MCA (Revised) / BCA (Revised)

Term-End Examination

December, 2022

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) Discuss Pipes, Filters and Redirection commands in LINUX, along with suitable examples and explanation. *10*

   (b) Elucidate the following with reference to Windows XP Networking : *10*

   (i) TCP/IP Protocol settings

   (ii) VPN and Remote Networking facilities

(c)   In context to computer security, explain the following :   *6*

    (i)   Integrity

    (ii)   Confidentiality

    (iii) Availability

(d)   Define authentication tokens. With reference to authentication tokens, explain the use of Hardware tokens and Software tokens.   *6*

(e)   Discuss Trivial File Transfer Protocol (TFTP) and TELNET.   *8*

2.   (a)   Explain the features of Network Operating System and Distributed Operating System.   *10*

  (b)   Define Domain Name System (DNS). In context to DNS, explain DNS Architecture and DNS Zones.   *10*

3.   (a)   Discuss process and thread management in LINUX.   *10*

  (b)   Discuss the file system, special files and file management in LINUX.   *10*

4. (a) Discuss the following (giving an example for each) with reference to shell scripting in LINUX : *10*

      (i)   variables

      (ii)   if ... else statement

      (iii)   echo command

      (iv)   break and continue

   (b) Briefly discuss the following network connecting devices, mentioning their purpose, operating layer and working principle : *10*

      (i)   Repeaters

      (ii)   Hubs

      (iii)   Bridges

      (iv)   Routers

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

   (a) SNMP and UDP

   (b) LINUX Utilities

   (c) User-to-User Communication in LINUX

   (d) Redundant Array of Independent Disks (RAID) and its Implementation