PG Even Semester Examination, September, 2023

COMPUTER SCIENCE

(8th / 2nd Semester)

Course No.: MCS-556

(Cyber Security)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

The figures in the margin indicate full marks for the questions.

UNIT-I

Answer (Q. 1 or Q. 2) and (Q. 3 and Q. 4) and (Q. 5 or Q. 6)

1. (a) What is security principles? Explain the confidentiality and authentication security principles with example. 2+5=7

   (b) What is Ethical and legal issues in security principle? Explain the various classification of Ethical issues in the security system. 2+5=7

2. (a) What is a Cyber Attack? Explain the various motive behind cyber attacks happen. 2+5=7

   (b) What is spoofing? Explain the different types of spoofing. 2+5=7

3. (a) Write the difference between DoS and Distributed Denial of Service (DDoS) attacks. 4

(b) Explain the various limitations associated with VPNs which impact their usability and corproate cybersecurity. 4

(c) What is Phishing attack? Explain the importance of phishing risk. 2+4=6

4. (a) What is a Virus? Differentiate among Viruses, Worms and Trojan Horses. 2+4=6

(b) What is pharming? Differentiate between phishing and pharming. Explain how to protect yourself against pharming. 2+2+4=8

5. What is a VPN? Explain with propert steps why online transactions are safer when a VPN is used. 2+5=7

6. What is firewall? Explain the various types of firewall? 2+5=7

UNIT-II

Answer (Q. 7 or Q. 8) and (Q. 9 and Q. 10) and (Q. 11 or Q. 12)

7. (a) What are the medium ocean control protocols? State the characteristics of medium access control protocols. 2+4=6

(b) State the principle of CSMA/CD protocol. Explain the basic mechanism of CSMA/CD protocol. 2+6=8

8. (a) State the function of the network layer of the OSI reference model. 4

(b) Explain the composition and structure of the Internet Protocol Suite with a neat block diagram. 10

9. (a) Write a brief note on the type of security threats encountered in the web. 8

(b) What are the active and passive attacks? 3

(c) What is IPSEC? Explain. 3

10. What is secure socket layer? Explain secure socket layer protocol and their functions. 14

11. Explain SSL record protocol and SSL record format. 7

12. Explain SSL handshake protocol. 7

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