

Paper ID & Roll No. to be filled in your Answer Book

Roll No.

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**BCA (Fourth Semester)**  
**Even Semester Examination, 2015**  
**DATA COMMUNICATION & COMPUTER NETWORKS**

*Time: 3.00 Hours]*

*[Max. Marks: 70*

**Note:** Attempt any Two of the following: (2×5=10)

1. (a) Write the need and objectives of a data communication network.
- (b) Differentiate ISO-OSI model with TCP/IP model of communication.
- (c) Explain the working of Network Layer.

**Note:** Attempt any Four of the following: (4×5=20)

2. (a) What are the factors of transmission impairments? Describe any four of them.
- (b) Define the term protocol and explain the usage of the following protocols:
  - (i) UDP
  - (ii) HTTP
  - (iii) SMTP
  - (iv) FTP

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- (c) Explain the features of X.25 systems.
- (d) List the services provided by network layers.
- (e) Explain Sliding Window Protocol.

**Note:** Attempt any Two of the following: (2×10=20)

- 3. (a) Explain the various topologies used in constructing computer networks.
- (b) Describe circuit switching, how is it different from message switching and packet switching.
- (c) What do you mean by Frequency Division Multiplexing and Time Division Multiplexing?

**Note:** Attempt any Four of the following: (4×5=20)

- 4. (a) List the features and functions of router.
- (b) Differentiate between digital and analog communication.
- (c) What is LAN? Describe satellite communication.
- (d) Describe the structure of IP addresses along with types of Internet.
- (e) What is Congestion? How can we control it?

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