

परमाणु ऊर्जा शिक्षण संस्था, मुंबई
Atomic Energy Education Society
Session: 2023 – 24

CLASS- VIII

SUBJECT : SCIENCE

WORKSHEET No. – 3

Name of the Chapter: **Coal and Petroleum**

I. Choose the correct option:- (1 x 10 = 10M)

1. (a) Carbon dioxide is formed
2. (b) Petroleum Conservation Research Association
3. (a) Sunlight
4. (c) Coke
5. (c) coal tar
6. (b) USA
7. (c) Coal gas
8. (a) 200
9. (d) CNG
10. (a) Carbon monoxide

II Answer in one sentence. (1 x 10 = 10M)

- 1.(i) Petrol (ii) Diesel
2. The useful substances formed from natural gas and petroleum are called petrochemicals.
3. Due to its great commercial importance petroleum is also called black gold.
4. Tripura, Rajasthan, Maharashtra and in the Krishna Godavari delta.
5. Coke is a tough porous and black substance. It is almost the purest form of carbon. It is formed by heating coal in the absence of air.
6. Some exhaustible natural resources are formed from the dead remains of living organisms. Hence, these are all known as fossil fuels.
7. Coal is processed in industry to get some useful products such as coke, coal-tar and coal gas.
8. When coal gets heated in air, it burns and produces mainly carbon dioxide gas.
9. CNG stands for compressed Natural Gas. It is considered to be a better fuel because it is less polluting.

10. The slow process of conversion of dead vegetation into coal is called carbonization

III Answer in two to three sentences. (2 x 10 = 20M)

1. Coal is black in colour and hard as stone. It is one of the fuels used to cook food. It was used in railway engines to produce steam to run the engine. It is used as fuel in thermal power plants to produce electricity and in various other industries.

2. The process of separating various constituents like petroleum gas, petrol, diesel, lubricating oil, paraffin wax, etc. as fractions of petroleum is known as refining.

3. Exhaustible natural resources like coal, petroleum and natural gas were formed from the dead remains of living organisms. So, these are called fossil fuels.

4. It takes a very long time for the formation of fossil fuels. It also requires specific conditions and it doesn't happen quite often, therefore, their limited stock will last only for few hundred years.

5. (i) The world's first oil well was drilled in Pennsylvania, (USA), in 1859.

(ii) In India, the first oil well was drilled at Makum (Assam) in 1867

6. The resources provided by nature or obtained from the nature are called natural resources. For example : air , water, soil and sunlight etc.

7. On the basis of the availability various, natural resources in nature can be classified in the following two groups;

(i) Inexhaustible natural resources : Air , Water , Soil , Sunlight etc.

(ii) Exhaustible natural resources : Forests , Wildlife , Minerals and Coal etc.

8. The resources which are present in unlimited quantity in nature and are not likely to be exhausted by human activities are called inexhaustible natural resources. For example : air , sunlight etc.

9. The resources which are present in limited quantity in nature and can be exhausted by human activities are called exhaustible natural resources. For example : forests, wildlife and minerals etc.

10. (i) It is used as a source of various useful substances.

(ii) It is used to get naphthalene, which is used to repel moths and other insects.

(iii) It is used to make road surface.

III Answer in three to four sentences. (3 x 5 = 15M)

1.

	Coke	Coal Tar	Coal Gas
1	It is tough porous and black substance.	It is thick black liquid with an unpleasant smell.	It is a gaseous fuel.
2	It is almost pure form of carbon.	It is a mixture of 200 different carbon compounds.	It is a mixture of gases mainly methane with some carbon monoxide.

2. Petroleum is a dark oily liquid.

It is a mixture of various constituents like petrol, diesel, kerosene, natural gas, paraffin wax, lubricating oil, etc.

Its constituents are very useful.

Due to its great commercial importance petroleum, is also called black gold.

3. a) The process of separating various components or fraction of petroleum is called refining.

This process is carried out in petroleum refinery.

b) Natural gas is a very important fossil fuel because it is easy to transport through pipes.

It is used in the form of CNG as fuel and generation of power.

4. CNG is called a clean fuel because;

- (i) It does not produce any pollution.
- (ii) No residue is left after burning of CNG.
- (iii) It burns completely in the air.

5. Harmful effects of burning fossil fuels are as following:

- (i) Burning of fossil fuels cause air pollution.
- (ii) They also cause global warming because they produce greenhouse gas like carbon dioxide on burning.

III Answer the following. (5 x 5 = 25M)

1. Various constituents of petroleum and their uses :

- (i) LPG : Fuel for home and industry.
- (ii) Petrol : Motor fuel, aviation fuel, solvent for dry cleaning.
- (iii) Kerosene : Fuel for stoves, lamps and for jet aircraft.
- (iv) Diesel : Fuel for heavy motor vehicles and electric generators.
- (v) Lubricating Oil : Lubrication Paraffin wax : Ointments, candles, Vaseline etc.
- (vi) Bitumen : Paints and road surfacing

2. The known reserves of these will last only a few hundred years is true, as we know that

coal and petroleum are fossil fuels. It requires the dead organisms millions of years to get converted into these fuels. Excessive and injudicious use of these fuels leads to shortage of these fuels and their use is also linked to global warming. It is therefore necessary that we use these fuels only when absolutely necessary.

3. PCRA is the petroleum conservation research association. They advise people how to save petrol/ diesel while driving. Their tips are :

- (i) Drive at a constant and moderate speed.
- (ii) Switch off the engine at traffic lights, or at places where you have to wait.
- (iii) Ensure correct tyre of pressure.
- (iv) Ensure regular maintenance of the vehicle.

4. a. If all the coal and petroleum reserve are depleted, we will not have fuels for our vehicles, factories and house as they take a very long time to replenish.

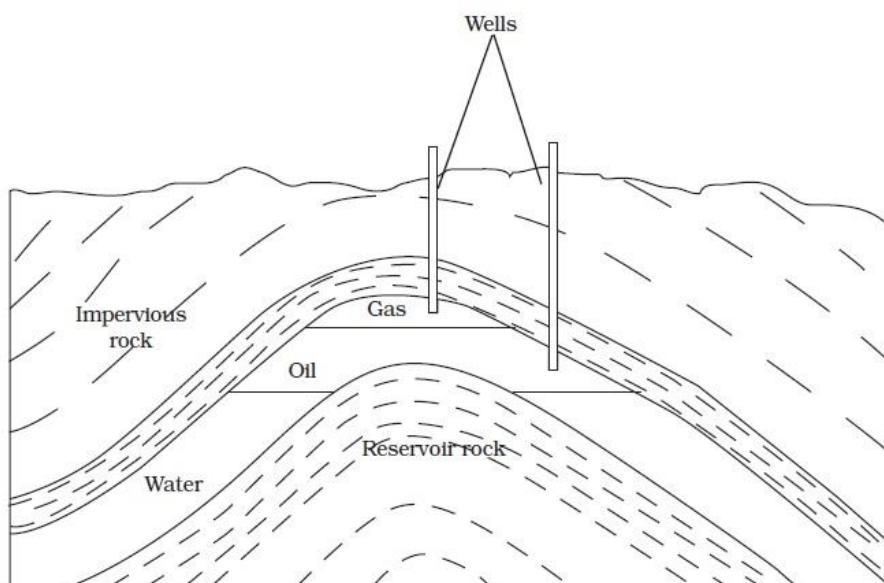
b. In following ways we can prevent the depletion of coal and petroleum:

- i. Use alternative fuels
- ii. Use public transport and by cycles for short distances
- iii. Use car pools to go for work or to school.

c. Many useful substances are obtained from petroleum and natural gas. These are called petrochemicals.

Petrochemicals are used in the manufacture of detergents , fibres, polythene and other plastics and fertilizers.

5.



Petroleum and natural gas deposits