

SARDAR PATEL UNIVERSITY
External Examination (CBCS)
B. Sc. (Info & Tech.) – 3rd- Semester (CBCS)
US03CINT02: Problem Solving Methodology & Programming in "C"
25th November, Monday - 2019

Time: 02:00 pm to 5:00 pm

Total Marks: 70

Q-1 Select an appropriate option. 10

1. _____ is a step by step approach to solve any problem.
(a) Process (b) Programming Language (c) Algorithm (d) Compiler
2. _____ is a pictorial representation of an algorithm.
(a) Data Diagram (b) Flow Chat (c) Pie Chart (d) Program
3. What is the standard decision symbol for a flowchart?
(a) Circle (b) Lozenge (c) Diamond (d) Square
4. The range of int data type is _____ bytes.
(a) 2 (b) 4 (c) 8 (d) 16
5. The value can be changed during program execution is known as _____.
(a) Variable (b) constant (c) Operator (d) None of these
6. The combination of ? and : is known as _____ operator.
(a) Ternary (b) Arithmetic (c) dot (d) Relational
7. ____ statement skips the remaining statement of the loop and control transfer to the condition.
(a) Break (b) Continue (c) if (d) switch
8. The Switch expression can be an _____ type.
(a) Integer (b) Float (c) Double (d) None of these
9. A group of character is known as _____.
(a) String (b) Array (c) Function (d) All of these
10. _____ operation is performed on string.
(a) Reading (b) Copying (c) Writing (d) All of these

Q-2 Answer the following questions. (Attempt any TEN) 20

1. What is an algorithm? List characteristics of an algorithm.
2. What is flowchart? List symbols used in flowchart.
3. List rules to draw flow chart.
4. Explain printf() statement with example.
5. Explain short hand operator.
6. Explain if statement with example.

7. Explain break and continue statement in C.
8. Write difference between exit and entry controlled loop.
9. Explain structure programming.
10. What is string? Explain.
11. Explain gets() function with syntax and example.
12. Write the advantage of function.

Q-3

- (a) What is an algorithm? Write advantages and disadvantages of an algorithm. 5
- (b) Write an algorithm to check whether inputted number is prime or not. 5

OR

Q-3

- (a) What is flow chart? Write advantages and disadvantages of flowchart. 5
- (b) Write an algorithm to check whether inputted number is palindrome or not. 5

Q-4

- (a) Explain Basic Structure of C program. 5
- (b) What is Variable? How to declare and initialization of variable with example. 5

OR

Q-4

- (a) What is operator? Explain different operators with example. 5
- (b) Explain basic data types used in C language. 5

- Q-5 Define array? Also explain declaration of 1D and 2D array with syntax and example 10

OR

- Q-5 Discuss in detail do-while, while and for loop. 10

Q-6

- (a) Define function? Explain type of function used in C with example. 5
- (b) Explain following function: (i) strcpy() (ii) strlen() 5

OR

Q-6

- (a) Explain formal parameter and actual parameter with example. 5
- (b) Explain following function: (i) strcmp() (ii) strcmp() 5

— X —
 (2)