

## HOLIDAYS HOMEWORK

**CLASS: XII**

**SUBJECT : Chemistry**

- A. Make a investigatory project on any one of the following topic :
- 1) On green chemistry- Bio-diesel and bio-petrol
  - 2) On sterilization of water using bleaching powder
  - 3) On analysis of fertilizers
  - 4) On measuring the amount of Acetic acid in vinegar
  - 5) On determination of contents of cold drinks
  - 6) To study the quantity of casein in milk
  - 7) On presence of insecticides and pesticides in fruits and vegetables
  - 8) On preparation of soyabean milk
  - 9) On study of rate of fermentation of juices
  - 10) Determination of caffeine in tea samples
  - 11) Determination of content of toothpaste
  - 12) Dyeing of wool, silk and cotton in malachite green
  - 13) Effect of Potassium Bisulphite as a food preservatives

Things should be mentioned:

- a) Aim
- b) Apparatus required
- c) Chemicals used
- d) Principle
- e) Procedure
- f) Observation table
- g) Result
- h) Precautions
- i) Pictures while doing experiment in the laboratory

B. Learn the following chapters

- 1) Solution
- 2) Biomolecule
- 3) Polymers

Read all chapters thoroughly and do practice of NCERT and extra question from these chapters.

- C. Complete your chemistry practical file and leave the space for observation table.

## Holiday Homework

### Class 12 PHYSICS

1. Complete practical file

2. Do any one project from following:

PHYSICS	SUBJECT
INVESTIGATORY TOPIC	<b>Some Suggested Individual Project Topics :</b> <ul style="list-style-type: none"><li>● Structure of atom</li><li>● Nuclei</li><li>● Special types of Diodes</li><li>● Single slit experiment</li><li>● Electrostatic Potential</li><li>● Capacitors</li><li>● Transformer</li><li>● Double Slit experiment</li><li>● AC generator</li><li>● Earth's magnetism</li><li>● EM waves</li><li>● Nuclear energy</li><li>● Dual nature of matter</li><li>● Telescope.</li></ul>
GUIDELINES	<ol style="list-style-type: none"><li>1. Each project should be minimum 15 to 20 A4 size (Executive bond) paper including conclusion and index.</li><li>2. Need to research on the topic and learn.</li><li>3. Photographs and creative presentation will be a part of project.</li><li>4. Projects should be hand written using blue/ blue-black ink and no prints should be kept (Except the photographs)</li><li>5. No striking is allowed in the project and to be neat and should have good handwriting</li><li>6. Prepare Model / Chart related to the project</li></ol>
SUBJECT TASK AND LINKAGES:	These projects are linked to chapters in the Physics. This project will be used as CBSE examination 2020 final project.

## HOLIDAYS HOMEWORK

**CLASS: XII**

**SUBJECT : BUSINESS STUDIES**

Project on any one of the following topics.

### **1) Project Work on Marketing:**

Students you are required to collect the information on any one topic out of the following for the project work on marketing. The topics are as follows:

- I) Toothpaste
- ii) Noodles
- iii) Shampoo
- iv) Bathing Soap
- v) Washing Detergents
- vi) Cosmetic Items
- vii) Pen
- viii) Shoes
- ix) Hair Dye
- x) Mobile
- xi) Chocolates
- xii) Sauces/Ketchup
- xiii) Body Sprays
- xiv) Fairness Creams
- xv) Jeans
- xvi) Pickles
- xvii) Jams
- xviii) Squashes
- xix) Roasted Snacks
- xx) Hair Oil
- xxi) Salt
- xxii) Bread /Butter
- xxiii) Any other product of your choice.

You are required to gather complete information/data of the topic you have selected for your project based on CBSE guidelines. The following are few points to be kept in mind such as:

- 1) Why have they selected this product/service?
- 2) Find out '5' competitive brands that exist in the market?
- 3) What permission and licenses would be required to make the project?
- 4) What are your competitors Unique Selling Proposition (U.S.P)?
- 5) Does your product have any range? Give details.

- 6) What is the name of your product?
  - 7) Draw the 'Label' of your product?
  - 8) Draw the 'Logo' of your product?
  - 9) Draft a tagline.
  - 10) What is the selling price of your competitor's product?
  - 11) What is going to be your selling price?
  - 12) List five ways of promoting your product.
  - 13) What is going to be your USP?
  - 14) Draft a social message for your label.
  - 15) What cost effective techniques will you follow for your promotion plan?
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- 16) Any schemes for
    - i) The Wholesaler
    - ii) The Retailer
    - iii) The Consumer
- Other essential information required.

## **2) Project on Elements of Business Environment**

- a) Changes witnessed over the last few years on mode of packaging and its economic impact.
- b) Changing role of the women in the past 25 years relating to joint families, nuclear families, women as the bread earner of the family.
- c) The trend in the changing interest rates and their effect on savings.
- d) A study on child labour laws, its implementation and consequences.
- e) The state of 'anti plastic campaign', the law, its effect and implementation.
- f) The laws of mining/ setting up of industries, rules and regulations, licences required for running that business.
- g) Social factors affecting acceptance and rejection of an identified product. ( Dish washer, Atta maker, etc)
- h) Effect of changes in technological environment on the behaviour of employee.

## **3) Principles of Management**

Students are required to visit any one of the following:

- a) A Departmental Store.
- b) An Industrial Unit.
- c) A fast food outlet.
- d) Any other organization.

You are required to observe the application of the General Principles of Management advocated by Fayol or enquire into the application of Scientific management techniques by F.W. Taylor in the unit visited.

## HOLIDAYS HOMEWORK

**CLASS: XII**

**SUBJECT : Accountancy**

Compressive project

1. Case study
  2. Adjustment
  3. Journal entries
  4. Ledgers
  5. Profit and loss account
  6. Balance sheet
  7. Graphical presentation
  8. Ratio analysis (min.10)
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## HOLIDAYS HOMEWORK

**CLASS: XII**

**SUBJECT : Economics**

ANSWER THE FOLLOWING QUESTIONS:

1. What is the difference between micro economics and macro economics?
2. What is circular flow of income and its importance in national income?
3. What lowers the significance of GDP as an index of welfare?
4. Difference between factor income and transfer income?
5. What is real flow and money flow?
6. What is GDP deflators?
7. Should the following be treated as normal resident of INDIA?give reasons of your answer
  - a) foreigner working in Indian embassy in Canada.
  - b) Indian working in Asian development bank in America.
  - c) indian student in USA who has been living there for five years.
8. An ambassador in US embassy in INDIA stays in his job for aperiod exceeding one year. Would he be treated as a resident or non resident of INDIA?

PREPARE YOUR PROJECT:

It should be neat and clean

Students have to prepare project themselves in their own writing.

TOPICS :

1. GST
2. DEMONETISATION
3. POVERTY
4. GDP AND WELFARE
5. EMPLOYMENT
6. INFLATION
7. BANKING SYSTEM OF INDIA
8. ECONOMIC REFORMS
9. GOVERNMENT BUDGETS

## HOLIDAYS HOMEWORK

CLASS: XII

SUBJECT : Maths

- If  $\begin{bmatrix} x+3y & y \\ 7-x & 4 \end{bmatrix} = \begin{bmatrix} 4 & -1 \\ 0 & 4 \end{bmatrix}$ , find the values of  $x$  and  $y$ .
- If matrix  $A = [1 \ 2 \ 3]$  write  $AA'$ , where  $A'$  is the transpose of matrix  $A$ .
- Write the value of  $x - y + z$  from the following equation:

$$\begin{bmatrix} x+y+z \\ x+z \\ y+z \end{bmatrix} = \begin{bmatrix} 9 \\ 5 \\ 7 \end{bmatrix}$$

- If  $A$  is a  $3 \times 3$  matrix, whose elements are given by  $a_{ij} = \frac{1}{3}[-3i + j]$ , then write the value  $a_{23}$ .
- If  $A$  is a square matrix and  $|A| = 2$ , then write the value of  $|AA'|$ , where  $A'$  is the transpose of matrix  $A$ .

- If  $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$ , verify that  $A^2 - 4A - 5I = O$ .

- Obtain the inverse of the following matrix, using elementary operations :  $A = \begin{bmatrix} 3 & 0 & -1 \\ 2 & 3 & 0 \\ 0 & 4 & 1 \end{bmatrix}$

- Using properties of determinants, prove that

$$\begin{vmatrix} a-b-c & 2a & 2a \\ 2b & b-c-a & 2b \\ 2c & 2c & c-a-b \end{vmatrix} = (a+b+c)^2$$

- Using properties of determinants, show that

$$\begin{vmatrix} a^2+1 & ab & ac \\ ab & b^2+1 & bc \\ ca & cb & c^2+1 \end{vmatrix} = 1 + a^2 + b^2 + c^2$$

- If  $A = \begin{bmatrix} 2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2 \end{bmatrix}$ , find  $A^{-1}$ . Using  $A^{-1}$  solve the following system of equations :

$$2x - 3y + 5z = 16; \quad 3x + 2y - 4z = -4; \quad x + y - 2z = -3$$

- Prove that  $\begin{vmatrix} a & a+b & a+b+c \\ 2a & 3a+2b & 4a+3b+2c \\ 3a & 6a+3b & 10a+6b+3c \end{vmatrix} = a^3$ .

- If  $A^{-1} = \begin{bmatrix} 3 & -1 & 1 \\ -15 & 6 & -5 \\ 5 & -2 & 2 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & 2 & -2 \\ -1 & 3 & 0 \\ 0 & -2 & 1 \end{bmatrix}$ , find  $(AB)^{-1}$ .

- A school wants to award its students for the values of Honesty, Regularity and Hard work with a total cash award of ₹ 6,000. Three times the award money for Hard work added to that given for Honesty amounts to ₹ 11,000. The award money given for Honesty and Hard work together is double the one given for Regularity. Represent the above situation algebraically and find the award money for each value, using matrix method. Apart from these values, namely, Honesty, Regularity and Hard work, suggest one more value which the school must include for awards.

[Delhi 2013, Value Based Question]