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NS – 618

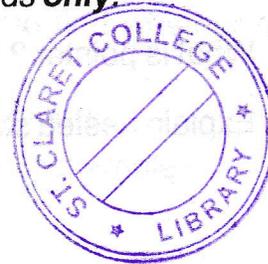
I Semester B.C.A. Degree Examination,  
November/December 2016  
(Y2K8 Scheme) (Repeaters)  
BCA – 105 : COMPUTER SCIENCE  
Programming Concepts Using 'C'

Time : 3 Hours

Max. Marks : 70/60

- Instructions :** 1) Answer **all** questions.  
2) Section – **D** is applicable to students who have taken admission in **2011-12 and Onwards only.**

SECTION – A



I. Answer **any ten** questions :

(10×1=10)

- 1) Define an algorithm.
- 2) Write the general syntax of declaring variable.
- 3) Mention any four valid integer constants.
- 4) Write any two keywords.
- 5) Write the general syntax of conditional operator.
- 6) What is the difference between while and do-while loop statements ?
- 7) How do you initialize one-dimensional array ?
- 8) What is recursive function ?
- 9) Write any two advantages of pointers.
- 10) What are the types of functions ?
- 11) What is macro ?
- 12) What is union ?

SECTION – B

II. Answer **any five** questions :

(3×5=15)

- 13) Write the structure of C program.
- 14) Draw a flowchart to input an integer and reverse it.

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- 15) Explain integer modifiers with an example.
- 16) Write C program to input n numbers and find the sum.
- 17) List out all the input and output statements in C.
- 18) Write a program to generate the following output.

```
*
*   *
*   *   *
*   *   *   *
```

- 19) What is pointer ? Explain pointer with suitable examples.
- 20) Explain nested structures with an example.

### SECTION - C

III. Answer **any five** questions : (5x7=35)

- 21) a) Explain relational operators in C with examples.  
b) Explain format specifiers of integer with examples.
- 22) a) Explain conditional and goto statement with examples.  
b) Write a program to find the GCD of two numbers.
- 23) a) Explain any two decision making with branching statement with examples.  
b) Explain type casting with an examples.
- 24) Explain the different ways of reading and writing strings. Give an example for each.
- 25) a) Write the structure of C-function.  
b) Write a C program to find largest and smallest of N numbers.
- 26) a) What is macro and explain with an example.  
b) Write a C program generate Fibonacci numbers using functions.



- 27) a) What is difference between call-by-value and call-by-reference ?  
b) Write a program to find length of a string using pointers.
- 28) Write a C program to accept student details like student – no., student – name, age using structures and display the same in nice format.

SECTION – D

(Only for 2011-12 and Onwards)

IV. Answer **any one** question. **Each** question carries **ten** marks. **(1×10=10)**

- 29) Write a program to find reverse of an integer and find whether given number is palindrome or not.
  - 30) a) Write a 'C' program to find sum of n natural numbers.  
b) Explain any four string functions with syntax and example.
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