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Enrollment No.....



Faculty of Science / Engineering

End Sem Examination May-2024

CA3EL13 Linux & Shell Programming

Programme: BCA / BCA- Branch/Specialisation: Computer
MCA (Integrated) 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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Which among the following interacts directly with system hardware? **1**
(a) Terminal (b) Kernel (c) Shell (d) Applications
- ii. Linux is which kind of Operating System? **1**
(a) Multi-user (b) Multi-processes
(c) Multi-tasking (d) All of these
- iii. The process id of init process is: **1**
(a) -1 (b) 0 (c) 1 (d) 2
- iv. Which Linux command is used to print a file? **1**
(a) lp (b) pr (c) print (d) ptr
- v. Sed stands for: **1**
(a) Search editor
(b) Switch editor
(c) Stream editor
(d) Shell editor
- vi. Which command is used to change file permissions? **1**
(a) file (b) chown (c) chmod (d) ls -l
- vii. What command is used with vi editor to replace text from cursor to right- **1**
(a) S (b) s (c) R (d) r
- viii. Which is the correct statement for adding two numbers in a shell script? **1**
(a) `z= expr $x + $y` (b) `z=`expr $x + $y``
(c) `z=`expr x + y`` (d) None of these
- ix. What is the format of IP address? **1**
(a) 16 bit (b) 64 bit (c) 32 bit (d) 34 bit

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- x. Which command is used to shut down a system? **1**
(a) Sudo systemcontrol poweroff
(b) Sudo systemctl poweroff
(c) Sudo systemctl shutdown
(d) Sudo systemcontrol shutdown
- Q.2 i. Define bash. **2**
ii. What is kernel? Write types of kernel. **3**
iii. Draw architecture of Linux. Explain different layers of Linux architecture. **5**
- OR iv. Why is Linux the most used operating system? Justify. **5**
- Q.3 i. What is du and df command? **2**
ii. Explain system startup and shutdown process in detail. **8**
- OR iii. Explain following commands- **8**
(a) kill (b) ps (c) uniq (d) paste
- Q.4 i. Define awk. Write syntax with example and usage. **3**
ii. What is system monitoring and logging? Explain with the help of their commands. **7**
- OR iii. Explain egrep command. Write difference between grep and egrep commands. **7**
- Q.5 i. Define echo and shebang. Write difference between echo and read. **4**
ii. Write a script for- **6**
(a) To swapping of two numbers using third variable
(b) To check if the number is palindrome or not
- OR iii. What is shell scripting? Write features of it and write a shell script to perform arithmetic operations. **6**
- Q.6 Attempt any two: **5**
i. Write short note on: **5**
(a) FTP (b) Domain name system
ii. Explain file management in Linux with its commands. **5**
iii. Describe all the Ip address classes. **5**

P.T.O.

Marking Scheme

Linux & Shell Programming (T) - CA3EL13 (T)

Q.1	i)	(b) kernel		1
	ii)	(d) All of the above		1
	iii)	(c) 1		1
	iv)	(a) lp		1
	v)	(c) Stream editor		1
	vi)	(c) chmod		1
	vii)	(c) R		1
	viii)	(b) <code>z=`expr \$x + \$y`</code>		1
	ix)	(c) 32 bit		1
	x)	(b) <code>sudo systemctl poweroff</code>		1
Q.2	i.		2 Marks	2
	ii.	Definition –	1 Marks	1+2=3
		types with definition.	2 Marks	
	iii.	Architecture diagram,	2 Marks	2+3=5
		layers explanation	3 Marks	
OR	iv.	Each point of explanation –	1 Marks	1*5=5
Q.3	i.	Du –	1 Marks	1+1=2
		Df –	1 Marks	
	ii.	Startup or reboot process,	4 Marks	4+4=8
		Shutdown process ,	4 Marks	
OR	iii.	Each command	2 Marks	2*4=8
Q.4	i.	Definition –	1 Marks	2+1 = 3
		Syntax , example and usage –	2 Marks	
	ii.	Explanation –	3 Marks	3+4=7
		Commands –	4 Marks	
OR	iii.	Explanation with options –	4 Marks,	4+3=7
		Difference-	3 Marks	
Q.5	i.	Definition echo –	1 Marks	1+1+2=4
		Definition shebang –	1 Marks	
		Difference –	2 Marks	
	ii.	3 marks each program		3*2=6
OR	iii.	Explanation –	2 Marks	2+2+2=6
		Features –	2 Marks	
		Program –	2 Marks	

Q.6

i.	FTP- domain name system –	2.5 Marks	2.5+2.5=5
ii.	Explanation –	2 Marks,	2+3=5
iii.	file management with commands –	3 Marks	
		5 Marks	5
