

Faculty Code : 003**Subject Code : 007303****Time : 2½ Hours]****[Total Marks : 70**

1. Attempt the following. 15
1. _____ directory is used to store the devices that are available to the linux system.
(a) mnt (b) bin
(c) root (d) dev
 2. To change the password of user, _____ command is used.
(a) pwd (b) passwd
(c) password (d) None of these
 3. _____ kernel(s) include not only the CPU, Memory and IPC but they also include things like Device Drivers, File System Management and System Server Calls.
(a) Micro (b) Monolithical
(c) (a) and (b) both (d) None of these
 4. The file named digit has following contain :
1
2
3
4
5
6
Now
Head -n 4 digit | tail -2
What will be the output ?
(a) 1, 2, 3, 4 (b) 1, 2
(c) 3, 4 (d) None of these

5. In login command, _____ option is used to skip a second login authentication.
- (a) f (b) h
(c) p (d) m
6. mv command is used for.
- (a) rename and copy a file (b) move and copy a file
(c) rename or move a file (d) copy a file
7. cat-b filename will display
- (a) line number which is not blank
(b) line number including blank line
(c) do not display line number
(d) none of these
8. Initially when user open the file using vi editor, he/she is in _____ mode.
- (a) Input Mode (b) Execute Mode
(c) Command Mode (d) All of these
9. In the batch command, the process is executed in the _____.
- (a) Background (b) Foreground
(c) (a) and (b) both (d) None of these
10. _____ is used to remove/delete the job which is created by at command.
- (a) at-d (b) atrm
(c) Both (a) and (b) (d) None of these
11. _____ command is used to record everything printed on the screen.
- (a) record (b) store
(c) touch (d) script
12. To give read permission to the file, _____ number is used.
- (a) 4 (b) 2
(c) 1 (d) 7
13. _____ command is used to copy a file.
- (a) copy (b) cpy
(c) cp (d) All of these
14. _____ is used to compare two file.
- (a) compare (b) compa
(c) a and b both (d) None of these
15. To cancel all changes to the file and exit the vi editor
- (a) :q! (b) :wq
(c) :xq (d) All of these

2. Attempt any **five** of the following : 15
1. List and explain changing file permission with suitable example.
 2. Explain Is command with its all options and with example.
 3. List out and explain any three commands used for communication with suitable example.
 4. Explain date command with all its options with suitable example.
 5. Explain cron and crontab with suitable example.
 6. List out types of operating system and explain any one in detail
3. Attempt any **three** of the following : 15
1. Write a shell script that counts the number of character, number of white spaces and number of Capital letter without command.
 2. Write a Shell script to enter any file name and find out its extension.
 3. Write a Shell script to print
11111
2222
333
44
5
 4. Write a shell script which will reverse the string.
4. Attempt any **two** of the following : 15
1. Write a note on Process and list out and explain all the process related command with suitable example.
 2. Explain Unix/Linux Architecture in detail.
 3. Explain concept of piping and Tee command with suitable example.
5. Attempt any **one** of the following : 10
1. Write a note on File system and explain Regular Expression and list and explain regular expression command in detail with suitable example.
 2. Explain Paging and Segmentation in detail with suitable example.
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Time : 3 Hours]**[Total Marks : 70**

1. Answer the following multiple choice questions : (15)
- (1) _____ command gives the list of the logged in user
(a) who (b) which
(c) who am I (d) None of these
- (2) To view the process _____ command is used
(a) ls (b) lp
(c) Pl (d) None of these
- (3) ls -X _____
(a) recursive list (b) multicolumn output
(c) List only dir name (d) None of these
- (4) _____ directory contains the configuration file of Linux system
(a) bin (b) sbin
(c) etc (d) None of these
- (5) _____ directory contains the all the devices files of the Linux/Unix system
(a) bin (b) dev
(c) etc (d) None of these
- (6) _____ command is used to copy a file
(a) copy (b) cpy
(c) cp (d) All of the above
- (7) Which of the following is true Linux command ?
(a) rm papl (b) rm papl pap2
(c) rm * (d) All of the above
- (8) Which of the following is true for mv ?
(a) It renames a file
(b) It moves a group of files to a different directory
(c) It never creates copy
(d) All of the above
- (9) rm _____ command asks the user for confirmation before removing each file in the list
(a) -f (b) -a
(c) -i (d) None of these

- (10) we can be used to
- | | |
|--------------------------|----------------------|
| (a) count the words | (b) count the lines |
| (c) count the characters | (d) All of the above |
- (11) _____ is used to compare two files
- | | |
|----------------------|-------------------|
| (a) compare | (b) compa |
| (c) (a) and (b) both | (d) None of these |
- (12) Which of the following symbol is used to assign absolute permission for chmod ?
- | | |
|-------|-------------------|
| (a) + | (b) - |
| (c) = | (d) None of these |
- (13) In chmod _____ number is used for read permission.
- | | |
|-------|-------------------|
| (a) 4 | (b) 2 |
| (c) 1 | (d) None of these |
- (14) To save the file in vi
- | | |
|---------------------|-------------------|
| (a) :w | (b) :x |
| (c) (a) or (b) both | (d) None of these |
- (15) To abort the changes in the vi
- | | |
|---------|----------------------|
| (a) :q | (b) :wq |
| (c) :xq | (d) All of the above |

2. Attempt any **five** of the following : (15)

- (1) Explain date command with its all options.
- (2) What is file/directory permission ? Explain in detail.
- (3) What is script ? Explain the recording of the session with suitable example.
- (4) Write short note on printf with its all format string.
- (5) Explain utility of "bc" with suitable example.
- (6) What is file in Linux/Unix ? List and explain the types of file in Linux/Unix.

3. Attempt any **three** of the following : (15)

- (1) Explain Linux/Unix file system tree in detail.
- (2) Explain ls with its all options.
- (3) What is the functionality of tar ? Explain its options with suitable example.
- (4) Write short note on grep command.

4. Attempt any **two** of the following : (15)

- (1) Write shell script that will count the number of characters, numbers of digits, number of small characters and number of capital characters.
- (2) Write a shell script that will convert the capital letters to small and small to the capital for the give file.
- (3) What is permission ? Explain relative, absolute and directory permission with suitable example.

5. Attempt any **one** of the following : (10)

- (1) Explain Linux/Unix architecture in detail.
- (2) What is vi ? Explain the different commands of vi with suitable example.



003-007303

M. C. A. (CBCS) (Sem. III) Examination

November – 2011

**CCA-3003 : Operating System & Linux/Unix
Programming
(New Course)**

Faculty Code : 003

Subject Code : 007303

Time : 3 Hours]

[Total Marks : 70

Instruction : Write answer of all questions in main answer sheet.

1 Answer the following Multiple Choice Questions : 15

(1) Which of the following is not a page replacement algorithm ?

- (A) Optimal Page Replacement
- (B) Clock Page Replacement
- (C) Least Reference used page Replacement
- (D) Working set Page Replacement

(2) Fixed partition is also called

- (A) Static Partition
- (B) Dynamic Partition
- (C) Single Partition
- (D) None of these

- (3) In Paging which of the following tables are created
- 1 Segmented Map Table
 - 2 Page Map Table
 - 3 Memory Map Table
 - 4 Job Table
- (A) 1, 2, 3
- (B) 2, 3, 4
- (C) All of above
- (D) None of these
- (4) The page which is in demand is not currently in the memory, but it has to be brought from secondary memory, then_____ is generated.
- (A) Error
- (B) Swap out
- (C) Page Fault
- (D) None of these
- (5) pwd command is used to
- (A) enter password
- (B) reenter password
- (C) Display present working directory
- (D) none of these
- (6) To save the file and exit from the vi editor which of the following command is used ?
- (A) :wq
- (B) :w
- (C) :q
- (D) None of these

- (7) File Descriptor for standard Input is
- (A) 0
 - (B) 1
 - (C) 2
 - (D) 3
- (8) For redirecting the input which special character is used?
- (A) <
 - (B) >
 - (C) |
 - (D) =
- (9) `uniq -d file name` Command is used to
- (A) Display non-duplicate lines
 - (B) Display only duplicate lines
 - (C) count the number of duplicate lines
 - (D) None of these
- (10) Write command is used to
- (A) print on the terminal
 - (B) communicate with another login user
 - (C) Display the information about login user
 - (D) None of these

- (11) chmod command is used to
- (A) changing the permission
 - (B) change the owner
 - (C) changing the content of the file
 - (D) changing the group
- (12) Priority based scheduling is called _____ policy.
- (A) Preemptive
 - (B) Non-Preemptive
 - (C) Both 1 and 2
 - (D) None of these
- (13) _____ directory is used for mount points.
- (A) mount directory
 - (B) root directory
 - (C) etc directory
 - (D) mnt directory
- (14) To give the execute permission, which value is used ?
- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4

(15) touch command is used to

- (A) create a new empty file
- (B) updating date and time of existing file
- (C) both A and B
- (D) None of these

2 Attempt any five of the following : 15

- (i) Explain process with its various states
- (ii) Difference between paging and segmentation with example
- (iii) Difference between fixed partition and dynamic partition.
- (iv) Explain compaction for memory management with example.
- (v) Explain real time operating system.
- (vi) Differentiate sort and uniq Unix command with example.

3 Attempt any three of the following : 15

- (i) What is scheduling ? List various types of scheduling technique. Explain priority scheduling.
- (ii) Explain Foreground and Background process with exaple.
- (iii) Explain following command :

Write

Finger

Grep

Uniq

Tee

(iv) Explain following command :

Kill

At

Who

Diff

Comm

4 Attempt any two of the following : 15

- (i) Explain contiguous and non contiguous memory allocation
- (ii) Explain different types of operating systems
- (iii) Why Page replacement is needed ? List various page replacement algorithms. Explain any two in detail.

5 Attempt any one of the following : 10

- (i) Count the no. of lines, words & characters from the file which is given from the command prompt.
- (ii) Write a shell script to check whether the input no. is prime number or not.