

**MASTER OF BUSINESS ADMINISTRATION
CENTUM**

Term-End Examination

June, 2012

**MCTE-022 : VOICE OVER INTERNET
PROTOCOL**

Time : 3 hours

Maximum Marks : 100

Note : Answer any five questions. All questions carry equal marks.

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1. (a) How the voice is packetized and assembled in VoIP ? How can the problems like latency and jitter be minimized in VOIP System ? Explain. 15
 - (b) How can VoIP be used to reduce Communication and Infrastructural cost ? 5
 2. (a) Describe the use of Soft Switches, Gateways, Blade servers, Routers in the VOIP Systems. 15
 - (b) Differentiate between circuit switching and packet switching. 5
 3. (a) What are the requirements and benefits of VoIP Systems and PSTN interconnection ? Explain the various methods and configurations of this interconnection. 15
 - (b) Explain the role of Session Border Controllers. 5

4. Compare and contrast between the following : 20
- Voice over secure IP (VoSIP)
 - Secure voice over IP (SVoIP)
 - Secure voice over secure IP (SVoSIP)
- Focus on the underlying technologies used in each.
5. Assume you are implementing and deploying VoIP services for a national business organisation. Answer the following -
- (a) Write the parameters to calculate VoIP band width requirements. 5
 - (b) Write characteristics of selecting transmission technologies. 5
 - (c) List the end-user equipments. 5
 - (d) Write mechanisms for disaster recovery. 5
6. (a) What is the significance of SIP ? How does it work ? Explain. 10
- (b) Write the step - by - step mechanism for establishment of an IP phone call. 10
7. (a) Discuss the legal issues in international VoIP implementation. 10
- (b) What is a problem in making "Emergency Call" through VoIP Systems ? Explain its possible solutions. 10

8. Explain the following with illustration, example or diagram as needed : **5x4=20**
- (a) Media Gateway Control Protocol
 - (b) Evolution of VoIP
 - (c) Skype Protocol
 - (d) Least Cost Routing.
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