

**AMIETE – CS/IT (Current Scheme)**

Time: 3 Hours

**JUNE 2015**

Max. Marks: 100

**PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.**

**NOTE: There are 9 Questions in all.**

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions, answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

**Q.1 Choose the correct or the best alternative in the following: (2×10)**

a. What command is used with vi editor to delete a single character?

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|-------|-------|
| (A) x | (B) y |
| (C) a | (D) z |

b. What hardware architectures are not supported by Red Hat?

- |           |                    |
|-----------|--------------------|
| (A) SPARC | (B) IBM-compatible |
| (C) Alpha | (D) Macintosh      |

c. Which of the following command is used to create a Linux installation boot floppy?

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|---------------------|-------------------|
| (A) mkboot disk     | (B) bootfp disk   |
| (C) ww and rawwrite | (D) none of these |

d. What file specifies the order in which to use specified name services?

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|------------------------|------------------|
| (A) /etc/services      | (B) /etc/nsorder |
| (C) /etc/nsswitch.conf | (D) /etc/hosts   |

e. What command do you use to create Linux file systems?

- |           |           |
|-----------|-----------|
| (A) Fdisk | (B) Mkfs  |
| (C) Fsck  | (D) Mount |

- f. Which of the following command can you execute to count the number of lines in a file?
- (A) Lc (B) wc -l file  
(C) Cl (D) Count
- g. Which of the following is not a communication command?
- (A) grep (B) mail  
(C) mesg (D) write
- h. What command is used to list the files chap01, chap02 and chap04?
- (A) ls chap\* (B) ls chap[124]  
(C) ls -x chap0[124] (D) ls chap0[124]
- i. What sign is used to erase or kill an entire line you have typed and start you are on a new line (but not display a new prompt)?
- (A) ! (B) \$  
(C) # (D) @
- j. What project is currently developing X server support?
- (A) XFree86 Project, Inc. (B) RHAD Labs  
(C) GNOME Project (D) All of these

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**Answer any FIVE Questions out of EIGHT Questions.  
Each question carries 16 marks.**

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- Q.2** a. What are the important Distributions related to Linux? (8)  
b. What are the Configuration facilities associated with Linux? (8)
- Q.3** a. Write the steps of how to add a system call to a Kernel. (8)  
b. What are the basic data structures and algorithms in the Linux? (8)
- Q.4** a. What is the process? How to specify a virtual address space for a process? (8)  
b. What is the difference between block devices caching and paging in Linux?(8)
- Q.5** a. What is Inter process Communication? How to create IPC with sockets? (8)  
b. What are pipes? Explain the usage of Pipes in Linux. (8)

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- Q.6** a. What are the basic principles of File System? (8)
- b. Explain the representation of File Systems in the kernel with the help of diagram. (8)
- Q.7** a. What is the difference between Polling and Interrupts? (8)
- b. Explain in detail DMA operation with the help of example. (8)
- Q.8** a. Write short notes on: (8)
- (i) IP
  - (ii) UDP
  - (iii) TCP
- b. With the help of diagram explain ARP. What are the network devices associated with Linux? (8)
- Q.9** a. What is Kernel Daemon? Explain the term Debugging. (8)
- b. What are the problems associated with Multi-processor systems? (8)