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B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019

Seventh Semester

IT16702 – INFORMATION SECURITY*(Information Technology)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**Answer **ALL** questions**PART A - (10 X 2 = 20 Marks)**

	CO	RBT
1. List down the layers of Security required for an organization.	1	R
2. Define Espionage.	1	U
3. List out the methods involved in Steganography.	2	R
4. Define Avalanche effect.	2	U
5. Compare Honeypots and Honeynets.	3	AN
6. What are the merits of Digital Forensics?	3	R
7. What is deterrence?	4	R
8. Differentiate public and private laws.	4	AN
9. What are the steps in executing the project plan?	4	R
10. List out the non technical aspects of Implementing Information Security.	4	R

PART B - (5 X16 = 80 Marks)

11. (a) (i) Write short notes on various approaches of Information Security.	(8)	1	U
(ii) Brief about the critical characteristics of Information.	(8)	1	U
(OR)			
(b) (i) Explain the phases of Secure SDLC model with a neat diagram.	(8)	1	U
(ii) Discuss about the history of Information security.	(8)	1	U

12. (a) (i) Apply RSA Algorithm to compute the cipher text for the given plain text "CODE". Assume the prime numbers $p = 7$ & $q = 19$. Public key $e = 11$. (Note: consider the value of the alphabets from 0 to 25). **(8) 2 AP**
- (ii) Encrypt the text "Department" using play fair matrix for the keyword "Establishment". **(8) 2 AP**
- (OR)**
- (b) (i) Apply Diffie Hellman key exchange algorithm to Compute shared secret key between two users Alice and Bob. Given prime number $p = 199$, primitive root $k = 6$, secret values of Alice and Bob are $A = 40$ and $B = 50$ respectively. **(8) 2 AP**
- (ii) How Transposition technique differs from Substitution technique? Generate the cipher text for the message "The secret information revealed can be used as a password for the voting process." using RailFence technique for row count 4? **(8) 2 AP**
13. (a) Illustrate various types of firewall along with its application in detail. **(16) 4 U**
- (OR)**
- (b) Explain how Kerberos and VPN's are used to protect remote connections with necessary illustrations. **(16) 4 U**
14. (a) Discuss in detail about the various International law and Legal bodies. **(16) 3 AN**
- (OR)**
- (b) Elaborate on code of ethics followed in professional organization. **(16) 3 AN**
15. (a) With a neat sketch illustrate about Information Security Project Management and Planning. **(16) 4 U**
- (OR)**
- (b) (i) Explain the process involved in ISMS certification and accreditation. **(8) 4 U**
- (ii) Brief about NIST Model. **(8) 4 U**