

**MCA (Revised) / BCA (Revised)**

**Term-End Examination**

**February, 2021**

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

*Time : 3 hours*

*Maximum Marks : 100*

*(Weightage : 75%)*

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**Note :** *Question no. 1 is compulsory. Answer any three questions from the rest.*

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1. (a) Draw a diagram of Simple Network Management Protocol (SNMP) architecture and show how it is used to manage network devices. 10
- (b) List and describe various security features in WINDOWS 2000 O/S. 10
- (c) Write LINUX/UNIX commands for the following : 5×2=10
  - (i) To list all the files in a directory that have 3 characters in the file name.

- (ii) To set file permissions of a file ABC to *read, write, execute* for all (user, group and others)
  - (iii) To kill the process using its process-id.
  - (iv) To rename an existing directory.
  - (v) To route the command's output to the terminal and to a file using “**tee**” command.
- (d) Explain the abstract model of virtual memory used in Linux O/S with the help of a suitable diagram to explain its working. 10
- 2.** (a) List and explain the 3 file systems supported by WINDOWS 2000. Also describe what is file replication service. 10
- (b) What is stored in the Registry of WINDOWS XP ? Discuss various components of a Registry. 5
- (c) What is packet switching ? What are its 2 approaches ? Briefly describe. 5
- 3.** (a) List and explain the different states of a process in LINUX. 6
- (b) What is a Repeater ? At which level of OSI model is it used and how ? 6
- (c) Define a protocol. List and explain any two application layer protocols. 8

4. (a) What are the security services provided by IPsec ? Discuss the two IPsec components in WINDOWS 2000. Also explain the policy options for IPsec implementation. 10
- (b) Explain the following w.r.t. DNS : 10
- (i) DNS Architecture
- (ii) DNS Zones
5. Write short notes on any **four** of the following : 4×5=20
- (a) “Hardening” in WINDOWS 2000 O/S
- (b) Unguided Transmission Media
- (c) Differences between “Diff” and “Cmp” commands of LINUX with examples
- (d) Memory Management in LINUX O/S
- (e) Firewalls
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