(b) ++x and x++

(c) Logical AND and logical OR operators

(d) >> and << operators

(e) while and do-while loops.

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2015

Time : 3 Hours

Full Marks : 75

The questions are of equal value.

*Answer **five** questions, selecting atleast **two** questions from each Section.*

Section—A

1. What is Computer Network ? Describe different Network Topologies.

2. What is Boolean algebra ? Design a half adder using :

    (a) NAND gates only

    (b) NOR gates only.

3. (a) What is Switching ? Differentiate between circuit switching and packet switching.

(b) How is performance improved in CSMA/CD protocol compared to CSMA protocol ?

4. (a) Discuss 7 layers of OSI Model, with their functionality.

(b) Why transport layer protocols, like TCP and UDP are called end to end protocols ? What is the difference between them ?

5. Write short notes on *any two* of the following :

(i) POP and web-based E-mail

(ii) VSAT

(iii) Internet v/s Intranet

(iv) Growth of internet.

Section—B

6. (a) What is the function of if-statement ? Explain with example.

(b) Write a program in C to determine whether n given number is "odd" or "even" and print the message.

NUMBER IS EVEN

OR

NUMBER IS ODD

Without using else option.

7. What are pointers ? Why are they required ? How do you declare and initialize them ? Write a program to read two integers x and y and swap the contents of the two variables x and y using pointers.

8. What do you mean by strings ? State some library functions for string manipulation. Also create a function in C to find the length of the string.

9. (a) Write a program to find the number of vowels in the given line text.

(b) Differentiate between an array and a structure. Explain with an example.

10. Differentiate between :

(a) Relational operators and lagical operators