Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject Code: 725103 Date: 20-06-2014

Subject Name: Information System and Network Security

Time: 02:30 pm - 05:00 pm Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain Mainframe, client-server and web based architecture for information system.	**07**
	(b)	Define threat, vulnerability and countermeasure. Also distinguish between information level threat and network threat with example.	**07**
Q.2	**(a)**	Explain various types of assets and provide a scheme for classifying threats to information security.	**07**
	(b)	Explain protection of laptop using physical and logical access control measures.	**07**
		OR	
	(b)	Discuss security policies in mobile devices and cryptographically generated addresses (CGA) technique.	**07**
Q.3	**(a)**	Explain hierarchical relation between policies, standards and guidelines. Also discuss types of policies for information system security in organization.	**07**
	(b)	Discuss roles of owner, custodian and user in information classification.	**07**
		OR	
Q.3	**(a)**	Explain confidentiality, integrity, availability (CIA) for InfoSec and define authorization.	**07**
	(b)	Attempt followings.	
		i. Define Steganography, Nor-repudiation, spoofing	**03**
		ii. Discuss credit card frauds in online transaction environment	**02**
		iii. List out some characteristics of computer viruses.	**02**
Q.4	**(a)**	Distinguish between quantitative and qualitative risk assessment.	**07**
	(b)	Explain conventional encryption techniques in detail.	**07**
		OR	
Q.4	**(a)**	Explain risk analysis/risk management process and discuss safeguard.	**07**
	(b)	Explain RSA algorithm with example.	**07**
Q.5	**(a)**	Briefly explain OSI security architecture.	**07**
	(b)	Explain following attacks.	
		i. DoS(denial of service)	**02**
		ii. DDoS	**02**
		iii. Sql Injection	**03**
		OR	
Q.5	**(a)**	Explain message digests and steps in creation of digital certificate.	**07**
	(b)	i. Differentiate between active attack and passive attack.	**03**
		ii. What is the purpose of Diffie-Hellman algorithm	**02**
		iii. What is preventive control and corrective control?	**02**

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