

M.E. Second Semester (Computer Science & Information Technology) (New-CGS)  
**13191 : Information Technology & Security (ITS) : 2 RNME 3**

P. Pages : 2

Time : Three Hours



**AW - 3879**

Max. Marks : 80

- Notes :
1. All question are compulsory.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answer necessary with the help of neat sketches.

1. a) State & explain the generic weakness of the Merkle – Damgard design of hash function. 6  
b) Explain the structure & working of "Quantum Cryptography" with BB84 protocol. 7

**OR**

2. a) What is public key cryptography? Explain IRSA with suitable example. 7  
b) State & explain "Needham -Schroeder" public key based authentication protocol. 6
3. a) State & explain 3G Architecture in mobile network. 7  
b) State & explain software security testing cycle. 6

**OR**

4. a) State & explain the working of security Target (ST) and Protection Profile (P.P.) 7  
b) Explain how security functions in Authentication centre in 3G Network. 6
5. a) What is risk Governance? What are the criteria for evaluating risk governance. 7  
b) What is 'Dumpster Diving'? How to prevent it. 6

**OR**

6. a) What are the methods used for Internet foot printing? 7  
b) Explain the various phases of digital investigation process. 6
7. a) Explain working of network scanner with "Nessus". 7  
b) Explain the working of 'sniffers' along with its types. 7

**OR**

8. a) Explain the concept of "Spooting" with its types. 7  
b) Explain the working of following password crackers. 7  
i) John & Ripper ii) Coin & Abel

9. a) State & explain how "session hijacking is achieved. 6
- b) What is "Buffer Overflow"? How it is detected & prevented. 7

**OR**

10. a) State & Explain types of DOS attacks. 6
- b) Explain how Trojan works? Explain how it is detected & prevented. 7
11. a) Explain mail vulnerabilities in case of "SMTP" & "POP". 7
- b) State & explain various vulnerabilities with respect to web server. 7

**OR**

12. a) State & explain 'Linux Vulnerabilities'. 7
- b) State & explain how Incident Handling works. 7

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