

**MCA (Revised)**  
**Term-End Examination**  
**December, 2007**

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

Time : 3 hours

Maximum Marks : 100

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**Note :** Question number 1 is **compulsory**. Answer any **three** questions from the rest.

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1. (a) Explain the characteristics of the Modern Operating Systems. 10
- (b) Explain the basic purpose of the following connecting devices in computer networks : 10
- (i) Repeaters
  - (ii) Hubs
  - (iii) Bridges
  - (iv) Routers
  - (v) Gateways
- (c) Describe the layering structure of the TCP/IP protocol suite. 10

- (d) Write a LINUX shell script that accepts an arbitrarily long list of file names as arguments and replaces all digits in them with a “\*”. 5
- (e) Explain the responsibilities of User and Kernel modes of WINDOWS 2000 system. 5
2. (a) Explain the following with reference to WINDOWS 2000 : 12
- (i) Distributes file system
  - (ii) File Replication service
  - (iii) FAT16 and FAT32
- (b) Explain the usage of the following for authenticating a user : 8
- (i) Hardware token
  - (ii) Software token
3. (a) Describe the file system in LINUX. 7
- (b) Explain Trivial File Transfer Protocol (TFTP) and mention where it can be used. 6
- (c) Discuss the page replacement algorithm used by LINUX. 7
4. (a) Discuss the mesh topology and list its advantages and disadvantages. 7
- (b) Explain the role of NAME SERVERS and RESOLVERS in DNS Architecture. 7

(c) Mention the usage of the following LINUX commands, with an example for each : 6

- (i) cat
- (ii) cmp
- (iii) diff
- (iv) wc
- (v) sort
- (vi) chmod

5. Describe the following and also explain their usage : 4×5=20

- (i) Vi Editor
- (ii) Mapped Drive in WINDOWS 2000
- (iii) Virtual Private Network remote access in WINDOWS 2000
- (iv) IPSec

