

**End Semester Examination of Semester-I, 2017**

**Subject : BCA**

**Paper : BCA-102**

**Full Marks : 70**

**Time : 3 Hrs**

*The figures in the margin indicate the marks  
corresponding to the question*

*Candidates are requested to give their answers  
in their own word as far as practicable.*

*Illustrate the answers wherever necessary.*

**Group A**

1. Answer **any five** out of eight questions: 2x5=10
- a) What is header file? Give example.
  - b) What is the function of size of operator? Give example.
  - c) Define “break” statement with example.
  - d) Define pointer with example.
  - e) Define conditional operator with example.
  - f) Explain recursion with example.
  - g) Why C language is called case sensitive?
  - h) What is machine level language?

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**Group B**

Answer **any five** out of seven questions : 5×4=20

2. Write a program in C to check whether a year is leap year or not.
3. Explain the term "Pointer to an array".
4. Write a C-Program to find the GCD of two integers.
5. Differentiate between post-increment and pre-increment of one variable. Explain with example.
6.
  - a) What is array? Give example.
  - b) What will be the output of the following code with reason? 2+2  

```
int a[5] = {1, 2, 3, 4, 5};  
int *p = a;  
printf ("%d", *p);
```
7. Write a program in C to find out the sum of all integers which is divisible by 3 or 7 within a range  $n_1$  and  $n_2$ , where  $n_1$  and  $n_2$  both are integers and  $n_1 < n_2$ .
8. Define with examples. 2+2
  - a) Automatic storage class.
  - b) Register storage class.

**Group C**

Answer **any four** out of six questions:

10×4=40

9. a) Write a C-Program that will print prime numbers within a range.
- b) Write a C-Program that will compute the sum of first n even numbers. 6+4
10. a) Write a C-Program to find the factorial of an integer using recursion.
- b) Write a C-Program to find the sum of digit of a number. 5+5
11. Explain with example:  
Call by value and call by reference mechanism. 10
12. a) Write a C-Program to add two n X n matrices.
- b) Write a C-Program to find the largest among three numbers. 6+4
13. a) What is string? Explain with example?
- b) What are the purposes of gets() and puts()?
- c) Write a C-Program to find the length of the string without using "strlen" function. 2+2+6
14. a) What is structure? Explain with example.
- b) Write a C-Program of "Linear Search". 3+7
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