

A feed stock is mixed with 30% of water and is gasified in a closed environment in to a syn gas using carbon monoxide and hydrogen. The cooled syngas is then converted in to usable products through exposure to bacteria.

3.composing

A feed stock of organic matter is subjected to some organisms to reduce and convert organic waste into high quality feed stuff and oil material for the biodiesel industry.

**TWO MARKS**

**1. Define renewable resources.**

The renewable resources are those resources which have the inherent capacity to reappear, or replenish themselves by quick recycling , reproduction, and replacement within a reasonable time ,and to maintain themselves.

Example; air, water, soil (land), and plants, and animals

**2. Define non-renewable resources.**

The non-renewable resources are those that do not have the ability for recycling and replacement within a reasonable period of time. Example; minerals, coal oil, natural gas, ground water

**3. List some of the renewable energy sources.**

- a. Solar energy
- b. Wind energy
- c. Hydro energy
- d. Geo-thermal energy
- e. Ocean thermal energy

**4. Define deforestation.**

Deforestation is the process of removal of (or) elimination of forest resources due to many natural or man-made activities. In general, deforestation means destruction of forests.

**5. What is mining?**

Mining is the process of extracting mineral resources and fossil fuels like coal from the earth. These deposits are found in the forest region, and any operation of mining will naturally affect the forest. Mining operation requires removal of vegetation along with underlying soil mantle.

**6. Define drought.**

Drought is nothing but scarcity of water, which occurs due to inadequate rainfall, late arrival of rains, and excessive withdrawal of ground water.

**7. Define food resources.**

Food is an essential requirement for human survival. Each person has a minimum food requirement. The main components of food are carbohydrates, fats, protein, minerals, and vitamins.

**8. Uses of forest.**

- a. Wood used as fuel.
- b. Various industries use raw materials as pulp, paper, board, timber.
- c. Many plants are utilized in preparing medicines and drugs.
- d. Forest products, like gums, resins, dyes.

**9. Types of mining.**

- a. surface mining :

It involves mining of minerals from the shallow deposits.

- b. underground mining:

It involves mining of minerals from deep deposits.

**10. What is hydrological cycle?**

The water from various water bodies gets evaporated by the solar energy, and falls again on the earth in the form of rain or snow and enter into the living organisms and plants and ultimately returns to the ocean .this process is called hydrological cycle.

Clouds →water (ocean, lake, river) →living organisms &plants

**11. Define floods.**

A flood is an overflow of water, whenever the magnitude of flow of water exceeds the carrying capacity of the channel within its banks.

**12. Cases of flood.**

- a. Heavy rainfall, melting of snow (ice), sudden release of eater from dams, often causes floods in the low-lying coastal area.
- b. Prolonged downpour can also cause the over-flowing of lakes and rivers resulting into floods.
- c. The removal of dense and uniform forest cover over the hilly zones leads to occurrence of floods.

**13. List some of the food resources available in the world.**

Major food sources available in the world to cater the human"s hunger are 12 types of seeds and grains, 3 root crops, 20 common fruits and vegetables, 6 mammals, 2 domestic fowl, few fishes and other forms of marine life etc.

**14. Define Traditional Agriculture.**

Traditional Agriculture can be classified as Traditional Subsistence agriculture and Traditional Intensive agriculture. Traditional Subsistence agriculture produces enough crops or live stock for a farm family"s survival and in good years, a surplus to sell or put aside for hard times. In Traditional Intensive agriculture farmers increase their inputs of human and draft labour, fertilizer, and water to get a higher yield per area of cultivated land to produce enough food.

**15. Write the advantages and disadvantages of petroleum as a energy resources?**

As a source of energy petroleum has many advantages a. It is relatively cheap to extract and transport

- b. It requires little processing to produce desired products and
- c. It has relatively high net and useful energy yield.

However it has certain disadvantages also,

- a. Produces Environmental pollution
- b. Oil spills, in ocean cause water pollution and is expensive to clean up.

**16. Write short notes on Tidal energy.**

Tides, the alternate rise and fall of sea water possess lot of energy. The identified tidal power potential in India is around 9000 MW. Currently France, Russia, china and Canada are effectively utilizing the tidal energy to produce 2 to 3% of their energy demand.

**17. Define Soil Erosion.**

Soil erosion is the movement of soil components, especially surface litter and top soil, from one place to another. The two main movers are flowing water and wind.

**18. List some ways to protect soil.**

- a. When the buildings are constructed, all the trees shall be saved.
- b. Setting a composite bin and it shall be used for producing mulch and soil
- c. Conditioner for yard and garden planetso organic methods can be used for growing vegetables.
- d. Strictly enforcing laws and policies that minimize soil erosion, salt buildup and water logging.

**19. What is equitable use of resources?**

The Equitable use of resources is a concept that deals with the rational use of resources so that a harmony between man"s resource requirement and its availability can be established.

**20. Define drought.**

Drought is nothing but scarcity of water which occurs due to inadequate rainfall, late arrival of rains and excessive withdrawal of ground water.

**21. Give the classification of Mineral Resources.**

Energy resources (coal, oil, natural gas, uranium, and geothermal energy; metallic mineral resources (iron, copper and aluminum) and nonmetallic minerals resources (salt, gypsum and clay, sand, phosphates, water, and soil).

**22. Write short note on blue baby syndrome.**

When the nitrogenous fertilizers are applied in the fields they leach deep into the soil and contaminate the ground water. The nitrate concentration in the water gets increased. When the nitrate concentration exceeds 25mg /lit they cause serious health problems called blue baby syndrome. This disease affects infants and leads even to death.

**23. Define energy.**

Energy may be defined as any property, which can be converted into work (or) the capacity to do work.

**24. Write short notes on petroleum gas.**

It is the mixture of three hydrocarbons butane, propane and ethane. The main constituent of petroleum gas is butane. The above gases are in gaseous state in ordinary pressure but they can be liquefied under high pressure. So it is called as LPG. (Liquefied petroleum Gas).

A domestic cylinder contains 14 kg of LPG. A strong smelling substance called ethyl mercaptan is added to LPG gas cylinder to help in the detection of gas leakage.

**25. List some of the renewable energy sources.**

- a. Solar energy
- b. Wind energy
- c. Hydro energy
- d. Geo-thermal energy
- e. Ocean thermal energy
- f. Biogas

**26. Define wind energy.**

Moving air is called wind. Energy recovered from the force of the wind is called wind energy. The energy possessed by wind because of its high speed. The wind energy is harnessed by making use of wind mills.

**27. What is ote?**

There is often large temperature difference between the surface level and deeper level of the tropical oceans. This temperature difference can be utilized to generate electricity. The energy available due to the difference in temperature of water is called ocean thermal energy.

**28. Define geo thermal energy.**

Temperature of the earth increases at a rate of 20-75°C per km, when we move down the earth surface. High temperature and high pressure steam fields exist below the earth's surface in many places. The energy harnessed from the high temperature present inside the earth is called geothermal energy.

**29. Define LPG.**

The petroleum gas obtained during the cracking and fractional distillation can be easily converted into liquid under high pressure called as LPG. LPG is colorless and odorless gas. But during bottling some mercaptans is added, which produces bad odour.

**30. What is land degradation?**

Land degradation is the process of deterioration of soil or loss of fertility of the soil.

**PART B:**

1. Discuss the effect of deforestation.
2. What are the cases of soil erosion?
3. Explain forest resources.
4. Explain about fresh water resources.
5. Environmental effects of extracting and using mineral resources.
6. Write about World food problems,
7. Changes caused by agriculture and overgrazing.