

**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

\*\*\*\*\*

**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.  
**OR**
- 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.  
**OR**
- 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.  
**OR**
- 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.  
**OR**
- 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.

\*\*\*\*\*