

- (c) What problems can be solved by blockchain ? 6
9. (a) How blocks are linked in blockchain ? 5
- (b) What is the importance of blockchain in  
cryptocurrency ? 6
- (c) What is the difference between Prof-of-work and  
Prof-of-state ? 5

Roll No. ....

**67194-N**

**MCA 4th Semester 2 yr. Course**  
**Examination – July, 2022**

**CYBER SECURITY & Blockchain Technology (I)**

**Paper : 21MCA24DA1**

**Time : Three Hours ]**

**[ Maximum Marks : 80**

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Questions Number 1 will consists of total 8 parts (short answer type questions) covering the entire syllabus and will carry 16 marks. In addition to the *compulsory* question there will be *four* units i.e. Unit-I to Unit-IV. Questions Number 1 will be *compulsory*. In addition question, student will have to attempt *four* more questions selecting *one* question from each Unit.

1. (a) What are the advantages of cyber security ?
- (b) State the purpose of packet filter.

- (c) What is Encryption ? Define.
  - (d) What is MITM attack ?
  - (e) What is Nonce range ?
  - (f) Explain about computers as a target in the commission of cybercrimes.
  - (g) Give an overview of Indian IT ACT, 2000.
  - (h) What is a worm ? Why are worms dangerous ?
- $2 \times 8 = 16$

#### UNIT - I

- 2. (a) Explain the categories of Computer Security. 5
- (b) Describe security risk and analysis. 5
- (c) Describe how Metasploit can be used as effective vulnerability scanning tool. 6
- 3. (a) Explain the architecture of Open VAS. 8
- (b) Explain the concept of Network Reconnaissance and describe any tool that supports it. 8

#### UNIT - II

- 4. Outline the working of the following password cracking and brute-force tools. 16
- (a) John the Ripper

67194-N-550-(P-4)(Q-9)(22) ( 2 )

- (b) L0htr4ck
- (c) Pwdump
- (d) HTCHYdra
- 5. (a) Explain types of Intrusion Detection Systems. (IDS). 8
- (b) Explain about Nikto web vulnerability scanner. 8

#### UNIT - III

- 6. (a) Explain the ethical aspects of Digital Forensics. 8
- (b) What is Cyber Crime ? How is it classified ? What are the different types of cyber crimes towards an individual ? 8
- 7. (a) What is password cracking ? List four guidelines that need to be followed to avoid password cracking. 8
- (b) What is SQL injection ? Write steps for SQL injection attack on Insert, Update and Delete. 8

#### UNIT - IV

- 8. (a) What is a block in blockchain technology ? 4
- (b) What is the difference between Bitcoin blockchain and Ethereum blockchain ? 6

67194-N-550-(P-4)(Q-9)(22) ( 3 )

P. T. O.