

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 a given number is "odd" or "even" and print the message.

1374/78/30/1

(2)

(Contd)

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 logical operators

(b) `++x` and `x++`

(c) Logical AND and logical OR operators

(d) `>>` and `<<` operators

(e) `while` and `do-while` loops.

_____x_____



PPULearn.com