

67107-N

M.C.A. 3rd Semester (MCA 2 Year Programme)

w.e.f. 2021-2022 Examination, November-2023

NETWORK PROGRAMMING ELECTIVE-II (i)

Paper-21MCA23DB1

Time allowed : 3 hours]

[Maximum marks : 80

**Note:** *Question Number 1 will consist 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. Question No. 1 will be compulsory. In addition question, student will have to attempt **four** more questions selecting **one** question from each unit.*

1. (a) What is Data encryption?
- (b) What are the difference among encoding, encryption and hashing?
- (c) What is the main function of a firewall?
- (d) Discuss select and poll functions.
- (e) What is the difference between cat command and more command?
- (f) How to change the password in UNIX OPERATING SYSTEM?
- (g) Differentiate client and server.
- (h) What are socket options?

8×2=10

## Unit-I

8×2

2. (a) What is I/O multiplexing? Explain different types of Synchronous and asynchronous I/O models. 8
- (b) Write an explanation on the following functions calls by specifying the syntax, operation and necessary: 8
- (i) Listen
  - (ii) recvfrom
  - (iii) bind
  - (iv) socket
3. (a) Write briefly about lack of flow control with UDP. List the difference between TCP and UDP. 8
- (b) What is I/O multiplexing? Explain different types of Synchronous and asynchronous I/O models. 8

## Unit-II

4. (a) What is a DLL and what their usages and advantages? 8
- (b) What are the advantages of Java Beans? 8
5. Explain with diagrams the following I/O models provided by UNIX:
- (i) Blocking I/O model

- (ii) Non Blocking I/O model
- (iii) Signal driven I/O 16

### Unit-III

- 6. (a) Describe the transport layer of WAF. 6
- (b) Define in brief, "Wireless Application Environment (WAE)". 6
- (c) Difference between RMI and CORBA. 4
- 7. (a) Explain in detail the various aspects of security. 8
- (b) What is the difference between a digital signature and an electronic signature? 8

### Unit-IV

- 8. (a) Explain the various components of a URL with an example stating the various methods of extract each component. 8
- (b) Explain in detail the General format of an HTTP request security. 8
- 9. (a) What are the differences between HTTP Get and HTTP Post? 6
- (b) Write the various steps which are involved in creating a server program. 6
- (c) What is the use of URL class? 4