

**Q5.** Attempt any *two* questions from the following : 10x2=20

- (a) Explain various functions of session layer and presentation layer.
  - (b) What is TCP/IP and OSI model? Compare.
  - (c) What do you mean by internetworking? Discuss the use of network layer in the internet.
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**Printed Pages : 4**



**NBC404**

**(Following Paper ID and Roll No. to be filled in your Answer Book)**

**PAPER ID : 294404**

**Roll No.**

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**MCA-DUAL DEGREE**  
**(SEM. IV) THEORY EXAM. 2014-15**  
**COMPUTER NETWORK**

Time : 3 Hours]

[Total Marks : 100

**Note :** Attempt the questions as indicated.

**Q1.** Attempt any *four* questions from the following : 5x4=20

- (a) Discuss the various performance parameters of data communication networks.
- (b) What do you understand by network topology? Explain the different network topologies used in LAN.
- (c) What are the various categories of network? Discuss.

- (d) Discuss DTE-DCE interface.
- (e) What is the difference between interface and modem in terms of digital transmission?
- (f) Discuss various components of digital communication.

**Q2.** Attempt any *four* questions from the following : 5x4=20

- (a) Discuss various performance parameters of data communication networks.
- (b) What do you understand by multiplexing? Explain TDM.
- (c) What do you mean by attenuation and noise? Discuss.
- (d) Discuss flow control and error control.
- (e) What is the difference between guided and unguided transmission? Discuss.
- (f) Explain synchronous and asynchronous protocols.

**Q3.** Attempt any *two* questions from the following : 10x2=20

- (a) Differentiate among circuit switching, packet switching and message switching.
- (b) Explain working of PPP along with the layers.
- (c) Write short notes on the following :
  - (i) LCP and NCP
  - (ii) Character and bit-oriented protocols

**Q4.** Attempt any *two* questions from the following : 10x2=20

- (a) Explain various technologies used to increase the speed of routers and switches.
- (b) What is congestion control? Analyze the advantages and disadvantages of performing congestion control at the transport layer rather than at the network layer.
- (c) What is fixed routing? Discuss the function of bridges, routers, and gateways.