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all work is done by myself.

Q1 (a)

$$\begin{aligned}\text{Total bytes} &= 72 \times 1024 \text{ bytes.} \\ &= 73728\end{aligned}$$

$$\begin{aligned}\text{Total sector} &= \frac{73728}{128} \\ &= 576 \text{ sectors}\end{aligned}$$

$$\begin{aligned}\text{Total tracks} &= \frac{576}{26} \\ &= 22.15 \text{ means } 23\end{aligned}$$

∴ It needs 23 tracks.

(b)

In single sided.

$$\begin{aligned}\text{① double tracks} &= \frac{154}{2} * 26 \times 128 \\ &= 512512\end{aligned}$$

$$\text{② double sided} = 512512$$

$$\begin{aligned}\text{③ double tracks} &= 77 * (26 * 2) * (128 * 2) * 2 \\ &= 1025024\end{aligned}$$

∴ Make sector ~~large~~ ~~with~~ ~~be~~

b) Cont ^{tracks}
making ~~sector~~ double gives the
large number of storage in separate
tracks to double tracks helps
more storage.
~~but~~ so,
1 double tracks is more easier.

c) There are (1-26) sectors occupied
by the directory

②

No, two unix shell doesn't change
as unix provide the parallel processing
& two unix shell can do two different
job.

Yes it does in the same way
cd.. takes us to the earlier
director from current working
directory.

⑥ It will be removed as it will be already running by the system. & its ~~using it~~ will be using its static memory until the job is done.

⑦ No, because pico is a file editor that opens the file in shell & whereas chmod is only works for changing the mode of file i.e. append, read, write modes.

3.

① closes the directory that is currently working. It should be opened earlier for `closedir()`.

② `opendir` does a system call to read the content of the directory so `closedir()` does the call to close directory when its done by its work.

③

There is no any system function to call previous. In state filename can be stored in an array & moved next & previous.

④

```
d = opendir( )
```

```
c = 0
```

```
while (de = readdir(d)) {  
    filenames[c] = de->d_name;
```

```
    c++
```

```
}
```

```
for (i=0; i < n; i++)
```

```
{
```

```
    for (j=0; j < n; j++)  
    {
```

```
        if (strcmp(filenames[i], filenames[j])
```

```
            < 0)
```

```
            strcpy(cmd, filenames[j])
```

```
            strcpy(cmd, 'rm')
```

```
            system(cmd)
```

```
        }
```

```
}
```