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DAY - WEDNESDAY

Qⁿ. What do you mean by Light Emitting Diodes (LEDs).
Mention its important application.

Ans → A) Light Emitting diodes (LEDs) :-

A light emitting diode is a specially design P-n junction diode [Gallium, Arsenide, Phosphide (GaAsP)]. in which when electric current is made to flow in the forward dirⁿ, visible light is emitted from the reason of the depletion layer.

B) Applications :-

① The infrared LEDs can be used in ~~to~~ burglar alarm system and other areas requiring in visible radiations.

② They are used in instrumental displays, Panel indicators, digitized watches, calculators, Multimeters, Entencons and Telephone Switch boards etc.

③ They are rapidly replacing cathode Ray Tubes (CRT) in solid state video displays etc.

What are advantages of LEDs over other conventional incandescent light sources?

Ans → Following are the advantages of LEDs over other conventional incandescent light sources.

- ① They consume less power as they work on low voltage (1V. to 2V.) and electric currents (5 m.A. to 10 m.A.).
- ② They are not affected by mechanical vibration.
- ③ They have long life, even more than 20 years.
- ④ They require no heating, no warm up time and hence they are very fast in action. Since, like an ~~incand~~ incandescent lamp, they can be switched on or off in one second etc.

Qⁿ. ~~Ques~~ what is a photo diode? Give its principle and uses.

Ans → (A) Photo Diode :-

A photo diode is a P-n junction diode having photo sensitive semi-conducting material.

(B) Principle :-

It is based upon the principle of electric conduction from light.

4(c) Uses :-

- ① Photo diodes are used as Photo-detectors to detect the radiations.
- ② They are used in light operated switches.
- ③ They are used in sound films reading of computer punched cards and tapes etc.

Qⁿ. What is a solar cell? Give its principle and uses.

Ans → A. Solar cell :-

The solar cell is a P-n junction diode which converts light energy into electrical energy.

B. Principle :-

It is based upon the principle of production of potential difference by the sun light.

4(c) Uses :-

- ① Solar cells are used to charge batteries in day time.
- ② and then ^{use} during ~~use~~ at night as a source of electrical energy.