

**BACHELOR OF COMPUTER
APPLICATIONS / MASTER OF
COMPUTER APPLICATIONS
(REVISED) (BCA/MCA)**

Term-End Examination

June, 2026

**MCS-022 : OPERATING SYSTEM CONCEPTS
AND NETWORKING MANAGEMENT**

Time : 3 Hours

Maximum Marks : 100

Weightage : 75%

Note : *Question No. 1 is compulsory. Attempt
any **three** questions from the rest.*

1. (a) (i) Write the Linux command to display 3 files : “file-1”, “file-2” and “file-3” on the terminal. 1

- (ii) In Linux, how would you redirect :
- The output to “out-file”
 - The error messages to “err-file”
 - Both the output and error messages to “one-file” 3
- (iii) Write the Linux command to point out a text file on the terminal from 17th line onwards. 2
- (iv) In Linux, how would you check a file system consistency ? 2
- (v) Describe what the “wall” command does in Linux. Is it suitable for ordinary users ? 2
- (b) (i) How does multiprogramming improve system’s performance compared to buffering ? 5

- (ii) Explain how the Trivial File Transfer Protocol (TFTP) works. How does it differ from FTP and where is it used ? 5
- (c) How does disk mirroring differ from disk duplexing ? Describe the types of fault tolerance provided by each of the RAID levels from 0 to 6. 2+8
- (d) (i) What is the File Replication Service (FRS) in windows 2000 ? 2
- (ii) Describe the support available in windows 2000 for network printing and managing print jobs. List the steps involved in sharing a printer on the network if it is currently not shared. 6+2

2. (a) What are device files in Linux ?

Describe the fsck utility that keeps the
file system consistent. 6

- (b) Describe the peer-to-peer networking
features in Windows 2000. 4

- (c) What is cryptography ? Explain
how it works to provide security.
Bring out the difference between
symmetric and asymmetric key
cryptography. What are some
alternatives to cryptography based
authentication ? 10

3. (a) Describe with examples what filters and
pipelining are in Linux. 6

- (b) What are the different kinds of modifications that can be made to an existing user account in Windows 2000 ? 4
- (c) What is a repeater and why is it needed ? At what layer of the OSI protocol model does it operate ? Explain its features and characteristics. 10
4. (a) What is a Distributed Operating System ? Describe its features, characteristics and working. 10
- (b) How do Trust Relationships work in Windows 2000 ? What is Kerberos ? Explain how it helps in identifying and authenticating network clients. 10

5. Write short notes on the following : 5×4=20

- (a) Communication Protocols
- (b) “Write” command in Linux
- (c) Distributed file system in Windows 2000
- (d) Hardening services in Windows 2000
- (e) Bus Topology

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