

Roll No.

67107-N

**MCA 3rd Semester (MCA 2 Year
Programme) w.e.f. 2021-2022
Examination – December, 2024**

NETWORK PROGRAMMING ELECTIVE-II (i)

Paper : 21MCA23DB1

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 : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) How to change the password in UNIX OPERATING SYSTEM ? $8 \times 2 = 16$
- (b) How many types of files are there in UNIX ?
- (c) How to display the contents of a file ?
- (d) What is the role of server ?
- (e) What are the basic operations of Server Socket ?

(f) Distinguish between absolute URL and relative URL.

(g) What is retransmission in networking ?

(h) What is difference between IPv4 & IPv6 ?

UNIT - I

2. (a) What is OSI model and how it communicates data in networks ? 8

(b) What are the functions of a transport layer in networking ? How it provides logical communication between application processes running on different hosts ? 8

3. (a) Describe the OSI reference model and UNIX Standards. 8

(b) Write briefly about the TCP and UDP connection establishment, format and Buffer sizes. 8

UNIT - II

4. (a) Explain with diagrams the following I/O models provided by UNIX : 16

(i) Blocking I/O model

(ii) Non Blocking I/O model

(iii) Signal driven I/O

5. (a) How do I open a socket ? 8

(b) What is a DLL and what their usages and advantages ? 8

UNIT - III

6. (a) What are the different layers of WAP architecture? 8
(b) What is a firewall? How do you set it up? 4
(c) Difference between RMI and CORBA. 4
7. (a) Define in brief, "Wireless Application Environment (WAE)". 8
(b) Explain in detail the various aspects of security. 8

UNIT - IV

8. (a) Consider the TCP Echo Server and TCP Echo Client application and discuss what happens to the client when the server process crashes? 8
(b) What is the difference between client-side and server-side programming language? 8
9. (a) Describe the getaddrinfo function as applicable to IPV6. Write briefly about IPV4 socket options. 8
(b) Explain the purpose and syntax of select system call. What conditions cause select to return "ready" for sockets? 8