

**67194-N**

**MCA-2 Year Course- 4th Semester w.e.f. 2020-21**

**(Only Re-appear) Examination, November-2023**

**CYBER SECURITY & BLOCKCHAIN TECHNOLOGY (i)**

**Paper -21MCA24DA1**

*Time allowed : 3 hours]*

*[Maximum marks : 80*

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*Note : Attempt five questions in all. Question no. 1 is compulsory. In addition to compulsory question, attempt four more questions selecting one question from each unit.*

**Compulsory Question**

1. (i) How does vulnerability scanning work?
- (ii) What are sniffers?
- (iii) What does a packet filter do?
- (iv) What is web application security?
- (v) How to exploit attack vectors?
- (vi) What is phishing? Discuss the mitigation strategy of it.
- (vii) Discuss working of smart contract.

- (viii) How a sidechain is created in blockchain?

### Unit-I

2. (a) Who are cyber criminals? Explain different categories of cyber criminals.
- (b) What is network sniffer? How does a sniffer work? How does a packet sniffer can be detected? Discuss the packet sniffer mitigation.
3. (a) What is banner grabbing? Discuss different types of it. How banner grabbing can be prevented?
- (b) Compare various port and service tools with each other with their functioning.

### Unit-II

4. (a) Explain the main techniques hackers can use to get hold of password.
- (b) What is port forwarding? Why is it important? Discuss various types of port forwarding.
5. (a) What is VPN? How does VPN work? Discuss the benefits of a VPN connection.

- (b) Explain about password cracking mechanism and tools used for it.

### Unit-III

6. (a) What is DoS? How it occurs? Discuss the prevention methods for DoS.
- (b) What is steganography? Discuss various techniques of steganography.
7. (a) What is keyloggers? Explain its different types with their advantages and disadvantages.
- (b) What is destruction of data? Explain three major method to destroy the data.

### Unit-IV

8. (a) What is the purpose of digital signature? Explain Memory hard algorithm in brief.
- (b) What is Ethereum? How it is constructed? Discuss.
9. (a) How optimization can be achieved using Merkle Patricia Tree? Discuss.
- (b) Discuss the use of blockchain in IoT.