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[82]
[E86]

SARDAR PATEL UNIVERSITY
B.SC.:Examination, SEMESTER – III: January -2021
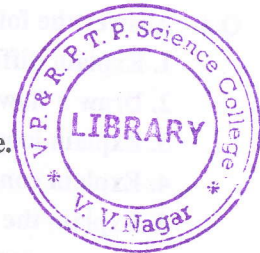## COMPUTER SCIENCE
US03CCSC21
FUNDAMENTALS OF COMPUTER PROGRAMMING USING C

Date: 5/01/2021, Tuesday   Time: 2:00 pm to 4:00pm   Total Marks: 70

Q.1   Multiple choice questions: [10]

1. _____ is a valid variable name.
   (a) int   (b) float   (c) tot_sum   (d) 9Sum

2. What is the standard decision symbol for a flowchart?
   (a) circle   (b) lozenge   (c) diamond   (d) square

3. _____is a pictorial representation of an algorithm.
   (a) Data Diagram   (b) Flow Chart   (c) Pie Chart   (d) Program

4. _____ statement skips the remaining statement of the loop and control transfer to the condition.
   (a) Break   (b) Continue   (c) if   (d) switch

5. For declaring one- dimensional array _____subscript is use.
   (a) One   (b) Two   (c) Three   (d) All of above

6. _____function is use for reading the string with the whitespace.
   (a) gets()   (b) puts()   (c) getc()   (d) putc()

7. When the function is called _____argument is pass.
   (a) actual   (b) formal   (c) actual & formal   (d) none of these

8. Comment on following C statement.
   const int *ptr;
   (a) You cannot change the value pointed by ptr
   (b) You cannot change the pointer ptr itself
   (c) You may or may not change the value pointed by ptr.
   (d) You can change the pointer as well as the value pointed by ptr.

9. What is the base data type of a pointer variable by which the memory would be allocated to it.
   (a) int   (b) float   (c) unsigned int   (d) None of these

10. Which operator is used with a pointer to access the value of the variable whose address is contained in the pointer?
   (a) &   (b) =   (c) *   (d) ->

Q.2   Fill in the blanks and True/False. [08]

1. _____ is a step by step approach to solve any problem.
2. Individual value in array is called _____.
3. User Defined Function can be classified in to _____ category.
4. _____ is an indirection operator.
5. Parallelogram symbol is used to represent output in a flowchart. [True / False]
6. In Array subscript can begin with number zero. [True / False]
7. isdigit( ) function is available in <ctype.h> header file. [True / False]
8. An array can never be sent by call by value. [True / False]

[1]

[P.T.O]

Q.3 Answer the following questions in SHORT (Any 10) :

1. Write advantages and disadvantages of an algorithm.
2. Write advantages and disadvantages of flow chart.
3. Write Rules of variable name.
4. What is string? Write the syntax of declaring string in c. Also give example.
5. Write the syntax of run time initialization of 1D array in c. Also give example
6. What is Escape sequence? Give the example of it.
7. What is user – define function? Give one example of user define function.
8. Explain the isalpha ( ) function.
9. Write the advantages of function.
10. Differentiate between '*' and '&' operators in pointers.
11. What is the use of free()?
12. How multiple values can be return using pointers?

Q.4 Answer the following questions in LONG (Any 4):

1. Explain different data type and operators used in C.
2. Draw a flowchart to check whether given no. is prime or not?
3. Explain looping statements with syntax and example.
4. Explain conditional control statements with syntax and example.
5. Explain the following category of function with example
   1. no argument & with return value   2. with argument & with return value
6. Explain sqrt(), pow(), strrev() & strcmp() functions with syntax and example.
7. Write notes on dynamic memory allocation.
8. What are pointer? Write advantages of using pointers. How it can be used with arrays? Explain pointer to an array using appropriate examples.