

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER VIII- EXAMINATION –WINTER-2023

Subject Code:4480603

Date: 11/12/2023

Subject Name: Network Security

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

- 1. Attempt all questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. Use of simple calculators and non-programmable scientific calculators are permitted.**

- Q.1 (a)** Explain OSI security architecture in detail. **07**
- (b)** What are models of network security? Explain its components. **07**
- Q.2 (a)** What is the difference between symmetric key cryptography and public key cryptography? **07**
- (b)** 1. What are the types of cryptography? Explain any Two. **03**
2. What are the principles of cryptography? Explain any Three. **04**
- OR**
- (b)** What is confidentiality and authentication in cryptography? Explain in detail. **07**
- Q.3 (a)** Discuss Symmetric Block Cipher? Explain AES with suitable diagram. **07**
- (b)** What is public key cryptography with example? **07**
- OR**
- Q.3 (a)** What is the difference between authentication header and Encapsulating Security Payload? **07**
- (b)** What is key explain public key and private key explain with diagram. **07**
- Q.4 (a)** 1. What is an Audit record in IDS? **03**
2. What is the difference between SSL and HTTPS? **04**
- (b)** What is an example of wireless LANs? Explain it. **03**
What is DNA? Explain an example of a distributed denial of service attack? **04**
- OR**
- Q.4 (a)** Explain HMAC algorithm with suitable diagram. **07**
- (b)** 1. Discuss the Man-In-The-Middle attack with suitable diagram. **03**
2. What is the difference between AES and DES **04**
- Q.5 (a)** What are the most common types of malicious software? Explain any three. **07**
- (b)** What are firewall and its characteristics? **07**
- OR**
- Q.5 (a)** What is wireless LAN? Explain common types of wireless devices. **07**
- (b)** How to configure in firewall in the system? **07**
