

Code No: 157CC

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, January/February - 2023****INFORMATION SECURITY****(Information Technology)****Time: 3 Hours****Max. Marks: 75****Note:** i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A****(25 Marks)**

- 1.a) What do you mean by security service? [2]
- b) What is Cryptanalysis? [3]
- c) Describe the use of public key Cryptography. [2]
- d) What are the requirements of MAC function? [3]
- e) What is Digital Signature? [2]
- f) What are the authentication applications? [3]
- g) What is TLS? [2]
- h) Write about Security Association. [3]
- i) What do you mean by Worms? [2]
- j) What is the function of firewall? [3]

**PART-B****(50 Marks)**

2. Explain in detail about the Blowfish Algorithm. [10]  
**OR**
- 3.a) Explain about Random number generation.  
b) What is traffic confidentiality? [5+5]
4. Explain the Diffie –Hellman key exchange algorithm. [10]  
**OR**
5. Explain the SHA 512 algorithm. Illustrate with an example. [10]
6. Explain in detail about Kerberos. [10]  
**OR**
7. What do you mean by PGP? Explain the working of PGP. [10]
8. What is IP Security? Discuss in detail about IP Security Architecture. [10]  
**OR**
9. Explain in detail Secure Electronic Transaction. [10]
10. Discuss about:  
a) Intruders                      b) Trusted system. [5+5]  
**OR**
11. Explain in detail about Intrusion Detection System. [10]

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