

=====

ID 番号 : 00107

受験番号 : 08IPE017

級/科目 : 「1 級/電気・電子工学」

=====

※以下に解答を設置問題順に記入してください。

[問 1]

1. A mobile phone comprising:

a positional information obtaining unit for obtaining positional information of the mobile phone;

a storing unit for storing telephone numbers to be dialed;

a display data selecting unit for selecting a telephone number in a region indicated by the positional information among the telephone numbers stored in the storing unit; and

a display unit for displaying the telephone number selected by the display data selecting unit.

2. The mobile phone of claim 1, wherein the positional information obtaining unit for obtaining the positional information comprises at least one of:

(i) a unit for obtaining positional information of the mobile phone itself on the basis of a signal sent from a GPS satellite;

(ii) a unit for obtaining positional information of the mobile phone itself on the basis of longitude/latitude information sent from a base station; and

(iii) a unit for obtaining positional information of the mobile phone itself on the basis of positional information sent from the base station.

[問 2]

In a lighting device using a solar cell, a cost required along with the utilization thereof is very low on account of its constitutive principle, and most part of the cost is for initial installation. When a large-capacity solar cell or storage cell is used in the lighting device to obtain a large lighting power, the installation cost is comparatively high. Therefore, it is desired to utilize the power of the device once installed as much as possible. Meanwhile, as to the function of the lighting device, it is important for the lighting device to avoid power blackout and to be turned on whenever necessary. To this end, the large lighting power is not much required, and a minimum power is generally sufficient.

Therefore, in this respect, the large-capacity solar cell or storage cell has a superabundant power, and thus a considerable part of the installation cost is in vain.

It has been proposed to set a lighting period in accordance with the remaining capacity of a storage cell for preventing over-discharge of the storage cell (see, for example, Japanese Utility Model Application Publication No. S12-345678). However, this approach is merely to adjust the lighting period and not to provide the function of avoiding the power blackout and being turned on whenever necessary, and thus does not provide a satisfactory lighting device.

[問 3]

FIG. 2 shows a backlight turn-on control procedure carried out by a microcomputer (73). When the power source switch (77) is turned on, the memory in the microcomputer (73) is initialized (step 1), and then the switch (78) is closed to turn on (step 2) the backlight (75a). Next, an input process (step 3) is carried out through the operation keyboard (72), and then, it is determined (step 4) whether or not the input information is a communication-related command, and if YES is obtained, the switch (78) is opened to turn off (step 5) the backlight. After that, a predetermined communication command process (step 6) is carried out, and when this process is terminated, the backlight is turned on again (step 8). Alternatively, if NO is obtained as the result of the determination (step 4), the backlight remains in the on state, and a predetermined command process (Step 7) is to be carried out.

As a result, during communication with large power consumption, the backlight is turned off to save the power, which makes it possible to prolong the life of the cell. It should be noted that displaying on the liquid crystal display section (71) is required during the operation through the operation keyboard and after data is read from the data carrier (1), and thus turning off the backlight during the communication provides no inconvenience.