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**M.Sc. (Third Semester)
EXAMINATION, Dec. - Jan., 2021-22
COMPUTER SCIENCE
Paper Third
(Open Source Software with Case Study of Linux)**

*[Time : Three Hours]**[Maximum Marks : 100]***Note : Attempt all sections as directed.****Section - A****(Objective/multiple Choice Questions)****(1 mark each)**

1. Interpreter is used as a translator for.
 - (A) Low level Language
 - (B) High level Language
 - (C) COBOL
 - (D) C

2. Which command is used to count the total number of line, words and characters contained in file?
 - (A) Countw
 - (B) wcount
 - (C) wc
 - (D) CountP
3. What command is used to remove the directory?
 - (A) rdir
 - (B) remove
 - (C) rd
 - (D) rmdir
4. The logout built in command is used to-
 - (A) Shutdown the computer
 - (B) Logoff the computer
 - (C) Logout the current user
 - (D) To exit current shell
5. In OSI network architecture the routing is performed by___
 - (A) Session layer
 - (B) Transport layer
 - (C) Datalink layer
 - (D) Network layer

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6. Which option of rm command is used to remove a directory with all its subdirectories? **P.T.O.**
- (A) - b
 - (B) - o
 - (C) - p
 - (D) - r
7. Which command is used with vi editor to save file and remain in editing mode ?
- (A) x
 - (B) q!
 - (C) :w
 - (D) :q
8. Who founded the Linux kernel?
- (A) Bill Gates
 - (B) Linux Torvalds
 - (C) Ben Thomas
 - (D) Richard Stallman
9. Which program is used to schedule particular jobs or programs at particular times on the system ?
- (A) Vi
 - (B) Outlook
 - (C) Scheduler
 - (D) Cron

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10. Hidden files can be viewed using -
- (A) ls - a
 - (B) ls - l
 - (C) ls - h
 - (D) ls - k
11. What command is used to save the standard output in a file as well as display it on the terminal ?
- (A) tee
 - (B) more
 - (C) grep
 - (D) cat
12. Which of following is not a filter command ?
- (A) sort
 - (B) wc
 - (C) grep
 - (D) cat
13. What command is used to assign executable permission to all of files named report?
- (A) chmod ugo + x report
 - (B) chmod u + x report
 - (C) chmod ugo + r report
 - (D) chmod ugo + rw report

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14. What is boot strapping called ?
- (A) Cold boot
 - (B) Cold hot boot
 - (C) Cold hot strap
 - (D) Hot boot
15. The size of virtual memory is based on which of following?
- (A) CPU
 - (B) RAM
 - (C) Address Bus
 - (D) Data Bus
16. The first process launched by linux kernel is -
- (A) Init process
 - (B) Boot process
 - (C) Batch process
 - (D) None of above
17. What shells wild card is used to match a single character?
- (A) *
 - (B) ?
 - (C) [ijk]
 - (D) [iijk]

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18. Which feature is used to prevent overwriting an existing file the redirection operation ?
- (A) Mkfs
 - (B) Han
 - (C) Cat
 - (D) Noclobber
19. What command is used to display the characteristics of a process ?
- (A) au
 - (B) ps
 - (C) du
 - (D) pid
20. Where can system and mail logs be found in Red hat Linux?
- (A) /var/log
 - (B) /etc/log
 - (C) /mail
 - (D) All of above

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Section - B

(Very short answer type questions)

(2 marks each)

Note : Attempt all questions.

1. What do you mean by semaphore?
2. Define system calls.
3. Explain chmod of grep.
4. Explain traps.
5. What is command edit mode?
6. Explain Swapping.
7. Explain strength and advantage of Linux.
8. Explain shift commands of logical operators.
9. Explain backup of restore.
10. Explain managing system services.

Section - C

(Short Answer Type Questions)

(3 marks each)

Note : Attempt all questions. Give answer in less than 75 words.

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1. Explain system structure kernel & its functions.
2. Explain file operation, system calls and buffer cache.
3. Explain I/O redirection and standard error redirection.
4. Describe process state and transition.
5. Explain file handling calls in detail.
6. Describe the feature of shell of profile files.
7. Explain directory stacks and noclobber of noglob.
8. Explain process of scheduling in detail.
9. Describe startup and shut down what do you mean by super user?
10. Explain fork(), exec (), exit ().

Section - D

(Long Answer Type Questions)

(6 marks each)

Note : Attempt all questions.

1. Explain command & edit mode in vi editor. Describe yanking, command macros, searching strings in detail.
2. Explain loop and decision making statements in detail.
3. Explain system boot & init process. Describe command line argument.
4. Explain demand paging of process system calls.
5. Explain Basic system Administration in detail.

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