Code No: 5458AD

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech I Semester Examinations, July/August - 2021
NETWORK SECURITY AND CRYPTOGRAPHY
(Computer Science and Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

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1.a) With a neat diagram explain the model of network security.
 b) Discuss different security services in detail.   [7+8]

2.a) Explain the Hill cipher technique in detail.
 b) Describe different transposition cipher techniques.   [7+8]

3.a) With a neat flow diagram describe the working of single round of DES.
 b) Discuss different principles of public key cryptography.   [8+7]

4.a) Perform the Encryption and decryption for p =7, q = 11, e = 17 and m = 8 using RSA algorithm.
 b) Explain about the Diffie-Hellman key exchange algorithm.   [8+7]

5.a) What are the different ways to distribute the keys? Explain.
 b) Write about Digital signatures.   [8+7]

6.a) Discuss the Symmetric key distribution using symmetric encryption.
 b) Describe in detail the overall operation of CMAC.   [8+7]

7.a) Discuss different web security considerations.
 b) Discuss the SSH Protocol Stack.   [7+8]

8.a) Briefly explain Encapsulating Security payload in IP security
 b) What is meant by single sign on? Explain.   [7+8]

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