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M.C.A. IInd Semester (Main/Back) New Scheme Examination - 2009

MCA

Data Communications and Computer Networks

2C7114

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 32

Instructions to Candidates:*Attempt All Questions. Marks of questions are indicated against each question.*

- 1.. Answer the following question in one line :-
- For n devices in a network, what is the number of cable links required for mesh and bus topology.
 - What is major responsibility of network layer in OSI model.
 - A digital signal has a bit interval of 40 micro seconds. What is bit rate?
 - What is Baud rate?
 - What is Alohanet?
 - What is permanent virtual circuits?
 - Define Firewalls.
 - What is RMON?
 - List any five Routing protocols names.
 - What is cell network? (10×1=10)
2. Answer following questions in not more than 50 words.
- What do you understand by traffic monitoring
 - How Frame Relay technology is better than ISDN.
 - Discuss Virtual Private Network.
 - Discuss various aspects of security
 - Write about computer telephony (5×3=15)
3. Answer the following questions in not more than 150 words.
- Differentiate UDP and TCP
 - Explain various VLAN standards.
 - Explain working of CSMA/CD.
 - Consider the delay of pure ALOHA Versus slotted ALOHA at low load. Which one is less and why?
 - Explain simple Network Management Protocol (5×4=20)

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- What is SONET? What is the function of SONET regenerator? Explain all SONET layers. (10)
 - Define and explain the data link layer in IEEE 802 Project. Why is the layer divided into sublayers? Explain working of each sublayer. (10)
- What do you understand by Authentication Protocol? With an example? Explain the authentication operation using Kerberos. What is the effect if Authentication Server (AS) goes down in terms of Security? (15)

OR

Explain the Process of signal conversion using Pulse Amplitude Modulation (PAM) and Pulse Code Modulation (PCM). Assume that data stream is mode of five 1's, encode this stream using :- (15)

- Polar NRZ - I
- Differential Manchester
- NRZ .

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