Code No: **R1631052**　　　　　　　　　**R16**　　　　　　　　　SET - 1

### III B. Tech I Semester Supplementary Examinations, August - 2021
## UNIX PROGRAMMING
(Common to Computer Science and Engineering, Information Technology)

Time: 3 hours　　　　　　　　　　　　　　　　　　　　　　　Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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**PART –A**　　　　　　　　　　　　　　　　　　**(14 Marks)**

1. a) List out the different ways to run two or more terminal commands at once in UNIX. [2M]
   b) Write the equivalent octal notation command for the following UNIX command: chmod u=rw, g=rx, o=r myfile. [2M]
   c) What is the difference between shell and kernel? [2M]
   d) Write the commands for the below: [3M]
      i) To delete pattern matching lines from a file.
      ii) To delete line from range X to range Y from a file.
   e) Which command is used to delay for a fixed amount of time during the execution of a script?  Write the syntax of that command. [3M]
   f) Which system call is used to create a child process in UNIX? [2M]

**PART –B**　　　　　　　　　　　　　　　　　　**(56 Marks)**

2. a) List the characteristics of the UNIX operating system with their advantages and disadvantages. [7M]
   b) Explain the following UNIX commands: i) man;  ii) pwd; iii) cmp; iv) diff. [7M]

3. a) Explain the directory hierarchy of the UNIX operating system. [7M]
   b) Which command is used to change the file permissions in UNIX?  How to remove all the permissions for all the users using shorthand notation? [7M]

4. a) Discuss about command line structure in brief. [7M]
   b) Write a script to print first $n$ natural numbers using until loop. [7M]

5. a) Explain the built in functions used in *awk*. [7M]
   b) Explain *sed* command with all the options. [7M]

6. a) Write a shell program to create a simple calculator which can perform basic arithmetic operations like addition, subtraction, multiplication or division depending upon the user input. [7M]
   b) How to use shell arrays in UNIX? [7M]

7. a) Explain in sequence the steps to convert a background process to a foreground process. [7M]
   b) What is the use of *stty* command in UNIX? List out the categories of options supported by *stty* command and elaborate it. [7M]

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