

**Important: Closed book and no calculators;
Answer directly on these test sheets**

1 Short questions: 4 marks each

1. A Unix utility that sends its outputs the standard error by default, could also send its outputs to a regular file, if redirected.

Your answer: (True/False) False

2. A user ID in Unix is a nonnegative integer?

Your answer: (True/False) True

3. A user ID and a process ID are usually identical.

Your answer: (True/False) False

4. A shell is a programming language, similar to C, used for specific applications.

Your answer(True/False) : False

5. A program can change its own process ID while running.

Your answer(True/False) : False

6. The code of a bash internal command can be found using command **which**.

Hint: **which** locates commands in the file system.

Your answer(True/False) : False

7. **rm *.*?** means delete all files with one character after '.'

Your answer(True/False) : True

8. **EOF** is a special ASCII character, found at the end of every file in the disk.

Your answer(True/False) : False

2 Tracing: 5 marks each

1. What will appear when the line below is typed on a Bash shell terminal?

echo Saturday Feb. 8 | tr -d ". " | tr '[:digit:]' 'X'

Hint:

tr -d "????" delete all characters ???? from input.

tr '[:digit:]' 'X' replaces any digit by letter X.

Your answer : SaturdayFebX

2. In a few words, what does the following bash script do?

more \$1 | tail -n \$2 | head -n 1

Hints:

1) **head -n k** delivers the first k lines of a file

2) **tail -n k** delivers the last k lines of a file

Your answer : Displays \$2th line counting from the end of file \$1

For example, if the above bash is called myBash and you call it as follows

myBash letter.txt 20

It will display the 20th line of file **letter.txt** counting from the last line.