2012

Course : B.C.A (2nd YEAR)

Paper : 3

Time : 3 hours

Full Marks : 75

Candidates are required to give their answers in their

own words as far as practicable.

The questions are of equal value.

Answer any five questions, selecting

at least one from each group.

GROUP –A

1. **What is Network Topology ? Explain the different types of network topologies with the help of diagram.**

2. **What do you mean be communication channel ? Explain any two channels with properties each.**

3. **Discuss the architecture of OSI model ? Explain the functions of each layer in OSI model.**

4. **State and prove De –Morgan's theorem in Boolean algebra.**

5. Write short notes on any three of the following :

    (a) Protocols

    (b) E-mail

    (c) Logic gates

    (d) Dial – up connectivity

Group- B

6. Explain the structure of a C-program with its major elements.

7. What are the different data types available in C-language ? How can you perform type conversion in expression ?

8.   (a) What is loop control ? Differentiate between while ( ) and do- while ( ) loop controls.

    (b) Write a C-program to find the sum of N-natural Numbers using for ( ) loop.

9.   (a) What is recursion ? Write a recursive function to find factorial of n.

    (b) Differentiate between structure and union.

10. **Write short notes on any three of the following :**

   (a) **String**

   (b) **Array**

   (c) **Dynamic memory allocation**

   (d) **File handling functions.**

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