

### SECTION 3.

Q.108)

Q108 The Biomass Conversion

(i) The following processes used for the biomass conversion to energy or to products.

- a) Direct Combustion,
- b) Thermochemical conversion
- c) Biochemical conversion

(ii) Direct combustion or the combustion is the process of burning in presence of oxygen to produce heat light and bio product

(iii) complete conversion to ashes is called incineration

Wood, dung, vegetable waste can be dried and burnt to provide heat or other commercial also low calorific value gas by pyrolysis

(b) Thermo chemical conversion

(i) Biomass is decomposed in thermo chemical processes by heating materials at high temperature and pressure

(ii) Thermochemical conversion takes two forms: gasification and liquefaction

(iii) Gasification takes place by heating the biomass with limited oxygen to produce low heating value gas or by reacting it with steam.

(c) Biochemical conversion

(i) In biochemical conversion there are two pathways: anaerobic and aerobic

(ii) Anaerobic digestion

(iii) Fermentation