Enrollment No.....................................

Faculty of Engineering
End Sem (Odd) Examination Dec-2019
CA5CO16 Linux Programming & Scripting

Programme: MCA   Branch/Specialisation: Computer Application

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1

i. What is the core of the Linux operating system?   **1**
(a) Bash   (b) Kernel   (c) File System   (d) GUI

ii. Who invented Linux?   **1**
(a) Ken Williamson   (b) Linux Thompson
(c) Linus Torvalds   (d) Google

iii. Which below command lists files in the long format?   **1**
(a) $ ls –lrt or $ ls -ltr   (b) $ ls –long or $ ls -lng
(c) $ ls –LD or $ ls -ld   (d) $ ls –l or $ ls -L

iv. How are shell variables stored?   **1**
(a) Stored in Global Dictionary.
(b) Stored as array.
(c) Stored as Integer.
(d) Stored as string variables.

v. Which of the below AWK built-in variable signifies the number of arguments facilitated at the command line?   **1**
(a) ARGC   (b) ARGV
(c) CONVFMT   (d) ENVIRON

vi. AWK supports the below arithmetic operators: **1**
(a) +, ^, %, =, /   (b) +. -, /, *, %
(c) +, -, &, *, #   (d) +, -, @, *, /

vii. What is the default permission on user's home directory?   **1**
(a) 555   (b) 777   (c) 000   (d) 700

viii. Three files which are automatically created inside any user's home directory when a user is added. Which of the below is wrong? **1**
(a) .bashrc   (b) .bash_file
(c) .bash_profile   (d) .bash_history

ix. Which of the below command check the ports are listening in Linux Server? **1**
(a) netstat -L   (b) netstat –listen
(c) netstat -check   (d) netstat -route

x. What is the full form of DHCP? **1**
(a) Dynamic Host Control Panel
(b) Dynamic Host Control Protocol
(c) Dynamic Host Configuration Protocol
(d) None of these

Q.2 i. Define Linux Kernel. **2**
ii. Explain any three file related commands of Linux. **3**
iii. Explain features of Linux. **5**
OR iv. Write short note on file system of Linux. **5**

Q.3 i. What are the different types of commonly used shells on a typical Linux system? **2**
ii. How will you pass and access arguments to a script in Linux? What is the significance of $#? What is the difference between $* and $@? **8**
OR iii. What is Shell Scripting? What is the importance of writing Shell Scripts? **8**

Q.4 i. Write list command using AWK to list only zero-byte files which are present in the directory. **3**
ii. Explain Variable and Operators in PERL scripting. **7**
OR iii. Write note on Expression and Substitution in PERL scripting. **7**

Q.5 i. Write the steps to granting system administrator privileges to regular users. **4**

ii. Explain in short: **6**
The password file, Shadow passwords and Managing password Security for users.
OR iii. Explain in short: **6**
Becoming a superuser, Adding new users, User IDs and Group IDs

Q.6 Attempt ant two:
i. Write note on TCP / IP Addressing. **5**
ii. What is SSH? How does SSH works? **5**
iii. Explain traceroute command. **5**

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Marking Scheme
CA5CO16 Linux Programming & Scripting

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Q.1   i.   What is the core of the Linux operating system?   **1**
(b) Kernel

ii.   Who invented Linux?   **1**
(c) Linus Torvalds

iii.   Which below command lists files in the long format?   **1**
(a) $ ls –lrt or $ ls -ltr

iv.   How are shell variables stored?   **1**
(d) Stored as string variables.

v.   Which of the below AWK built-in variable signifies the number of   **1**
arguments facilitated at the command line?
(a) ARGC

vi.   AWK supports the below arithmetic operators: **1**
(b) +. -, /, *, %

vii.   What is the default permission on user's home directory?   **1**
(d) 700

viii.   Three files which are automatically created inside any user's home   **1**
directory when a user is added. Which of the below is wrong?
(b) .bash_file

ix.   Which of the below command check the ports are listening in Linux   **1**
Server?
(b) netstat –listen

x.   What is the full form of DHCP?   **1**
(c) Dynamic Host Configuration Protocol

Q.2   i.   Definition of Linux Kernel.   **2**

ii.   Any three file related commands of Linux.   **3**
1 mark for each command   (1 mark * 3)

iii.   Features of Linux.   **5**
1 mark for each Feature   (1 mark * 5)

OR   iv.   File system of Linux.   **5**
Definition   2 marks
Structure   3 marks

Q.3   i.   Types of commonly used shells on a typical Linux system   **2**

ii.   Pass and access arguments to a script in Linux   2 marks   **8**
Significance of $#   3 marks
Difference between $* and $@   3 marks

OR   iii.   Shell Scripting   2 marks   **8**
Importance of writing Shell Scripts
1 mark for each importance (1 mark *6)   6 marks

Q.4   i.   List command using AWK   **3**

ii.   Variable and Operators in PERL scripting.   **7**
1 mark for each variable and operators   (1 mark *7)

OR   iii.   Expression in PERL scripting   3 marks   **7**
Substitution in PERL scripting   4 marks

Q.5   i.   Steps to granting system administrator privileges to regular users   **4**
1 mark for each step   (1 mark *4)

ii.   The password file   2 marks   **6**
Shadow passwords   2 marks
Managing password Security for users   2 marks

OR   iii.   Becoming a superuser   2 marks   **6**
Adding new users   2 marks
User IDs   1 mark
Group IDs   1 mark

Q.6   Attempt ant two:
i.   TCP / IP Addressing   **5**
1 mark for each   (1 mark *5)

ii.   SSH   2 marks   **5**
Working   3 marks

iii.   Traceroute command   **5**
1 mark for each option   (1 mark *5)

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