

DREAMLAND SCHOOL

CLASS X

ENGLISH LANGUAGE

HOME ASSIGNMENT 6

ACADEMIC YEAR- 2020-2021(Date -29-4-20)

- I. Read the following passage carefully and answer the questions which follow.
- After the overthrow of the Nanda Dynasty at Magadha, the Mauryas came to prominence. The history of their rule is completely reliable on account of evidence obtained from a variety of sources. Several religious documents provide various information which has helped historians to reconstruct the events of history in a chronological manner. The Arthashastra of Kautilya, for example, has considerable bearing on the developments during their rule. Though there lies a confusion regarding the date of the events which are documented in this book, the historians unanimously agree that certain portions of the text have a Mauryan touch about them and may be taken as its original kernel. The Greek account called Indica has also been very crucial in the reconstruction of India's past, written by Megasthenes, it is one of most reliable sources available. According to all the available documents, Chandragupta was the founder of the Mauryan dynasty. He helmed the throne of Magadha at the age of twenty five. Indian tradition system has it that the brahmanaKautilya, also known as Chanakya or Vishnugupta, was his mentor and guide. Although the origin and early life of Chandragupta remain obscure, the Greek accounts add that he moved to the north west India and subdued the Greek garrisons left behind by Alexander.
- I. Give meaning of the following words, as used in the text.
- Chronological
 - Unanimously
 - Kernel
 - Garrisons
- II. Answer the following questions.
- a. How did the Mauryan dynasty came to power? Who was it's founder?
 - b. What are the different sources which helps in reconstruction of India's past?
 - c. What do we get to know from the document of Megasthenes?
 - d. Who was Vishnugupta?
- III. Summarize the above mentioned passage, approximately in 50 words.
2. Write a letter to your cousin sister explain to her how you are coping up with the online mode of education. Mention the active role of your school in this process.

(Wed), CI-X, EVS

Ch-4 Topic(Forest Grazing)

Home Assignment...

- 1) Why is grazing management important?
- 2) What is control grazing?
- 3) What do you mean by rotational grazing?.
- 4) What causes grazing?
- 5) What are the ways to reduce overgrazing?

....(To be continued next class.....)

Class 10
Economics

Ch-4 Meaning and Types of Market:

Q1: What is a market?

Q2: What is a perfect competition market?

Q3: What is an oligopoly market?

Q4: What is a monopoly market?

Q5: What is a monopolistic market?

Class 10

पाठ- नेताजी का चश्मा

Q-1) "बार बार सोचते क्या होगा उस कौम का जो अपने देश की खातिर घर गृहस्ती, जवानी, ज़िन्दगी सब कुछ होम कर देने वालों पर भी हस्ती है और अपने लिए बिकने के मौके ढूंढती है।"

क) 'क्या होगा उस कौम का' लेखक का क्या आशय है?

उत्तर: नेताजी का चश्मा शीर्षक के लेखक स्वयं प्रकाश जी हैं। एक देश भक्त के प्रति पान वाले के व्यंग्य पूर्ण बातें सुनकर हालदार साहब को बहुत दुःख हुआ एक बूढ़ा अपाहिज कप्तान जो देश भक्ति की भावनाओं से अभिभूत होकर नेताजी के मूर्ति पर चश्मे लगाता है तो उसका मज़ाक उड़ाया जाता है। हालदार साहब के मन ने विचार आया ऐसे देश का क्या होगा जहां देश भक्ति की भावनाओं की कोई कदर नहीं है। लेखक का आशय है कि इस प्रकार के व्यक्ति अपने स्वार्थ सिद्धि के लिए देश व देशवासियों के हित को भी दाव पर लगाने के लिए भी तत्पर रहते हैं।

ख) कप्तान चश्मे वाला नेताजी की आँखों पर चश्मा क्यों लगता है?

उत्तर: कप्तान चश्मे वाला एक देश भक्त विचार धारा का व्यक्ति है। उसे नेताजी की बगैर चाशनी वाली मूर्ति बुरी

लगती है और वह उसे आहत भी करती है । वह यह अहसास कार्य है कि बगैर चश्मे के नेताजी को असुविधा होगी इसीलिए वह अपनी छोटी सी दुकान में उपलब्ध गिने चुने फ्रेमों में से एक फ्रेम नेताजी की आँखों पर फिट कर देता था ।

ग) हालदार साहब को पान वाले की कौन सी बात अच्छी नहीं लगी?

उत्तर: जब हालदार साहब ने पान वाले से पूछा कि क्या कप्तान चश्मे वाला नेताजी का साथी है या आज़ाद हिंद फौज का भूत पूर्व सिपाही ,उस समय पान वाले ने व्यंग्य भाव में हस्ते हुए कहा कि 'नहीं साहब वो लंगर क्या जायेगा फ़ौज में ,पागल है पागल।उसका कहीं फोटो वोटो छपवा दो'। एक देश भक्त का इस तरह मज़ाक उड़ाये जाना हालदार साहब को अच्छा नहीं लगा।

घ) नेताजी का चश्मा कहानी हमें क्या सन्देश देती है?

उत्तर: नेताजी का चश्मा कहानी देश भक्ति की भावना से परिपूर्ण है ।इस कहानी के माध्यम से लेखक ने यह सन्देश दिया है कि देश भक्ति किसी वर्ग की गुलाम नहीं होती ,वह तो जाति पाती आमिर गरीब ,बूढ़े जवान सभी के अंदर समाहित होती है।इस कहानी में कहानी कार ने एक सामान्य नागरिक के माध्यम से देश के करोड़ों नागरिकों के

योगदान की चर्चा की है। लेखक यही सन्देश देना चाहते हैं कि हमें देश के लिए किये गए तुच्छ से तुच्छ बलिदान को भी नमन करना चाहिए और देश भक्तों का आदर करना चाहिए तथा सभी देशवासियों को देश के प्रति बलिदान करने के लिए सदैव तत्पर रहना चाहिये।

HOMEWORK- "केवल एक चीज़ थी जो देखते ही खटकती थी।"

क) मूर्ति में किस बात की कमी खटकती थी ?

ख) हालदार साहब को मूर्ति बनाने का प्रयास सफल और सराहनीय क्यों लगा ?

ग) उस मूर्ति कार को ही मूर्ति बनाने का काम क्यों दिया गया था ?

घ) शीर्षक की सार्थकता स्पष्ट करें।

Mathematics- Reflection

Class-X

Assignment:- Date:-

REFLECTION OF A POINT IN A LINE

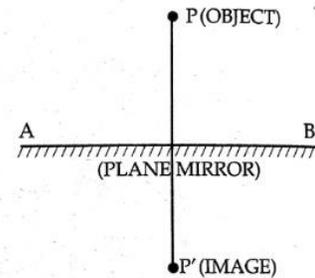
When we see the image of an object in a plane mirror, we notice that:

- (i) the distance of the *image* behind the mirror is the same as the distance of the *object* in front of it.
- (ii) the *mirror line* is perpendicular to the line joining the object and its image.

Thus, if P is the object and P' its image in a plane mirror, then the *mirror line* (say AB) is the perpendicular bisector of the line segment PP' . This leads to:

Definition. The *reflection* (or *image*) of a point P in a line AB is a point P' such that AB is the perpendicular bisector of the line segment PP' .

The line AB is called *axis of reflection* (or *mediator*).



Invariant point

In particular, if the point P lies on the line AB , then the image of P is P itself. Such a point is called an *invariant point* with respect to the line AB . This leads to:

Definition. A point is called an *invariant point* with respect to a given line if and only if it lies on the line.

Reflection of a point in the x -axis

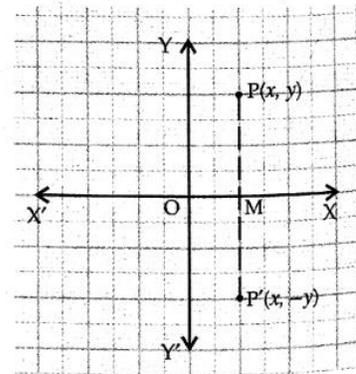
Let $P(x, y)$ be any point in the coordinate plane. From P , draw PM perpendicular to x -axis and produce it to a point P' such that $MP' = MP$. Then the point P' is the *reflection* of the point P in the x -axis.

From figure, the coordinates of the point P' are $(x, -y)$.

Thus, the reflection of the point $P(x, y)$ in the x -axis is the point $P'(x, -y)$.

Rule to find the reflection of a point in the x -axis:

- (i) Retain the abscissa i.e. x -coordinate.
- (ii) Change the sign of ordinate i.e. y -coordinate.



Reflection of a point in the y -axis

Let $P(x, y)$ be any point in the coordinate plane. From P , draw PN perpendicular to y -axis and produce it to a point P' such that $NP' = NP$. Then the point P' is the *reflection* of the point P in the y -axis.

From figure, the coordinates of the point P' are $(-x, y)$.

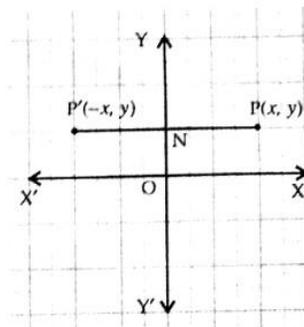
Thus, the reflection of the point $P(x, y)$ in the y -axis is the point $P'(-x, y)$.

Rule to find the reflection of a point in the y -axis:

- (i) Change the sign of abscissa i.e. x -coordinate.
- (ii) Retain the ordinate i.e. y -coordinate.

For example:

- (i) the reflection of the point $(2, 3)$ in the y -axis is the point $(-2, 3)$.
- (ii) the reflection of the point $(-4, -1)$ in the y -axis is the point $(4, -1)$.
- (iii) the reflection of the point $(0, 5)$ in the y -axis is the point itself, therefore, the point $(0, 5)$ is *invariant* with respect to y -axis.



Reflection of a point in a line parallel to x -axis

Let $P(x, y)$ be any point in the coordinate plane and AB be a line parallel to x -axis.

Equation of the line AB is $y = a$, where a is positive if the line AB lies above the x -axis and a is negative if it lies below the x -axis. (See article 12.2.1)

From P , draw PM perpendicular to the line AB and produce it to a point P' such that $MP' = MP$. Then the point P' is the *reflection* of the point P in the line AB i.e. in the line $y = a$.

From figure, the coordinates of the point M are (x, a) . Let the coordinates of the point P' be (α, β) .

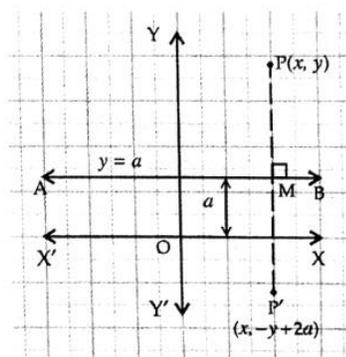
Since $MP' = MP$ i.e. $M(x, a)$ is the mid-point of the line segment PP' , we have

$$\begin{aligned} \frac{x + \alpha}{2} &= x \text{ and } \frac{y + \beta}{2} = a && \text{(See article 11.1.1)} \\ \Rightarrow x + \alpha &= 2x \text{ and } y + \beta = 2a \\ \Rightarrow \alpha &= x \text{ and } \beta = -y + 2a \\ \Rightarrow \text{the coordinates of the point } P' &\text{ are } (x, -y + 2a). \end{aligned}$$

Thus, the reflection of the point $P(x, y)$ in the line $y = a$ is the point $P(x, -y + 2a)$.

For example:

- (i) the reflection of the point $(4, 5)$ in the line $y = 2$ is the point $(4, -5 + 2 \times 2)$ i.e. $(4, -1)$.
- (ii) the reflection of the point $(-2, -3)$ in the line $y = 2$ is the point $(-2, 3 + 2 \times 2)$ i.e. $(-2, 7)$.



Reflection of a point in a line parallel to y -axis

Let $P(x, y)$ be any point in the coordinate plane and AB be a line parallel to y -axis.

Equation of the line AB is $x = a$, where a is positive if the line AB lies to the right of y -axis and a is negative if it lies to the left of y -axis. (See article 12.2.2)

From P , draw PM perpendicular to the line AB and produce it to a point P' such that $MP' = MP$. Then the point P' is the *reflection* of the point P in the line AB i.e. in the line $x = a$.

From figure, the coordinates of the point M are (a, y) . Let the coordinates of the point P' be (α, β) .

Since $MP' = MP$ i.e. $M(a, y)$ is mid-point of the line segment PP' , we have

$$\frac{x + \alpha}{2} = a \text{ and } \frac{y + \beta}{2} = y \quad \text{(See article 11.1.1)}$$

$$\Rightarrow x + \alpha = 2a \text{ and } y + \beta = 2y$$

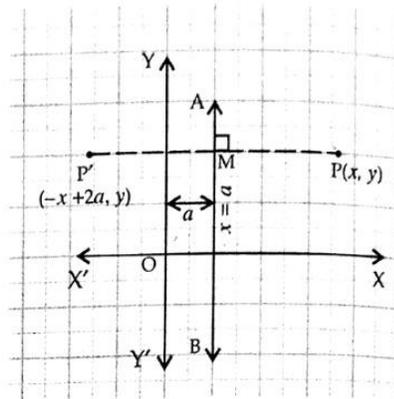
$$\Rightarrow \alpha = -x + 2a \text{ and } \beta = y$$

$$\Rightarrow \text{the coordinates of the point } P' \text{ are } (-x + 2a, y).$$

Thus, the reflection of the point $P(x, y)$ in the line $x = a$ is the point $P'(-x + 2a, y)$.

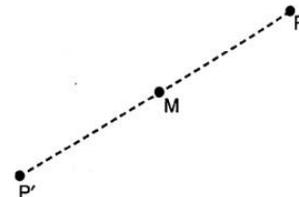
For example:

- (i) the reflection of the point $(3, 2)$ in the line $x = 2$ is the point $(-3 + 2 \times 2, 2)$ i.e. $(1, 2)$.
- (ii) the reflection of the point $(-3, -4)$ in the line $x = 2$ is the point $(3 + 2 \times 2, -4)$ i.e. $(7, -4)$.
- (iii) the reflection of the point $(2, -5)$ in the line $x = -1$ is the point $(-2 + 2 \times (-1), -5)$ i.e. $(-4, -5)$.
- (iv) the reflection of the point $(2, -3)$ in the line $x = 2$ is the point $(-2 + 2 \times 2, -3)$ i.e. $(2, -3)$ i.e. the point itself, therefore, the point $(2, -3)$ is *invariant* with respect to the line $x = 2$.



REFLECTION OF A POINT IN A POINT

Definition. The *reflection* (or *image*) of a point P in a given point M is a point P' such that M is the mid-point of the line segment PP' .

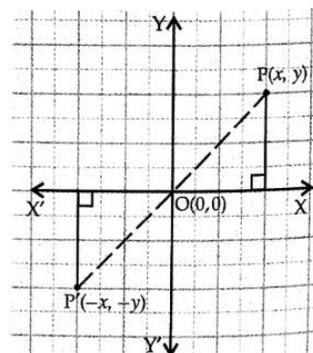


Reflection of a point in the origin

Let $P(x, y)$ be any point in the coordinate plane. Join PO , and produce it to a point P' such that $OP' = OP$. Then the point P' is the reflection of the point P in the origin.

From figure, the coordinates of the point P' are $(-x, -y)$.

Thus, the reflection of the point $P(x, y)$ in the origin is the point $P'(-x, -y)$.



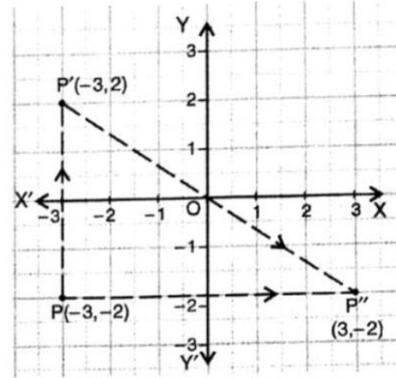
Example 1 The point $P(-3, -2)$ on reflection in x -axis is mapped on P' . Then P' on reflection in the origin is mapped as P'' . Find the coordinates of P' and P'' .

Write down a single transformation that maps P onto P'' .

Solution. Since the point P' is the reflection of the point $P(-3, -2)$ in x -axis, the coordinates of P' are $(-3, 2)$.

Further, as the point P'' is the reflection of the point $P'(-3, 2)$ in the origin, the coordinates of P'' are $(3, -2)$.

The single transformation — the reflection of the point $P(-3, -2)$ in y -axis maps it onto $P''(3, -2)$.



Example 2 A point P under reflection in y -axis is mapped onto $P'(2, 3)$.

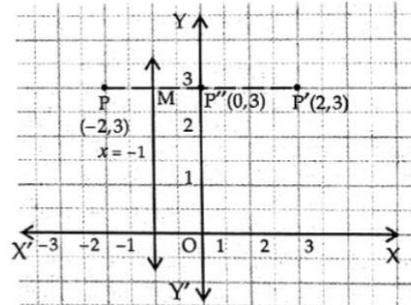
(i) Find the coordinates of P .

(ii) Find the coordinates of the image of P under reflection in the line $x = -1$.

Solution.

(i) Since $P'(2, 3)$ is the image of P under reflection in the y -axis, the coordinates of P are $(-2, 3)$.

(ii) We know that the reflection of the point (x, y) in the line $x = a$ is the point $(-x + 2a, y)$, therefore, the image of the point $P(-2, 3)$ under reflection in the line $x = -1$ is the point $P''(-(-2) + 2 \times (-1), 3)$ i.e. the point $P''(0, 3)$.



Example 3 A point P is reflected to P' in the x -axis. The coordinates of its image are $(2, -3)$. Find :

(i) the coordinates of P .

(ii) the coordinates of the image P'' of P under reflection in the y -axis.

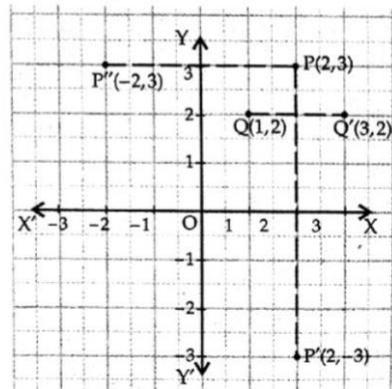
(iii) the coordinates of the image Q' of the point $Q(1, 2)$ in the line PP' .

Solution.

(i) Since $P'(2, -3)$ is the image of P in the x -axis, the coordinates of P are $(2, 3)$.

(ii) The coordinates of the image P'' of P under reflection in the y -axis are $(-2, 3)$.

(iii) The coordinates of the image Q' of the point $Q(1, 2)$ in the line PP' are $(3, 2)$.



Home Work-

1. Find the coordinates of the image of $(3, 1)$ under reflection in x -axis followed by reflection in the line $x = 1$.
2. If $P'(-4, -3)$ is the image of a point P under reflection in the origin, find
 - (i) the coordinates of P .
 - (ii) the coordinates of the image of P under reflection in the line $y = -2$.
3. A point $P(a, b)$ is reflected in the x -axis to $P'(2, -3)$, write down the values of a and b . P'' is the image of P , when reflected in the y -axis. Write down the coordinates of P'' . Find the coordinates of P''' , when P is reflected in the line, parallel to y -axis such that $x = 4$.
4.
 - (i) Point $P(a, b)$ is reflected in the x -axis to $P'(5, -2)$. Write down the values of a and b .
 - (ii) P'' is the image of P when reflected in the y -axis. Write down the coordinates of P'' .
 - (iii) Name a single transformation that maps P' to P'' .

CLASS-X

SUBJECT – GEOGRAPHY

CHAPTER- MINERAL AND ENERGY RESOURCES- II(PART I)

ASSESSMENT-7

Energy Resources

Energy is an essential input for industrial and economic development. Energy output is obtained from commercial sources like coal, petroleum and electricity.

Sources

Conventional energy Resources

The energy sources which cannot be compensated, once these are used are termed as conventional energy sources, e.g. - Coal, Petroleum and natural gas.

Characteristics

1. They are exhaustible
2. They cause pollution.
3. They are very expensive to be maintained.

Coal

It is the oldest source of conventional energy.

Type	% of Carbon	Quality	Area
Anthracite	80%	Very	Jammu and Kashmir
Bituminous	60-80%	High	Jharkhand, Odisha,

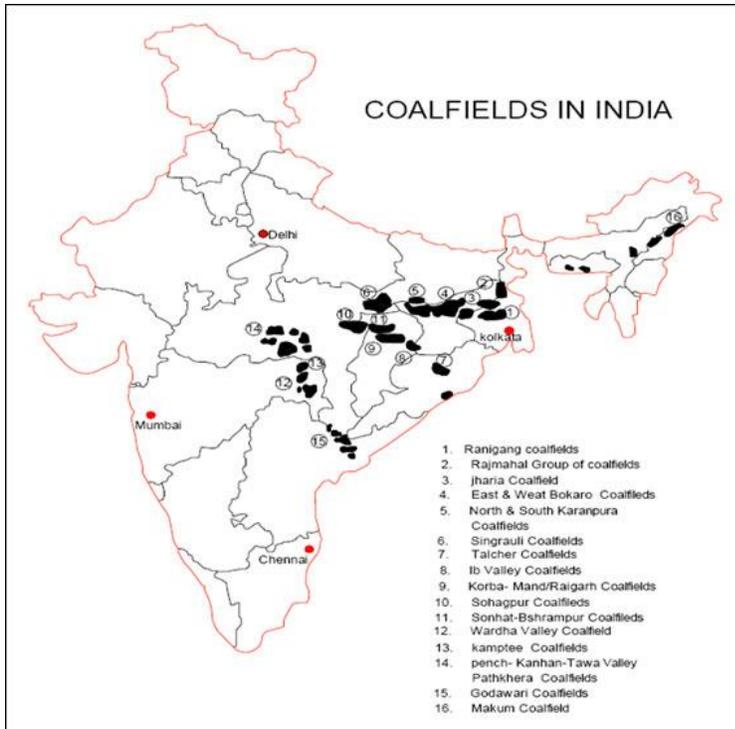
			West Bengal, Chhattisgarh, M.P
Lignite	60%	Inferior	Palna of Rajasthan, Neyveli in Tamil Nadu, Lakhimpur in Assam
Peat	50-60%	Inferior	Jharkhand, Odisha, West Bengal, M.P

Uses

1. Lignite is used in power generation.
2. Bituminous Coal is used in Iron and steel and cement industry.
3. Anthracite is used in domestic consumption.
4. The Indian railways were the largest consumer of anthracite till recently.
5. Peat is used as domestic fuel in many places.

Distribution of coal (Gondwana coalfields) Data of 2017

States	Mining Centers
Odisha	Talcher, Rampur, Sambalpur.
Chhattisgarh	Korba, Tatapani, Jhilmili.
M.P	Singrauli, Sholapur, Umaria, Sohagpur,
Jharkhand	Jharia, Bokaro, Giridih, Karanpura.
Telengana	Adiladad, Karimnagar, Tandur
Maharashtra	Wardha Valley



Tertiary coal fields – (Lignite and Peat type of coal)

1. Rasi in Kashmir.
2. Lakimpur in Assam.
3. Borjan and Tiensang in Nagaland.
4. Pallu in Rajasthan.

Advantages-

1. Coal supplies around 36% of the primary energy needs all over the world.
2. Coal is still the cheapest conventional energy resource.
3. People get more energy by burning a small quantity of coal.
4. Like wind, solar and hydel energy it is not dependent on climate.
5. It has several by products like phenol, creosote oil, naphthalene.

Disadvantages-

1. As coal fields do not exist all over the country transportation of coal from mines to the industries is expensive.
2. Anthracite which is the best quality coal is limited in supply.
3. Use of big machines in the coal mines is difficult.
4. Fires in the mines and pit heads also result in heavy losses.
5. Burning of coal emits harmful wastes and causes environmental pollution.
6. Digging for coal may destroy forest areas.

Petroleum (Mineral Oil)

The word petrol (meaning 'rock') and oleum (meaning 'oil'). The petroleum is the oil obtained from rocks. It is a kind of fossil fuel derived from the decomposition of organic matter under intensive heat and pressure.

Uses

1. Almost all vehicles big or small, aeroplanes, ships and trains run on petroleum.
2. Petroleum is also used for making many products including synthetic fibers, synthetic rubbers, varnish, paints, detergents, phenols, fertilizers etc.
3. It is also the main sources many products like petrol, kerosene, diesel oil.
4. It is the most important raw material of chemical and plastic industry.

Distribution-

Major oil fields in India

On-shore Oil-fields

a) North-Eastern India-

In Assam there are Digboi (oldest field), Naharkatiya, Maran, Rudrasagar, Galeki, Hugrijan.

Arunachal Pradesh- Nigreu oil field near Kharasang.

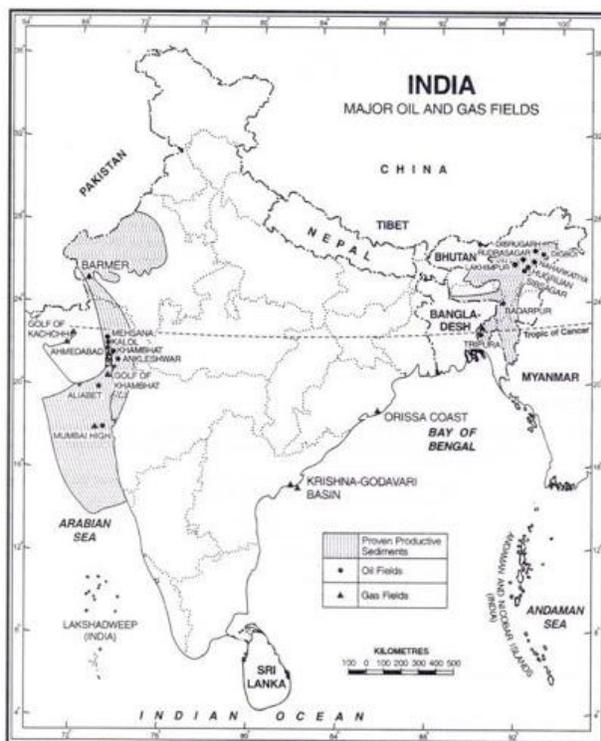


FIG. 26.5. India : Major Oil and Gas fields

b) Western India.

In Gujrat important oil fields are. Ankleshar, Kalol, Nawagam, Kousamba, Kathana, Barkol, Dholka, Kadi, Sananda etc.

c) Southern India

Godwari Basin and Kaveri Basin

are perspective oil fields.

Off-shore oil-field-

Mumbai High region is important oil field. The name of the rig installed here is Sagar Samrat.

Other Oil-fields-

Apart from these areas, oil has also been discovered in the Kaveri, Krishna and Godvari Basins.

Oil refineries

Public sector

- Indian Oil Corporation Ltd.-Barauni
- Indian Oil Corporation Ltd.- Koyali
- Indian Oil Corporation Ltd.- Haldia
- Indian Oil Corporation Ltd.- Digboi
- Hindustan Petroleum Corporation Ltd.- Mumbai

Private Sector

- Reliance Industries Ltd.- Jamnagar
- Reliance Petroleum Ltd.- Jamnagar
- Indian oil corporation Ltd. – Koyali.

Advantages-

- 1) By modern technologies it can be extracted easily.
- 2) It has high density.
- 3) It can be extracted at low cost.
- 4) It can be easily transported because it is in liquid form.
- 5) Various types of uses are increasing day by day.

Disadvantages-

- 1) As it is a natural fossil fuel it is limited.
- 2) Burning oil generates greenhouse gases and causes environmental pollution.

- 3) It is non-renewable form of energy resources.
- 4) It leads to increase in price.

Natural Gas

It has become an important source of energy in India.

Distribution- Over three fourth (65%) gas comes from Mumbai high, rest is produced by Assam, Tamil Nadu, Tripura and Bassein.

Advantages-

- 1) Natural gas is a renewable resource.
- 2) It can be created in the landfills.
- 3) It is cheaper.
- 4) It can be efficiently and safely stored.
- 5) It is considered to be environment friendly.
- 6) This gas is used in cooking.

Disadvantages-

- 1) It cannot be used at large scale.
- 2) It is highly volatile and can be dangerous if handled carelessly.
- 3) It is colorless, odorless which makes it look detection difficult.
- 4) Like other fossil fuels it emits green house gases.

(To be continued..)

Assignment Questions-

- 1) Name four types of coal found in India. Which type of coal is mostly used in iron and steel Industry?
- 2) Petroleum is called a fossil fuel- give reason.
- 3) Write the name of two on-shore and off-shore oil fields of India.
- 4) What is lignite? Name the two areas where lignite is found in India.
- 5) Name any two oil refineries in India.
- 6) Petroleum is very important mineral for present industrial and economic development- give reason.
- 7) Which are the two leading producer states of coal?

Pranamita Majumder

DATE-29.04.2020 (WEDNESDAY)

CLASS-X

SUBJECT-PHYSICS

CHAPTER-2: WORK, ENERGY AND POWER (1ST CLASS)

Work

Work done (W) = Force (F) × Displacement (S)

If angle between force and displacement is θ then,

Work done $W = FS \cos \theta$

When $\theta = 0^\circ \Rightarrow$ work done is +ve

When $\theta = 90^\circ \Rightarrow$ work done is zero

When $\theta = 180^\circ \Rightarrow$ work done is -ve

Units of work done: Joule (SI), erg (CGS)

$$1 \text{ J} = 10^7 \text{ erg}$$

Power

The rate of doing work is called power.

$$\text{Power} = \frac{\text{Work done}}{\text{Time taken}} = \frac{W}{t}$$

$$W = F \times S$$
$$\text{Power} = \frac{W}{t} = \frac{F \times S}{t} = F \times v \quad (S/t = v)$$

If a person does a given amount of work at a faster rate, more power is spent by him.

Units of Power : The S.I. unit of power = watt (W) (1 W = 1 J s⁻¹)

If 1 joule of work is done in 1 second, the power spent is said to be 1 watt.

Bigger units are kilowatt (kW), megawatt (MW) and gigawatt (GW)

$$1 \text{ kW} = 10^3 \text{ W}, \quad 1 \text{ MW} = 10^6 \text{ W}, \quad 1 \text{ GW} = 10^9 \text{ W}$$

Other units : 1) C.G.S. unit = erg s⁻¹ 1 W = 10⁷ erg s⁻¹

2) 1 Horse power = 746 W = 0.746 kW

Energy

The energy of a body is its capacity to do work

Units of energy- Joule (SI), erg(CGS), watt hour, kilowatt hour, Calorie, Electron volt (eV)

DATE-29.04.2020 (WEDNESDAY)
CLASS-X
SUBJECT-PHYSICS
ASSIGNMENT-7
CHAPTER-2: WORK, ENERGY AND POWER (1st CLASS)
(F.M.-10)

Answer the following questions

(Question No-1 carries 1 mark, 2 carries 2 marks, 3 carries 3 marks, 4 carries 4 marks)

1. When is work said to be done by a force?

 2. A coolie A carrying a load on his head climbs up a slope and another coolie B carrying the identical load on his head moves the same distance on a horizontal platform. Who does more work? Explain the reason.

 3. (i) The work done by a fielder when he takes a catch in a cricket match is negative or positive? Explain mathematically.
(ii) Arrange the values of 1 kWh, 1calorie, 1 eV in ascending order.

 4. A pump is used to lift 500 litre of water from a depth of 60 m in 10 s. Calculate:
 - (i) the work done by the pump.
 - (ii) the power at which the pump works, and
 - (iii) the power rating of the pump if its efficiency is 30%. (take $g=10 \text{ m/s}^2$ and density of water= 1000 kg/m^3)
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