
 - ii) return
 - iii) continue
 - iv) break
 - v) exit()
7. Write a C program to find sum of n numbers using for loop. **(RBT – Level 2)**
8. Write a C program using nested for loop to print the following pattern. **(RBT – Level 3)**
 - i)

```
*
* *
* * *
* * * *
```
 - ii)

```
* * * *
* * *
* *
*
```
9. Write a C program to find the sum of even numbers from 1 to n. **(RBT – Level 3)**
10. Explain the Syntax of nested if ... else statement. Write a C program to find largest of three numbers using nested if ... else statement. **(RBT – Level 2)**
11. Write a simple calculator program in C language to do simple operations like addition, subtraction, multiplication and division. Use switch statement in your program. **(RBT – Level 3)**
12. Explain the syntax of do-while statement. Write a C program to find the factorial of a Number using while loop, where the number n is entered by the user. **(RBT – Level 3)**
(Hint: factorial of n = 1*2*3*....*n).
13. Explain in detail the Formatted and Unformatted Input and output Functions in C? **(RBT – Level 2)**
14. Explain in detail how to read and write a character in C using putchar and getchar functions? **(RBT – Level 2)**

15. Write a C program to compute the roots of a quadratic equation by accepting the coefficients. **(RBT – Level 3)**
16. Explain the various operators in C. **(RBT – Level 3)**
17. What is type casting in C? Explain its types with suitable examples. **(RBT-Level 3)**
18. Simulation of a Simple Calculator. **(RBT-Level 3)**
19. Compute the roots of a quadratic equation by accepting the coefficients. Print appropriate messages. **(RBT-Level 3)**
20. An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges. **(RBT-Level 3)**
21. Show the evaluation of the following C expressions. **(RBT-Level 2)**

If $a=3, d=7, e=2, c=5, b=4, x= --a*d/e-c++ * b$, find a, b, c, d, e, x.

If $x=20, y=5$, find the value of the expression $x=10+15\&\&y<10$

If $a=9, b=12, c=3$, find the value of the expression $a-b/3+c*2-1$

$10!=10 \parallel 5<4 \&\& 8$

22. Write a C program for the following **(RBT – Level 3)**
- To check whether the given year is leap year or not
 - To read a character and check whether it is vowel or consonant.
 - Largest of 3 numbers using ternary operator.