DREAMLAND SCHOOL

CLASS X

ENGLISH LANGUAGE

ASSIGNMENT 14

ACADEMIC YEAR – 2020-21

DATE – 18/5/2020

1. Write a letter to the editor of a newspaper appealing for help for the victims of flood. Give some details of the miserable condition of the victims and state the urgency of supporting them.

2. <u>Join the sentences without using and, but and so:</u>

   1. A man is drowning. He shouted for help.
   2. It is not a new car. It is reliable.
   3. Take the cheque. The cash may not be sufficient.
   4. I speak the truth. I am not afraid.
   5. They wanted to earn. They worked hard for that reason.
   6. He was sensible. He did the right thing.
   7. I saw the wicked man. I ran into the house.
   8. I found the door open. I went inside.
   9. He went into the field. He saw a snake.
   10. He will pay back the money. He will not delay it.

CH-7 Topic (Nuclear Energy)

Home Assignment.....

1) What do you mean by nuclear energy?

2) What is a nuclear power plant and how does it work?

3) How many nuclear power plants are there in India?

4) Why is nuclear energy bad?

5) Is it bad to live near nuclear power plant?

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

Q1.

Using the Remainder and Factor Theorem, factorise the following polynomial: $x^3 + 10x^2 - 37x + 26$.

Ans.

$f(x) = x^3 + 10x^2 - 37x + 26$

$f(1) = (1)^3 + 10(1)^2 - 37(1) + 26$

$= 1 + 10 - 37 + 26 = 0$

$x = 1$

$$x-1)\overline{x^3 + 10x^2 - 37x + 26}(x^2 + 11x - 26$$
$$\underline{x^3 - x^2}$$
$$-\ +$$
$$\overline{\quad 11x^2 - 37x}$$
$$\underline{11x^2 - 11x}$$
$$-\ +$$
$$\overline{\quad -26x + 26}$$
$$\underline{-26x + 26}$$
$$+\ -$$
$$\overline{\quad 0}$$

$x - 1$ is factor of $f(x)$

$\therefore f(x) = (x - 1)(x^2 + 11x - 26)$
$= (x - 1)(x^2 + 13x - 2x - 26)$
$= (x - 1)[x(x + 13) - 2(x + 13)]$
$= (x - 1)[(x - 2)(x + 13)]$

Q2.

If $(2x + 1)$ is a factor of $6x^3 + 5x^2 + ax - 2$ find the value of a

Ans.

Let $2x + 1 = 0$, then $x = -\frac{1}{2}$

Substituting the value of x in f(x),

$f(x) = 6x^3 + 5x^2 + ax - 2$

$$f\left(-\frac{1}{2}\right) = 6\left(-\frac{1}{2}\right)^3 + 5\left(-\frac{1}{2}\right)^2 + a\left(-\frac{1}{2}\right) - 2$$

$$= 6\left(-\frac{1}{8}\right) + 5\left(\frac{1}{4}\right) + a\left(-\frac{1}{2}\right) - 2$$

$$= -\frac{3}{4} + \frac{5}{4} - \frac{a}{2} - 2 = \frac{-3+5-2a-8}{4} = \frac{-6-2a}{4}$$

$\because 2x + 1$ is a factor of $f(x)$

$\therefore$ Remainder $= 0$

$$\therefore \frac{-6-2a}{4} = 0 \Rightarrow -6 - 2a = 0$$

$$\Rightarrow 2a = -6 \Rightarrow a = -3$$

$\therefore a = -3$

Q3.

If $(3x - 2)$ is a factor of $3x^3 - kx^2 + 21x - 10$, find the value of k.

Ans.

Let $3x - 2 = 0$, then $3x = 2$

$\Rightarrow$ $x = \frac{2}{3}$

Substituting the value of x in f(x),

$f(x) = 3x^3 - kx^2 + 21x - 10$

$$f\left(\frac{2}{3}\right) = 3\left(\frac{2}{3}\right)^3 - k\left(\frac{2}{3}\right)^2 + 21\left(\frac{2}{3}\right) - 10$$

$$= 3 \times \frac{8}{27} - k \times \frac{4}{9} + 21 \times \frac{2}{3} - 10$$

$$= \frac{8}{9} - \frac{4k}{9} + 14 - 10 = \frac{8-4k}{9} + 4$$

$\because$ Remainder is 0

$$\therefore \frac{8-4k}{9} + 4 = 0$$

$\Rightarrow 8 - 4k + 36 = 0$

$\Rightarrow -4k + 44 = 0 \Rightarrow 4k = 44$

$\therefore k = 11$ **Ans.**

HOME WORK:-

Q1.

If $(x - 2)$ is a factor of $2x^3 - x^2 + px - 2$, then

(i) find the value of p.

(ii) with this value of p, factorize the above expression completely

Q2.

Find the value of 'K' for which $x = 3$ is a solution of the quadratic equation, $(K + 2)x^2 - Kx + 6 = 0$.

Also, find the other root of the equation.

Q3.

What number should be subtracted from $2x^3 - 5x^2 + 5x$ so that the resulting polynomial has $2x - 3$ as a factor?

Q4.

If $(x + 2)$ and $(x - 3)$ are factors of $x^3 + ax + b$, find the values of a and b. With these values of a and b, factorize the given expression.

18.5.2020   class 10

Ekanki sanchay

        Mahabharat ki ek sanjh

एकांकी परिचय

भारत भूषण द्वारा रचित ' महाभारत की सांझ' नामक एकांकी एक श्रेष्ठ एकांकी है ।एकांकीकार ने "महाभारत की एक सांझ" में संदेश दिया है कि परिवार में कभी भी घर या संपत्ति को लेकर कुल में अथवा भाइयों में वैमनस्य ,ईर्ष्या अथवा द्वेष भाव नही होना चाहिए ।धन अथवा सम्पत्ति को लेकर एक दूसरे में त्याग की भावना नही होनी चाहिए।त्याग और सहनशीलता का अभाव ही महाभारत के युद्ध का कारण बना ।एकांकीकार ने इस एकांकी में यह भी दिखाया है कि महाभारत में दोषी केवल दुर्योधन ही नही बल्कि युधिष्ठिर भी अपनी महत्वाकांक्षा के कारण दोषी है,जिसके कारण इतना रक्तपात हुआ।
  मुख्य पात्रो का चरित्र चित्रण-

युधिष्ठिर
युधिष्ठिर राजा पाण्डु के ज्येष्ठ पुत्र थे। इनकी माता का नाम कुंती था। युधिष्ठिर राजनीति एवं धर्म परायण पात्र थे।उनकी विनम्रता एवं धर्म परायणता के कारण उन्होंने अपने भाइयों के साथ वन में अनेक कष्ट उठाएं ।उनके स्वभाव और आदगुन के कारण अभी भी उन्हें स्नेह करते थे और उनकी आज्ञा का पालन करते थे ।इस एकांकी में युधिष्ठिर और दुर्योधन के बीच कटु वार्तालाप होता है । दुर्योधन के द्वारा दिए गए कष्ट और द्रौपदी के अपमान से उनके हृदय में भी दुर्योधन के प्रति द्वेष भावना उत्पन्न हो जाती है । यूधिष्ठिर ने सदा न्याय ही किया है इसीलिए दुर्योधन के सरोवर से निकलने पर युधिष्ठिर उसे लड़ने के लिए शस्त्र प्रदान करते है। अतः हम कह सकते है कि युधिष्ठिर धर्म प्रिय सत्यवादी वीर सहृदयी और न्याय पर चलने वाले थे।

दुर्योधन
दुर्योधन प्राचीन हस्तिनापुर के राजा ध्रितराष्ट्र के सौ पुत्रों में से ज्येष्ठ पुत्र थे।वह अपने चचेरे भाई पांडवो से बहत द्वेष रखता था । उसके पिता दुर्योधन की अनुचित कूटनीति में भी उसका साथ देते थे।वह क्रूर ,निर्दयी ,अहंकारी और बड़ो का अपमान करने वाला था ।वह भरे दरबार मे द्रौपदी का अपमान करता है और उसका चीर हरण करवाता है ।महाभारत के युद्ध का सूत्रपात दुर्योधन की हट धरने के कारण ही हुआ था ।वह अंत तक षड्यंत्रों तथा कूटनीतियों का सहारा लेता हुआ पांडवों से टक्कर लेता रहा ।उसे अपने प्राण से आधिक मोह था।

CLASS-X

SUBJECT- GEOGRAPHY

CHAPTER-MANUFACTURING INDUSTRIES IN INDIA-I (PART-1)

ASSIGNMENT-11

Manufacturing Industry

If agriculture is the backbone of the economy, industry is the energy. Generally speaking the process of transformation of natural resources into a finished, ready to use product, utilizing the full potential of the resources is called manufacturing industry.

Importance of Industries

- **Increase in Employment-** With the development of industries employment opportunities also increase.
- **Increase in GNP-** Due to industrialization the production of the country also increases.
- **Raise in Standard of living-** A rise in income of the workers raises the standard of living of the people.
- **Development of Other sectors-** Industrial development is useful in improving the other sector like transport, construction, agriculture etc.
- It also increases investment.

## Classification of Industries

Raw Materials

- On the basis of consumption of raw materials there are two types of industries
  a) Heavy Industry- Iron and steel industry
  b) Light Industry- Electric goods
- On the basis of sources of raw materials, industries are of four types
  a) Agro-based industries- Sugar, jute, cotton.
  b) Mineral-based industries- Iron and Steel
  c) Animal-based industries- Silk, dairy.
  d) Forest-based industries- Paper, cardboard

Management

- Private Sector Industries- Farm manufacturing industry.
- Public Sector Industries-Public utilities like railways, transport services, post and telegraph.
- Joint Sector Industries- Oil India limited.

Size

a) Large Scale Industries- Automobile and Iron and steel.
b) Medium Scale Industry- Cycle, Radio.
c) Small Scale Industry- Rice mill, flour mill.
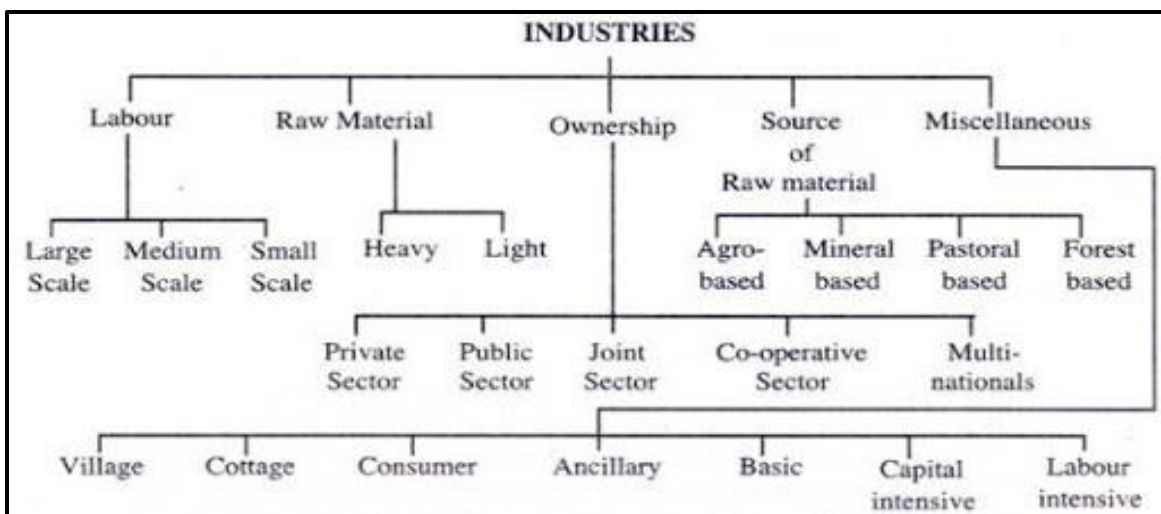
Miscellaneous-

- On the basis of location- Cottage Industry.
- On the basis of finished product or function.
    1. Basic Industry- Iron and Steel industry.
    2. Secondary or Consumer Industry- Paper, Sugar.
    3. Tertiary Industries- Transport, roads and railways which help other industries.
    4. Ancillary Industries- They manufactures spare parts for big industries.
    5. Labour Intensive Industries- Shoe-making, bidi making.

Textile Industry (Agro Based)

Cotton Textile Industry

India was famous for its manufacture of cotton textile since ancient times. At present cotton textile manufacture is the largest organized modern industry in India. The industry has developed all over India, but the largest numbers of mills are situated in Maharashtra, Gujrat and Tamil Nadu.

Maharashtra

It is the most important cotton cloth producing state of our country. It produces about 40% of the mill cloth in India.

The factors those are responsible for concentration of cotton mills in Mumbai are-

1. Black cotton soil provides the **basic raw material**.
2. Coastal **humid climate** is favourable for this industry.
3. Skilled and unskilled **labours are available** from nearer states.
4. Cheap **hydro electric power** is available from Tata hydroelectric grid.

5. **Coastal location** of Mumbai helps to import long staple cotton and export of finished goods.
6. Mumbai is **well connected** with its hinterland through railways and roadways.
7. Other facilities like banking facility, supply of soft water and market are available.

Important centers are Mumbai, Solapur, Pune, Kolhapur, Nagpur and Jalgaon.

Gujrat

It is the second largest producer of cotton textile in India. Ahmedabad is the largest centre where 70 out of 188 miles of Gujrat are located.

The Favourable factors for development of textile industries in Ahmedabad are-

1. It is situated in the cotton producing area, hence **raw cotton** is available.
2. Coastal **humid climate** is ideal for Cotton thread.
3. It has the advantage of Kandla and Mumbai **port** for export and import products.
4. Cheap **hydroelectric power** is available.
5. The **price** of cloth is also very low, so it has a great demand all over India.
   Other centers are Vadodara, Surat, Rajkot and Porbandar.

Tamil Nadu

This state produces only about 6% of mil cloth of India. It is often called the Manchester of South India. Important centers are Coimbatore, Madurai, and Salem, Tirunelveli, and Tuticorin.

West Bengal

Kolkata is the most important cotton centre of West Bengal. It gets some facilities like humid climate, transport facilities for the development of cotton textile Industry.

Problems of Cotton Textile Industry

1. **Scarcity of raw material-** India is still suffering for unavailability of long staple cotton due to partition of India and Pakistan.
2. **Obsolete Machinery-** Most of mills and their machines are 30-40 years old. So as a result low productivity occurs.
3. **Inadequate Power Supply-** Due to over increasing of population this industry is suffering from shortage.
4. **Stiff Competi*tion*-** Indian cotton textile has to face stiff competition with power loom and synthetic fiber product.
5. **Sick Mills-** about 177 mills are going in loss and have been declared as sick mills.

Assignment Questions

1. Write two importances of industries.
2. Classy with example the industries on the basis of source of raw material.
3. Write about the favourable conditions for the development of cotton textile industry in Mumbai and Gujrat.
4. State the two problems of cotton textile industry.

Pranamita Majumder

PRISM

Refraction through a rectangular glass block
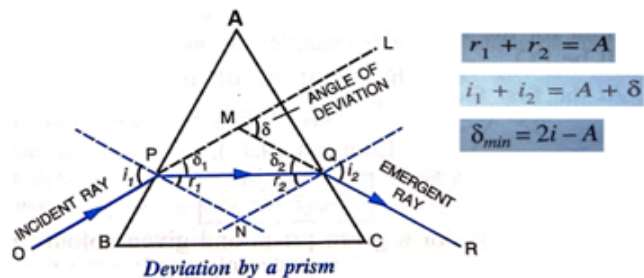
A prism is a transparent medium **bounded** by five plane surfaces with a triangular **cross** section.
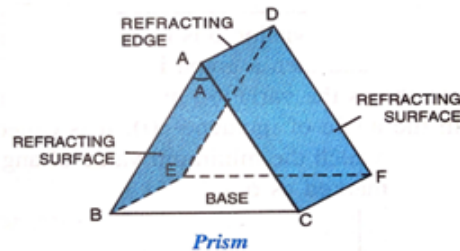
Prism

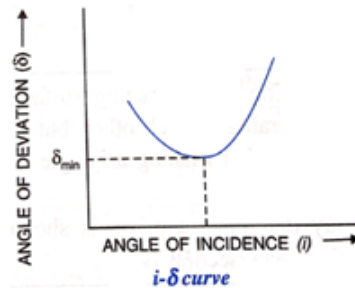### REFRACTION OF LIGHT THROUGH A GLASS PRISM

Deviation by a prism

$$r_1 + r_2 = A$$

$$i_1 + i_2 = A + \delta$$

$$\delta_{min} = 2i - A$$

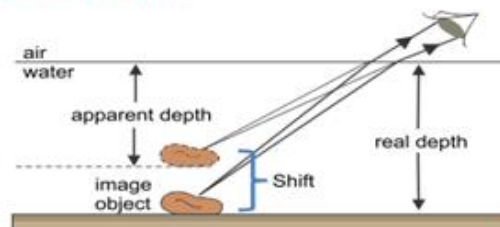## Factors affecting the angle of deviation :

1. Angle of incidence i
2. Refractive index of the prism
3. Angle of prism A
4. Colour or wavelength of light

i-δ curve

Real and Apparent Depth

An object placed in a denser medium when viewed from a rarer medium, appears to be at a depth less than its real depth. This is because of refraction of light.

$$_{Rarer}\,\mu_{\,Denser} = \text{real depth/apparent depth}$$

Shift = Real depth – Apparent depth

or

$$\text{Shift} = \text{Real depth} \times \left(1 - \frac{1}{_{Rarer}\,\mu_{\,Denser}}\right)$$

The shift by which the object appears to be raised depends upon
- The refractive index of the medium
- The thickness of the denser medium
- Colour (or wavelength) of incident light

DATE-18.05.2020 (MONDAY)
CLASS-X
SUBJECT-PHYSICS
ASSIGNMENT-12
CHAPTER-4: REFRACTION OF LIGHT AT PLANE SURFACES (2nd 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. Define the term angle of deviation.

2. A ray of light incident at an angle of incidence $48°$mon a prism of refractive angle $60°$ suffers minimum deviation. Calculate the angle of minimum deviation.

3. How angle of deviation depends upon-(i) angle of incidence (i), (ii) angle of prism (A) and (iii) material of the prism?

4. (i) Explain why a print appears to be raised when a glass slab is placed over it.
   (ii) A postage stamp kept below a rectangular glass slab of refractive index 1.5 when viewed from vertically above it, appears to be raised by 7 mm. Calculate the thickness of the glass slab.

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