M.C.A. (REVISED)/B. C. A. (REVISED)

Term-End Examination

June, 2022

MCS-022 : OPERATING SYSTEM CONCEPTS AND NETWORKING MANAGEMENT

Time : 3 Hours   *Maximum Marks : 100*

Weightage : 75%

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Note : (*i*) *Question No. 1 is compulsory.*

(*ii*) *Attempt any **three** questions from the rest.*

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1. (a) Explain the output of the following Linux/Unix commands :   5

    (i)   date who

    (ii) diff abc.txt xyz.txt

    (iii) man who

    (iv) ls-a

    (v)   pwd

(b) Explain the concept of filters and pipelines in Linux operating system. Give example for each. 5

(c) What is the default location of print spooler in Windows NT ? Name the different permissions that can be set for printers in Windows NT. Explain the significance of each. 5

(d) What do you understand by disk striping ? What are the limitations of disk striping ? List the RAID levels. 5

(e) Describe the structure and characteristics of any *two* types of guided transmission media. 5

(f) Differentiate between data terminal equipment and data transmission equipment. Give example of each. 5

(g) What is VPN ? Write the purpose of VPN and name the VPN technologies supported by Windows 2000. 5

(h) Explain the architecture of Simple Network Management Protocol (SNMP), with the help of a suitable diagram. 5

2. (a) Write Linux shell script that will convert all numeric digits present in a text file into "*". The path of the text file would be given by the user. Support your code with suitable comments for better readability.

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(b) Compare multiprogramming and multitasking. Give suitable example for each. 10

3. (a) List and explain various network topologies. Write *one* advantage and disadvantage of each. 10

(b) With reference to security system and facilities, explain the following : 10

(i) System Access Control

(ii) Data backup and off-site retention

4. (a) Discuss the functionality of user and kernel modes of Windows 2000 operating system. 10

(b) Explain the process and thread management in Linux Operating System.   10

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

(a) Microkernel Architecture

(b) Data Backup Strategies

(c) Auditing in Windows 2000

(d) Group policy in Windows 2000

(e) Active directory in Windows 2000