

MCA (Revised) / BCA (Revised)

Term-End Examination

December, 2016

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

Time : 3 hours

Maximum Marks : 100

(Weightage 75%)

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

1. (a) (i) Describe the purpose and working of the Telnet protocol. How is rlogin different from, and simpler than Telnet ? 5
- (ii) What are dialog boxes and icons ?
What is their utility ? 5
- (b) Explain the concept of a virtual machine in networking with the help of a diagram. Describe how it is useful. 10
- (c) Describe the pre-installation checks and information gathering that need to be carried out before installing LINUX on a computer. 10
- (d) Explain how the Encrypting File System works. Discuss the importance of Encrypting File System. 10

2. (a) What is the Active Directory in Windows 2000 ? Describe, with the help of a diagram, the logical structure of the Active Directory. 10
- (b) Explain the following in the context of packet switching in data communication : 10
- (i) Datagram Approach
 - (ii) Virtual Circuit Approach
3. (a) (i) It is desired to create a file in LINUX called "newfile" that consists of the last 15 lines of a file "file1" followed by the last 6 lines of a file "file2". Both "file1" and "file2" already exist. Write the sequence of commands in LINUX to achieve this. $2\frac{1}{2}$
- (ii) Write the LINUX command to take a text file named "source-file" as input and circularly shift every small case letter forward by 5 characters, such that "a" becomes "f", "z" becomes "e" and so on, but "A", "3", "\$" and other such characters are left unchanged. $2\frac{1}{2}$
- (iii) Write the LINUX command to change the password of a user called "jyoti" to "D93ef!kM\$". Who can run this command ? $2\frac{1}{2}$
- (iv) Write the LINUX command to find the number of users currently logged into the system ? $2\frac{1}{2}$

- (b) Write a LINUX shell script that takes exactly 3 filenames as arguments and outputs an error message otherwise. In the first file, all lower case letters are changed to upper case. The second file is unchanged. In the third file, all upper case letters are changed to lower case. New files are created to hold these outputs. 10
4. (a) How does the SNMP application work ? Why is it usually run over UDP ? Describe its architecture and usage. 10
- (b) (i) Name any six services offered by the Windows 2000 server. 3
- (ii) What is a 'Virtual Private Network' and how is it supported on the Windows Operating System ? 2
- (iii) What is a domain in Windows 2000 ? How does it enhance its functionality ? 3
- (iv) How can you map a network resource to a drive letter in Windows 2000 ? 2
5. Write short notes on the following : 4×5=20
- (a) Trivial File Transfer Protocol (TFTP)
- (b) Filters and Pipelines in LINUX
- (c) Windows Explorer
- (d) Hybrid Network Topologies