

AMIETE – CS/IT (New Scheme)

Time: 3 Hours

DECEMBER 2018

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 command is used to remove a directory?
 (A) rd (B) rmdir
 (C) deldir (D) rdir
- b. Which of the following commands is used to display the directory attributes rather than its contents?
 (A) ls -l -d (B) ls -x
 (C) ls -l (D) ls -F
- c. Any file's attribute information is stored in which structure on the disk?
 (A) inode (B) Data blocks
 (C) File blocks (D) Directory file
- d. Which command sends the word count of the file 'abc_file' to the 'xyz_file'?
 (A) wc abc_file >xyz_file (B) wc abc_file -xyz_file
 (C) wc xyz_file (D) wc abc_file |xyz_file
- e. The Octal number to be given along with chmod command to make a file readable, writable and executable to the owner, readable and executable to group and others is:
 (A) 000 (B) 755
 (C) 744 (D) 555
- f. Which command is used to delete the character before the cursor location in vi editor?
 (A) X (B) x
 (C) D (D) d
- g. Which command is used to sort the lines of data in a file in reverse order?
 (A) sort -a (B) sort -q
 (C) sort -t (D) sort -r
- h. In the shell, by default, all variables are considered and stored as
 (A) string (B) integer
 (C) character (D) metacharacter

- i. If no file is specified in sed command then
 (A) sed command will not work
 (B) sed reads the data already present in buffer
 (C) sed reads from standard input
 (D) It is necessary to provide the filename
- j. Which one of the following statement is not true about the format-control letters for printf statement in awk program?
 (A) 'c' prints a number as an ASCII character
 (B) 'd' prints a decimal integer
 (C) 'h' prints an unsigned hexadecimal integer
 (D) 'o' prints an unsigned octal integer

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

- Q.2** a. What is a UNIX operating system? Explain the UNIX architecture in detail. (8)
 b. What is a file? Explain various types of files in UNIX file system in detail. (8)
- Q.3** a. Describe the role of file attributes in UNIX file system. Explain the file attributes of *ls -l* command in brief. (8)
 b. Discuss the various modes of vi editor. List any five save and exit commands in ex mode of vi editor. (8)
- Q.4** a. Write short notes on the following: (4×2)
 (i) The wild cards (ii) Escaping and Quoting
 b. Discuss the mechanism of process creation in UNIX in detail. (8)
- Q.5** a. How many time stamps does a UNIX file has? Discuss the role of *find* command with a suitable example. (8)
 b. Discuss the filters *tail*, *paste* and *sort* with suitable examples. (8)
- Q.6** a. Explain the difference between wild card and a regular expression in detail. (8)
 b. What is *sed* command? Discuss the addressing mechanisms of *sed* command. (8)
- Q.7** a. What do you understand by a shell script? Discuss the two problems associated with Bash shell. (8)
 b. Write a shell script that accepts a filename and displays the last modification time if the file exists and a suitable message if it doesn't. (8)
- Q.8** a. Explain the working of *awk* filter? How *awk* is different from *sed*? (8)
 b. Discuss FS variable, OFS variable, length function and index function of *awk* filter in brief. (8)
- Q.9** a. Why the *perl* is known as the master manipulator? Discuss the working of split and join function of *perl*. (8)
 b. Write a program using *perl* to convert a decimal number to binary. (8)