

## 1994 Paper 1 Question 12

A Unix user (with the BASH shell) sets up a file containing the following commands, and ensures it is executable:

```
echo $1 $2
mv $1 $1.temp
mv $2 $1
mv $1.temp $2
```

The user at the next terminal sets up a file that is very similar, but which uses `cp` rather than `mv`. Describe the behaviour each can expect when they use these files as command scripts. Assuming that the files concerned are both called `sw`, explain carefully the consequences of such uses as

```
sw somefile somefile
sw firstfile.temp secondfile.temp
sw only/one.file
```

[7 marks]

In another file, called `de` (say) the following commands exist:

```
echo $# files >> de.info
for n in $*
do
    echo $n >> de.info
    mv $n backup/$n
done
```

What do the various substitutions (involving '\$' signs) do in this case? Given that '>>' is much like '>' but appends new data to an existing file rather than creating a new one, what will build up in `de.info` over the course of time? Discuss the effect of issuing the command "`de *`". [7 marks]

Many Unix commands, for example `xlsfonts` and even just `ls`, can generate more output than will fit on the screen at once. Give a brief account of (a) how to use `more` to inspect the output and (b) how to collect a copy of the output in a file for inspection using a text editor. Write a shell script that will run `ls` with the `-l` flag (to get a full detailed listing of file sizes and dates) on one or more directories, will collect all the output in a single temporary file, enter an editor to allow you to inspect the information you have gathered and at the end get rid of the temporary file. [6 marks]