

(1)

Name Ihsan ullah  
ID = 16717  
Course Title Applied Chemistry.

Ans No R (9).

Conversion of solar of solar energy into electric energy -

Solar cell (photovoltaic) for harvesting energy from sunlight have extensively been investigated and also commercialized because of high power conversion efficiency, low cost and compact design.

The output from photovoltaic is fluctuating owing to intermittent of solar irradiation.

The self powering integrated solar cell and electric energy storage -

solar energy is one of the most considered

sustainable abundant and

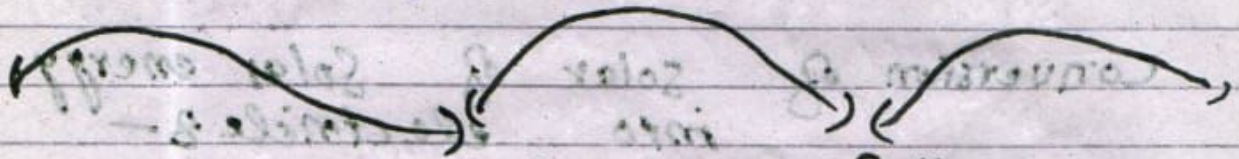
clean energy source to mankind.

which can provide

a easy way to fulfill

the global energy demand.

renewable energy conversion and storage technologies have been led to continuous growth in order to meet our future energy demands without any harmful emission.



Ans No R/b ) .

Differentiat between N-type and p-type :-

The difference b/w n-type and p-type

p-type

N-type -

- |  |  |
|--|--|
| <p>① Dopping elements semi conductor III group elements added as doping element.</p> | <p>① Semi conductor V group is added as doping element</p>             |
| <p>② impurity added creat vacancy of electron. it called Holes</p>                   | <p>② impurity added provides extra electron is know as donor Atom.</p> |
| <p>③ Acceptor Atom electrons are minority carriers</p>                               | <p>③ Holes are minority carriers -</p>                                 |

(3).

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Ans 3 (a).  
Role of depletion -

In semiconductor the depletion region also called depletion layer is an insulating region with a conductive doped semiconductor. The mobile charge carriers have been diffused away or have been forced away by an electric field. The only elements left in the depletion region are ionized donor or acceptor impurities -

Ans 3 (b)  
Mono crystalline -

a solar cell is a device which convert the sunlight into electrical energy. I will suggest to use the mono crystalline because its ampere is better then poly. voltage is higher then n poly. in case of low sunlight its convert better energy.

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Name Ihsan ullah

ID. 16717

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PART - A

- (1) The bio methane is produced by the Anaerobic oxidation of biomass.
- (2) Bio gas is compressed and used as fuels in vehicles.
- (3) The Bio methanol is used as the agricultural fertilizer.
- (4) Bio diesel is produced by the Trans esterification of the vegetable oil.
- (5) Fuel cell is an electrochemical device that converts the chemical energy in to the electrical energy.
- (6) From cathode Hydrogen gas is bubbled in hydrogen-oxygen cell.
- (7) A module in a solar panel refers to series and parallel arrangement of solar cell.
- (8) The efficiency of the solar cell is about 15%.
- (9) The current density of a photo voltaic cell ranges from 40-50 mA/cm<sup>2</sup>.
- (10) Solar energy is radiated by clouds and earth as long wave energy.