

8. (a) What is Shell Programming ? Write a shell program to create a menu and execute a given option based on user choice.

Option include : 8

- (i) List of users
- (ii) List of Processes
- (iii) List of files.

- (b) What are the internal and external commands in UNIX ? Explain any *two* examples in each type. 7

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EE-686

M.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

MCA655

NETWORK ADMINISTRATION

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. What do you mean by IP addressing ? Also explain IP address classes and subnet Addressing. **15**
2. (a) Explain the following commands : ping, netstat, tracert, traceroute. **8**
(b) Write a note on virtual LAN. **7**

Unit II

3. (a) What is digital signature ? Show how signing and verification is done using DSS (Digital Signature Standard). **8**
(b) Write an RSA Algorithm. In RSA, given $N = 133$ and the encryption Key (E) = 5, find the corresponding private key and public key. **7**
4. (a) What is AES ? What are the major parameters used in AES ? Explain the processing of plain text with a suitable diagram. **10**
(b) Define IP security architecture. **5**

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Unit III

5. (a) Explain various process state in O.S. and also explain the role of zombie and orphan process in process state diagram. **8**
(b) Explain shadow passwords and directory structure for Linux O.S.. **7**
6. (a) Describe the role and responsibilities of System administrator in host management. **8**
(b) Differentiate between NTFS and FAT in detail. **7**

Unit IV

7. (a) Explain about the looping statements in C shell. **7**
(b) What is awk utility ? Explain the options of awk utility. **8**

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P.T.O.