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2017

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 two from each group.

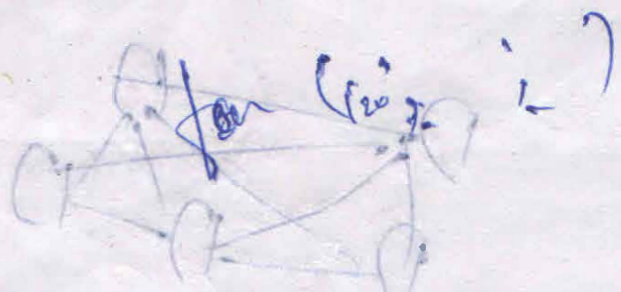
GROUP-A

1. What is OSI model? Explain the functions and protocols of each layer? Compare it with TCP/IP model.
2. What is topology? Explain different types of topologies.
3. What do you mean by guided and unguided media? Explain the different types of guided and unguided media.

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(1)

(Turn over)



4. What is K-Map? Design Half adder using K-Map.
5. Explain the following (any two) :
 - (a) Circuit switching.
 - (b) Optical fibre
 - (c) E-Mail
 - (d) Duality Principle
 - (e) Half Duplex

Group – B

6. What do you mean by C language? Explain the features of C language.
7. Explain different types of operators which are used in C language.
8. (a) Define switch statement. Explain it with syntax and flow-chart.
(b) What do you mean by array? Write a C program to demonstrate the use of an array.
9. (a) What is loop? Why it is necessary in the program? Write the syntax of the for Loop. Draw a control diagram of for loop.

- (b) What will be the output of the following program when executed :

```
void main ()  
{  
    int a = 5;  
    clrscr();  
    for(a = 1 ; a <= 10; a++)  
    {  
        printf ("\na = %d", a);  
        getch();  
    }  
}
```

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

- (a) Function
- (b) Sizeof()
- (c) Preprocessor directive & commands
- (d) File pointer
- (e) Storage classes

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