

## 06. COAL AND PETROLEUM

### Questions and Answers

#### 1. Complete the given analogy.

- (i) Coal : Exhaustible :: \_\_\_\_\_ : Inexhaustible  
 (ii) Coaltar : \_\_\_\_\_ :: Coke : Manufacture of steel  
 (iii) Petrochemical : Plastic :: CNG : \_\_\_\_\_  
 (iv) Carbondioxide : Global warming :: \_\_\_\_\_ : Nausea

#### 2. Match the following.

- |                             |   |   |                            |
|-----------------------------|---|---|----------------------------|
| (i) Natural resource        | [ | ] | a. Carbonisation           |
| (ii) Coal                   | [ | ] | b. Plastic chair           |
| (iii) Petrochemical product | [ | ] | c. Krishna, Godavari delta |
| (iv) Natural Gas            | [ | ] | d. Plankton                |
| (v) Petroleum               | [ | ] | e. Water                   |

#### 3. Multiple choice questions. Choose the correct answer.

- (i) Which one of the following is less polluting fuel ? [     ]  
 (A) Natural gas    (B) Coal    (C) Kerosene (D) Petrol
- (ii) The main constituent of coal is ..... [     ]  
 (A) Carbon    (B) Oxygen    (C) Air    (D) Water
- (iii) Which one of the following material is used for making shoe polish ? [     ]  
 (A) Paraffin wax    (B) Petrol    (C) Diesel    (D) Lubricating oil

#### 4. Fill in the blanks.

- (i) \_\_\_\_\_ was used in manufacture of steel.  
 (ii) The byproduct of coal used in synthetic dyes and paints is \_\_\_\_\_  
 (iii) Coal was formed in areas where large amounts of \_\_\_\_\_ was buried under the earth.  
 (iv) \_\_\_\_\_ gas which causes climate change and global warming.

#### 5. Name the petroleum products used for road surfacing.

**A.** Coal tar is a black thick liquid. It is obtained from petroleum. It is a mixture about 200 substances. Coal tar is the main product used for roads surfacing.

#### 6. Explain the process of formation of petroleum in Earth.

**A.** The organisms named Plankton were found in the bottom of seas and oceans and rivers. Plankton have tiny droplets of oil in their bodies. As these organisms died, their bodies settled at the bottom and covered with sand and clay. Due to absence of air these are transformed as petroleum or natural gas by high pressure and high temperature.

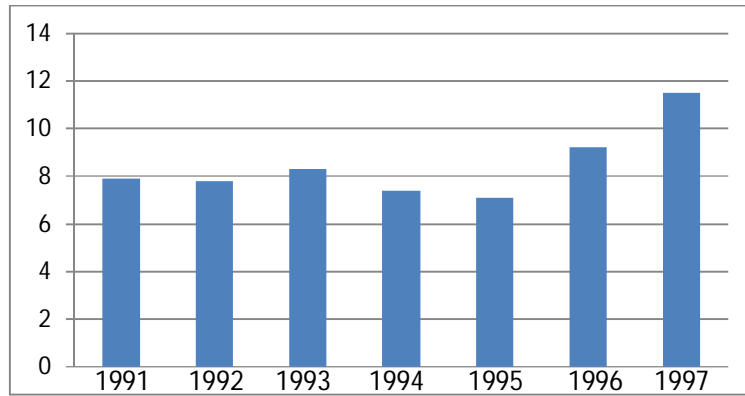
**9. The following table shows the total power shortage percentage in India from 1991-1997. Show the data in the form of a Bar graph taking shortage percentage for the years on the Y-axis and the years on the X-axis.**

Sl. No.	Year	Shortage (%)	Sl. No.	Year	Shortage (%)
1	1991	7.9	5	1995	7.1
2	1992	7.8	6	1996	9.2
3	1993	8.3	7	1997	11.5
4	1994	7.4			

**(a) Is the shortage percentage of power increasing or decreasing ?**

**(b) If shortage percentage of power increases year by year, how will it affect on human life ? Explain.**

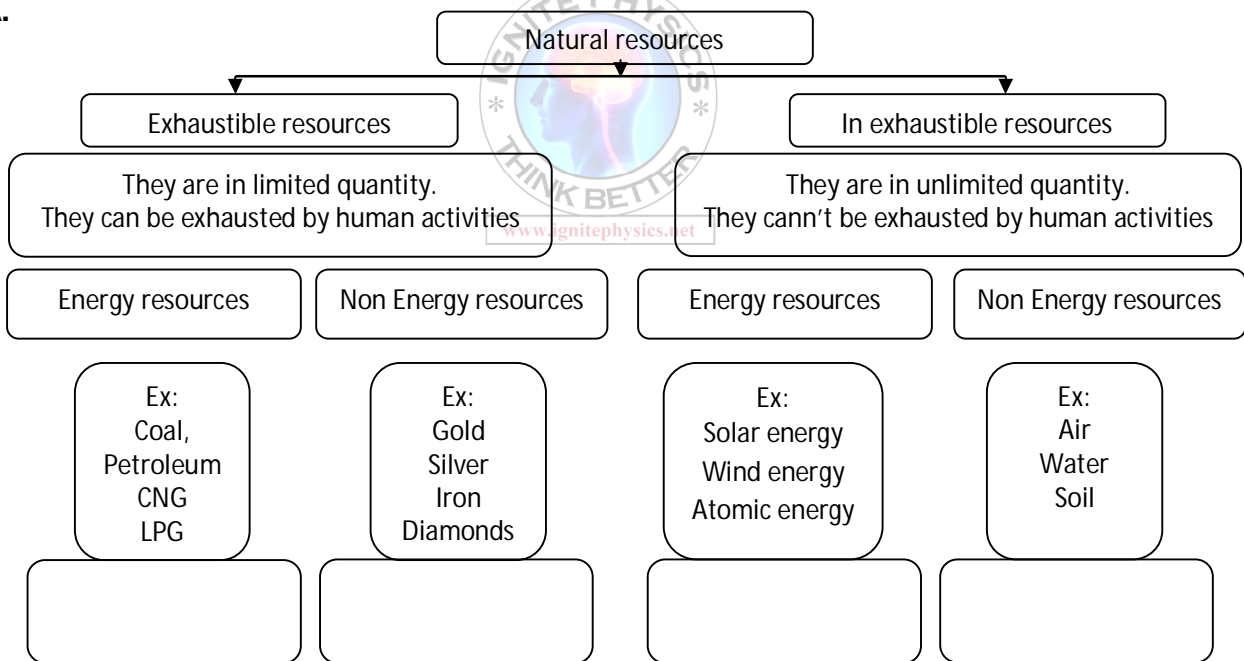
A.



- (a) The shortage percentage of power in India decreased from 1991 to 1992. It was increased from 1992 to 1993. Again decreased from 1993 to 1995. Then the shortage percentage increased from 1995 to 1997.
- (b) If shortage percentage of power increases year by year, then
- This results fuel crisis
  - This results economical crisis. (As the fuel cost increased with raising demands.)
  - Increase of shortage percentage of power indicates over consumption of power or energy sources. This leads to pollution.

**10. Draw a flow chart showing Exhaustible and Inexhaustible resources and their use.**

A.



**12. How do you appreciate the efforts of human beings to discover an alternate energy sources to coal and petroleum for their daily use ?**

A. Now we are using the fossil fuels for our energy needs. Fossil fuels like coal, Petroleum, CNG are non renewable energy resources. Also the fuels obtained from Petroleum like Petrol, Diesel causes air pollution. In this situation, we have to look for alternative energy resources like solar energy, wind energy. Because they are Pollution free and renewable energy resources. We appreciate the efforts of our scientists to discover an alternate energy sources.

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**13. Harshith said to his father, “Daddy, we can save more fuel by using cycle instead of bike for going to nearby places.” How do you appreciate Harshith’s comment ?**

**A.** Yes. Harshith’s opinion is very good. We can save more fuel by using cycle instead of bike for going to nearby places. Petrol and Diesel are non renewable energy resources. If the usage of such fuels continue in the present ratio, there will be occur an energy crisis in the coming future. Also causes environmental pollution. So we have to save fuels. So I appreciate Harshith and I too follow his advice.

**14. Why should people look for alternative sources of fossil fuel ?**

**A.** Now we are using the fossil fuels for our energy needs. Fossil fuels like coal, Petroleum, CNG are non renewable energy resources. Also the fuels obtained from Petroleum like Petrol, Diesel causes air pollution. In this situation, we have to look for alternative energy resources like solar energy, wind energy. Because they are Pollution free and renewable energy resources.

**15. Assume that you are a driver, What measures do you take to save petrol & diesel ?**

**A.** If I were a driver, I can take the following measures to save Petrol & Diesel :

- (i) I maintain the vehicle speed in economy Zone. It consumed reasonable fuel.
- (ii) I switch off the engine when it is in Heavy traffic.
- (iii) I never drive the vehicle in low gear, as possible.
- (iv) I will take the vehicle for regular checkups once in every three months.

**16. “Crude oil and refined fuel when spills into the sea from tanker of ships by accident.” Discuss the consequences of this on environment.**

**A.** If “Crude oil and refined fuel when spills into the sea from tanker of ships by accident.”

Then (i) They cause damage to Natural eco system

- (ii) They causes for the death of sea birds
- (iii) They kill marine mammals and shell fish in the seas.
- (iv) They disturb the eco systems and damage mangrove forests.
- (v) They cause damage of breeding grounds of some organisms like Tortoise.

**17. “The use of CNG and LPG as fuels for automobiles helps us to minimize air pollution and maintains ecological balance.” Do you agree with this statement ? If yes explain.**

**A.** Yes. I agree with this statement.

Now we are using the fossil fuels for our energy needs. Fossil fuels like coal, Petroleum, CNG, LPG are non renewable energy resources.

The fuels obtained from Petroleum like Petrol, Diesel are used in vehicles and in automobiles. They cause air pollution. As they are liquid fuels, produce smoke and liberate different poisonous gases like sulphur dioxide.

But CNG and LPG are different from these fuels. CNG and LPG are gaseous fuels. They do not produce smoke on burning. They liberate only Carbon dioxide and water vapour. They cause less air pollution.

So usage of CNG and LPG in automobiles is good to maintain ecological balance and to reduce air pollution.

**Answers :**

1. (i) Solar energy (ii) Synthetic dyes (or) Explosives (iii) ..... (iv) Toxic gases from paints
2. (i)-e, (ii)-a, (iii)-b, (iv)-c, (v)-d
3. (i)-a, (ii)-a, (iii)-a, (iv)
4. (i)-Coke, (ii)-Coal tar, (iii)-Organic matter like plants, (iv)-Carbon dioxide

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