

AMIETE – CS/IT {NEW SCHEME}

Time: 3 Hours

JUNE 2017

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. Which option of ls command is used to view file inode number?
(A) -l (B) -o
(C) -a (D) -i
- b. Which command is used to print a file?
(A) print (B) ptr
(C) lpr (D) None of these
- c. Which command is used to display the UNIX version?
(A) uname -r (B) uname -n
(C) uname -t (D) kernel
- d. Which command is used to display the operating system name?
(A) os (B) Unix
(C) kernel (D) uname
- e. Which command is used to set terminal IO characteristic?
(A) tty (B) cty
(C) pty (D) stty
- f. Which among the following interacts directly with system hardware?
(A) Shell (B) Commands
(C) Kernel (D) Applications
- g. Which represents the user home directory?
(A) / (B) .
(C) .. (D) ~
- h. How do you rename file “new” to file “old”?
(A) mv new old (B) move new old
(C) cp new old (D) rn new old

Code: AC109/AT109

Subject: UNIX & SHELL PROGRAMMING

- i. If a file is removed in Unix using 'rm' then
 (A) The file can be recovered by a normal user
 (B) The file cannot be recovered by a user
 (C) The file can be fully recovered provided the system is not rebooted
 (D) The file will be moved to /lost+found directory and can be recovered only by administrator's intervention.
- j. What command is used to copy files and directories?
 (A) copy (B) cp
 (C) rn (D) cpy

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

- Q.2** a. Discuss the salient features of the UNIX operating system. (8)
 b. Describe the relationship between the kernel, shell and the user, with the help of diagram. (8)
- Q.3** a. With the suitable sketch, explain the modes of operation of vi editor. (8)
 b. Explain the command "search for a pattern" and "search and replace" in vi editor. (8)
- Q.4** a. Discuss various commands for job control in UNIX, with example. (8)
 b. Explain how the shell process is created. (8)
- Q.5** a. What are hard links and soft links? Explain with example. (8)
 b. Explain following filters with an example. (8)
 (i) head (ii) tail (iii) cut
- Q.6** a. Explain the grep command with all options. (8)
 b. What is sed? Explain line addressing and context addressing. (8)
- Q.7** a. What is shell programming? Write a shell script for menu which displays. (8)
 (i) List of files (ii) content of files
 (iii) Process status (iv) Current date
 (v) Clear the session
 b. Explain Shell features of 'for' with syntax and example. (8)
- Q.8** a. Briefly describe the built-in functions in awk, with example. (8)
 b. Explain awk's built-in variables with examples. (8)
- Q.9** a. Write a shell program that prompts a user to input a string and a number and prints the string that many times, with each string on a separate file. (8)
 b. Discuss the string handling functions in Perl, with example. (8)