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Total No. of Questions : 11      Total No. of Printed Pages : 4

OR

Explain functions of each layer of OSI reference model in detail.

9. What is the need of classes in IP addressing ? What are the deficiencies of IPv4.

OR

Explain any two :-

- (i) SMTP.
- (ii) FTP.
- (iii) TFTP.

10. What is the role of AAL and ATM layer ?

OR

What is RSVP. How this protocol used for making the reservation.

11. What is cryptography ? What are symmetric key algorithms ?

OR

How data can be secured over networks ? What are security protocols ?

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B.C.A. V<sup>th</sup> Semester Examination, 2014-15

Data Communication & Networking

Paper - I

Time : 3 Hours]

[Maximum Marks : 85

Note :- All questions are compulsory.

SECTION - 'A'

Objective Type Questions

2×5=10

1. Choose the correct answer :

- (i) This layer establishes, maintains and synchronizes the interaction between communicating systems :
  - (a) Transport Layer      (b) Presentation Layer
  - (c) Session Layer      (d) Data Link Layer
- (ii) \_\_\_\_\_ is the set of techniques that allows the simultaneous transmission of multiple signals across a single data link :

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- (a) Multiplexing (b) Demultiplexing  
 (c) Both a & b (d) None
- (iii) Which one of the following is class C address :  
 (a) 191.255.68.232 (b) 192.255.68.232  
 (c) 255.255.255.255 (d) 239.1.32.68
- (iv) Full form of MPL is \_\_\_\_.
- (v) Which processes does TCP but not UDP use ?  
 (a) Windowing (b) Acknowledgements  
 (c) Source Port (d) Destination port

### SECTION - 'B'

Short Answer Type Questions 5×5=25

2. Give the difference between : (any one)

- (i) MAN and WAN.  
 (ii) Modulation and Demodulation.

3. Define any two :-

- (i) Hub  
 (ii) Repeaters  
 (iii) Routers

4. Explain in brief (any two) :-

- (i) IP addressing - classes.

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- (ii) Network layer (TCP/IP).  
 (iii) Mobile IP.

5. What are the application of ATM network ?

OR

Define PNNI Routing ?

6. Define Worms ? Give example of worms related threats ?

OR

In which devices wi-fi and Bluetooth technologies are used ?

### SECTION - 'C'

Long Answer Type Questions 10×5=50

7. What is modem ? Explain its role in conversion of Analog to Digital signals.

OR

Explain different types of transmission media and their merits and demerits over another media.

8. Explain CSMA with collision detection. Also explain the access method through token ring.

P.T.O.