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APR-MAY

B. E. (Eighth Semester) Examination, 2020

(Old Scheme)

(IT Engg. Branch)

DESIGN of UNIX OPERATING SYSTEM

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) & (d) of each question.

Unit-I

1. (a) What do you mean by multiuser system? 2
- (b) What is vi-editor? Explain various modes of vi-editor. 7

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- (c) Explain various features and benefits of Unix operating system. 7
- (d) Give syntax and details of following unix commands with example : 7
- (i) ls
 - (ii) mkdir
 - (iii) rm
 - (iv) mv
 - (v) cp
 - (vi) tr
 - (vii) sed

Unit-II

2. (a) Name of various flow control statements used in Unix. 2
- (b) Discuss the various metacharacters available in Unix. Explain with suitable example. 7
- (c) Give the syntax of if and case statement, while loops and explain with a small example. 7

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- (d) Write short notes on : 7
- (i) BEGIN and End patterns
 - (ii) ANK arithmetic

Unit-III

3. (a) Give any two services of operating system. 2
- (b) Give and explain the five scenarios for retrieval of buffer. 7
- (c) Write the advantages and drawbacks of buffer cache. 7
- (d) Explain Kernel and buffer cache architecture of Unix O/S with suitable diagram. 7

Unit-IV

4. (a) Define Inode. 2
- (b) Explain super block in detail. 7
- (c) Write an algorithm for converting a path name to an inode. 7
- (d) Write short notes on : 7
- (i) Mounting file system

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- (ii) OPEN (with syntax)
- (iii) READ (with syntax)

Unit-V

- 5. (a) Define region table entry. 2
- (b) Explain the process state transition diagram. 7
- (c) Write only the algorithm for fork. 7
- (d) Write down the detail of changing user mode to Kernel mode. 7