

H Roll No.

TMC-406

**M. C. A. (FOURTH SEMESTER)
MID SEMESTER EXAMINATION, 2021**

**NETWORK SECURITY AND
CRYPTOGRAPHY**

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any *one* of the sub-questions.

(ii) Each question carries 10 marks.

1. (a) Define the Components necessary for the network security against attacks in any organization. Explain each component in detail. 10 Marks (CO1)

OR

- (b) List and briefly define types of cryptanalytic attacks and their countermeasures. 10 Marks (CO1)

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TMC-406

2. (a) Name and explain the five categories into which the security services can be divided.

10 Marks (CO1)

OR

- (b) Enlist the important Security Mechanisms and briefly discuss RFC. 10 Marks (CO1)

3. (a) Explain the cryptanalysis attacks in detail with an example. 10 Marks (CO1)

OR

- (b) Differentiate between the active and passive attacks with 2 example for each of them. 10 Marks (CO1)

4. (a) Find the Ciphertext for the message : 'Instrumentz' with key : 'Monarchy' using PlayFair Cipher. 10 Marks (CO2)

OR

- (b) Discuss the different categories of the Substitution techniques in detail.

10 Marks (CO2)

(3)

5. (a) How block cipher is different from stream cipher ? Name and explain an encryption mechanism of each type. 10 Marks (CO2)

OR

- (b) Perform encryption and decryption using shift cipher with key = 7 Plain Text : WE WLL ATTACK FROM NORTH END.

10 Marks (CO2)

TMC-406