

R18

Code No: 157BB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, July/August - 2023

CRYPTOGRAPHY AND NETWORK SECURITY

(Computer Science and Engineering)

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) Differentiate between Plain Text and Cipher Text. [2]
- b) Briefly explain about Steganography. [3]
- c) What are Symmetric Key Ciphers? [2]
- d) Write a short note on Blowfish algorithm. [3]
- e) What is Message Authentication? [2]
- f) Write a short note on Digital Signatures. [3]
- g) Explain briefly about Web security Considerations. [2]
- h) Write a short note on Mobile Device Security. [3]
- i) How secure inter branch payment transactions are performed? [2]
- j) Write a brief note on Internet Key Exchange. [3]

PART – B

(50 Marks)

- 2.a) Explain with a neat diagram A model for Security. [5+5]
 - b) Differentiate between Symmetric and Asymmetric Key Cryptography. [5+5]
- OR**
- 3.a) Write a brief note on Security Mechanisms. [5+5]
 - b) Explain in detail about Substitution Techniques. [5+5]
- 4.a) Explain in detail about RC5 algorithm. [5+5]
 - b) Write a brief note on Diffie-Hellman Key Exchange. [5+5]
- OR**
- 5.a) Write a short note on Stream Ciphers. [5+5]
 - b) Explain the implementation of Knapsack Algorithm. [5+5]
- 6.a) Explain in detail about Authentication requirements. [5+5]
 - b) Explain in detail about X.509 Authentication Service. [5+5]
- OR**
- 7.a) Write a detailed note on HMAC. [5+5]
 - b) Explain in detail about Kerberos. [5+5]

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- 8.a) Explain in detail about Secure Shell (SSH).
- b) Write a brief note on IEEE 802.11 Wireless LAN.

[5+5]

OR

QA QA QA QA QA QA QA G

- 9.a) Discuss in detail about Wireless Security.
- b) Explain in detail about Secure Socket Layer.

[5+5]

- 10. Explain in detail about S/MIME.

[10]

OR

- 11.a) Write a detailed note on Encapsulating security payload.
- b) Explain briefly about Authentication Header.

[5+5]

QA QA QA QA QA QA QA G

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QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G