Code: 14E05406

MBA IV Semester Supplementary Examinations November 2016
DATA COMMUNICATION & NETWORK ANALYSIS
(For students admitted in 2014 only)

Time: 3 hours   Max. Marks: 60

All questions carry equal marks
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SECTION – A
Answer the following: (05 X 10 = 50 Marks)

1   With a neat diagram, explain the functionality of each layer in ISO-OSI reference model.
OR
2   Why error correction is required? Explain any two error correction methods with example.

3   (a) What are the design issues of data link layer? Explain.
     (b) Explain briefly the procedure of broadcasting algorithm for routing of packets.
OR
4   (a) Explain briefly about the simplex protocol for a noisy channel.
     (b) Describe the routing in datagram circuits with a neat diagram.

5   (a) Explain in detail about the flow control and buffering in transport layer.
     (b) Explain briefly about the internetwork fragmentation.
OR
6   Describe briefly about the connection establishment and release in transport layer.

7   (a) Explain the need of security for the messages in network.
     (b) Give a brief note on virtual terminal protocols.
OR
8   (a) Explain the approach of digital signature using public-key cryptography.
     (b) Give a brief note on file transfer protocol.

9   (a) Explain in detail about the distribution of name space in domain name system.
     (b) Discuss in detail about the ISDN services.
OR
10   Write a short note on following:
     (a) DNS messages.
     (b) Internetworking.

SECTION – B
(Compulsory Question)   01 X 10 = 10 Marks

11   **Case study:**
     A 1024-bit message is sent that contains 992 data bits and 32 CRC bits. CRC is computed using the IEEE802 standardized 32-degree CRC polynomial. For each of the following, explain whether the errors during message transmission will be detected by the receiver:
     (a) There was a single-bit error.
     (b) There were two isolated bit errors.
     (c) There were 18 isolated bit errors.
     (d) There were 47 isolated bit errors.
     (e) There was a 35-bit long burst error.