CAMBRIDGE INSTITUTE OF TECHNOLOGY
K.R. Puram Bengaluru – 36

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Principles of Programming using C – BPOPS203

MODULE- 1 QUESTION BANK

C123.1 - Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.

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

1. What is Computer? Give its characteristics. **(RBT-Level 1)**
2. What is stored program concept? **(RBT-Level 1)**
3. Explain all the computer generations. **(RBT-Level 2)**
4. Give the applications of computer. **(RBT-Level 1)**
5. List all the computer types and explain each. **(RBT-Level 1)**
6. Give the functional block diagram / basic organization of a computer. Explain in detail.
7. State the components inside computer. **(RBT-Level 1)**
8. Explain Motherboard. **(RBT-Level 1)**
9. Explain all Input devices. **(RBT-Level 2)**
10. Explain all output devices. **(RBT-Level 2)**
11. Explain Programming paradigms. **(RBT-Level 1)**
12. Give an example of structured program. **(RBT-Level 1)**
13. What are the phases of SDLC? **(RBT-Level 1)**
14. Explain testing and debugging. **(RBT-Level 1)**
15. Define an algorithm, flow-chart and pseudocode. Give an example for each. **(RBT-Level 1)**
16. What is a program? Explain the structure of C program. **(RBT-Level 1)**
17. Show the execution of a C program with an example. **(RBT-Level 1)**
18. What is token in C? Explain the different types of tokens available in C language. **(RBT-Level 1)**
19. Define constant. Explain the different types of constants available in C language. **(RBT-Level 1)**
20. What are keywords and identifiers in C? Give example for each and explain. **(RBT-Level 1)**
21. What is a data type? Mention the different data types supported by C language, giving an example to each. **(RBT-Level 1)**

22. Explain how variables are used in a program? Also, Explain its declaration and initialization statement with example. **(RBT-Level 2)**
23. What is an Operator? List and explain various types of operators with an example program for each. **(RBT-Level 1)**
24. What is an Operator? Explain the following operators with an example program for each. **(RBT-Level 1)**
    i) Arithmetic ii) Relational iii) Logical iv) Assignment
25. Explain the following operators with an example program for each. **(RBT-Level 1)**
    i) Increment and Decrement ii) Conditional iii) Bitwise iv) Special
26. What is Type Conversion in C? Explain with suitable examples. **(RBT-Level 1)**
27. Which is valid and invalid names? If name is invalid, explain why? **(RBT-Level 1)**
    i) 1999_space ii) _apple iii) iNtEL iv) one_2v) for vi) #12 vii) i.b.m viii) help+me ix)auto
28. Write a C program that computes the size of int, float, double and char variables. **(RBT-Level 2)**
29. Write an Algorithm, Flow-chart, Pseudocode and Program for the following. **(RBT-Level 2)**
    - Sum of 2 numbers
    - Area and perimeter of a circle
    - Area and perimeter [2*(l+b)] of a rectangle
    - Area of square, triangle given its sides
    - Calculation of simple interest : ptr/100
    - Swap 2 numbers
    - Swap 2 numbers without using temporary variable
    - Convert temperature in degree Celsius to Fahrenheit
    - Area of right angled triangle
    - Size of int, float, double and char variables
30. 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 || 5<4 && 8