

**HOLIDAY HOMEWORK SESSION 2026- 27**

**CLASS : XI SCIENCE**

**ENGLISH CORE**

**English Core : Literature through Time and Emotions**

Complete the following activities neatly in your practical notebook using colours and relevant images creatively.

**1. “The Portrait of a Lady” (Hornbill) — Changing Times and Emotional Distance**  
**Write on :** “*How changing lifestyles slowly create emotional distances in relationships.*”

**Relate it to :** The turning point in the author’s relationship with his grandmother when they moved to the city. Also add a relevant line from the story and simple related symbols/pictures (e.g., a spinning wheel or a sparrow).

**Word Limit :** Not more than 100 words.

**2. “A Photograph” (Hornbill) — Permanence vs. Impermanence / Transience**

**Write on :** “*The bittersweet pain of looking at old memories.*”

**Relate it to :** Shirley Toulson’s reaction to the snapshot clicked during her mother’s childhood. Add relevant lines from the poem and a simple flowchart :

Carefree Childhood → Passing Time → Bittersweet Memory → Acceptance.

**Word Limit :** Not more than 100 words.

**3. PROJECT WORK – Digital Presentation**

**Assignment :** Prepare a Microsoft PowerPoint (PPT) or Google Slides presentation on the chapter "The Address" by Marga Minco (*Snapshots* textbook).

**Technical Specifications :** –

**Slide Count :** Make the presentation within 5 slides.

**File Format :** Save and submit your final file as a **PDF** or **PPTX** format.

**Naming Rule :** Name your file exactly as: **Name\_Class\_Section\_RollNo\_TheAddress**

**Submission :** Send your project as an attachment to the Email ID given below :

**holidayprojects11@gmail.com**

In the Subject line, write your **NAME\_Class\_Section**.

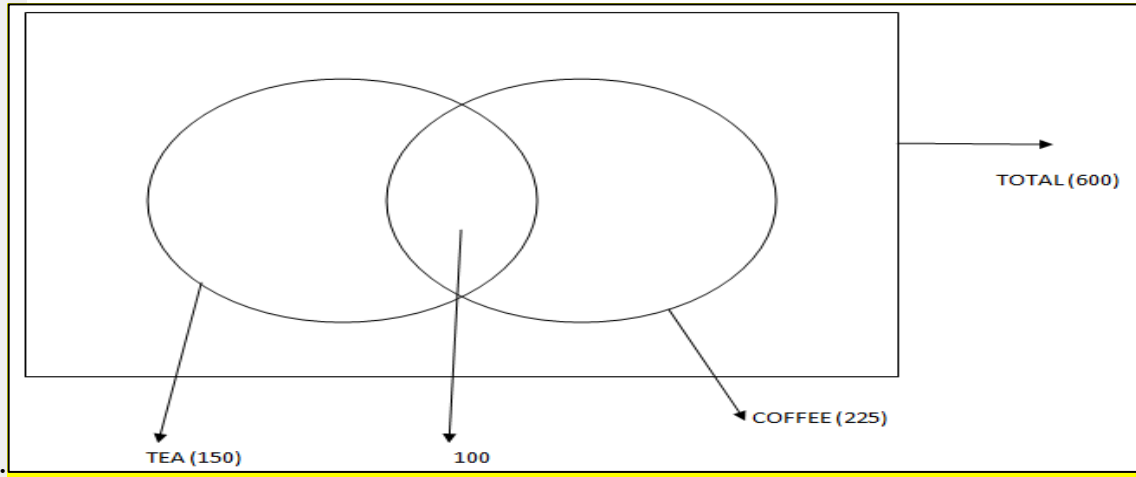
**Visual & Design Rules**

**Colour Palette :** Use sombre colours (like grey, navy, dark brown, or olive green) to match the post-war, melancholic theme of the story.

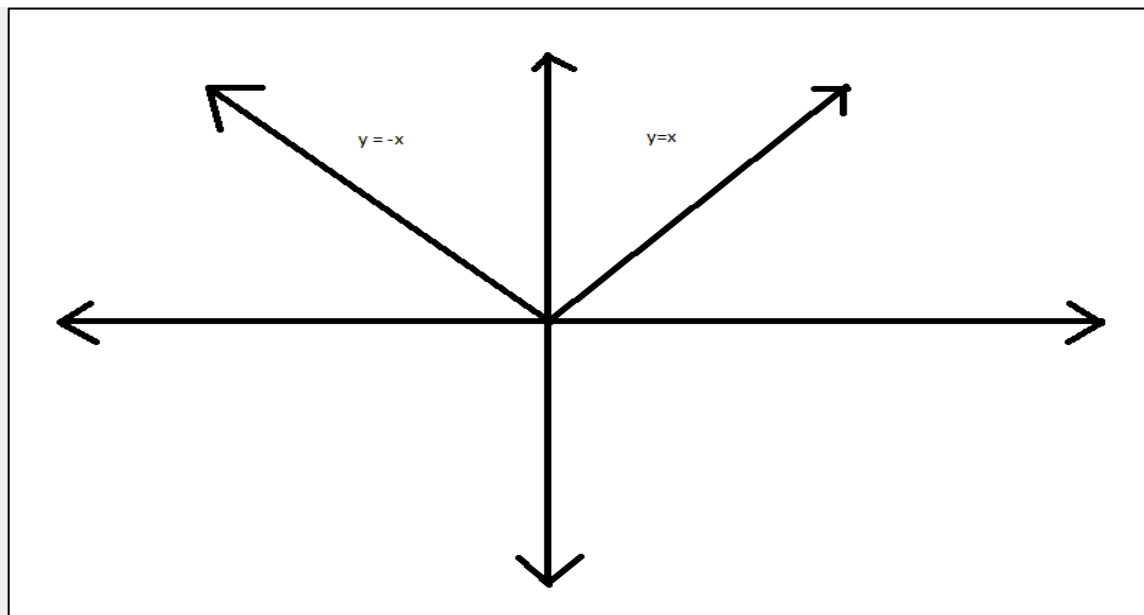
**General Instructions**

- ✓ Submit the project in a neat and clean manner.
- ✓ Use original and innovative ideas.
- ✓ Avoid copying directly from sources available on the internet.
- ✓ Mention your Name, Class and Section clearly.
- ✓ The project should reflect creativity, literary understanding and critical thinking.

1.



- A. Find the number of students taking at least one drink .
- B. Find the number of students taking tea only.
- C. Find the number of students taking coffee only.
- D. Find the number of students taking exactly one drink.
- E. Find the number of students not taking any drink.



- A. Define the above function ?
- B. Write the domain of the function?
- C. Write the range of the function?

3. Draw the graph of signum function.(Use mm graph)

**PROJECT WORK(use shoelace file )**

- 1.To find the number of subsets of a given set and verify that if a set has n number of elements , then the total number of subsets is  $2^n$ .
- 2.To distinguish between a relation and a function.
- 3.To plot the graphs of  $\sin x$ ,  $\sin 2x$  ,  $2\sin x$  ,and  $\sin \frac{x}{2}$  , using the same coordinate axes.  
(use mm graph)

## **FORMAT TO BE FOLLOWED:-**

**a)1st Page**-Name of the school, Investigatory Project, name, class, section, roll no., subject, Guide teachers' name

**b)2nd Page**-Certificate

**c)3rd Page**-Acknowledgement

**d)4thPage**-Index

## **PHYSICS**

**A. Prepare an investigatory project:** Submit the draft of an investigatory project:

### **SUGGESTED TOPICS FOR THE INVESTIGATORY PROJECT:**

1. Finding the coefficient of restitution of a surface by dropping a ball from height h.
2. Finding the value of acceleration due to gravity by a sharp end rod.

Follow the given format:-

a)1st Page-Name of the school, Investigatory Project, name of the student, class, section, Board roll no.,

subject, Guide teachers' name

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c)3rd Page-Acknowledgement

d)4thPage-Index

e)5thPage-Aim/Objective

f)6th Page onwards-Project Report

h) 7th page - Conclusion

l) 8th page - Bibliography

### **B. Write the following Activities:**

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bar.

### **2. Answer the following questions:**

**i.** State the number of significant figures in the following:

(a) 0.007 m<sup>2</sup>

(b)  $2.64 \times 10^{24}$  kg

(c) 0.2370 g cm<sup>-3</sup>

(d) 6.320 J

**ii.** A famous relation in physics relates 'moving mass'  $m$  to the 'rest mass'  $m_0$  of a particle in terms of its speed  $v$  and the speed of light,  $c$  (This relation first arose as a consequence of special relativity due to Albert Einstein). A boy recalls the relation almost correctly but forgets where to put the constant  $c$ . He writes :

$m = m_0/\sqrt{(1-v^2)}$ . Guess where to put the missing  $c$  .

- iii. Precise measurements of physical quantities are a need for science. For example, to ascertain the speed of an aircraft, one must have an accurate method to find its positions at closely separated instants of time. This was the actual motivation behind the discovery of radar in World War II. Think of different examples in modern science where precise measurements of length, time, mass etc., are needed. Also, wherever you can, give a quantitative idea of the precision needed.
- iv. The distance of a galaxy is of the order of  $10^{25}$  Calculate the order of magnitude of time taken by light to reach us from the galaxy.

### **CHEMISTRY**

1. A sample of a hydrate of barium chloride weighing 61 g was heated until all the water of hydration is removed. The dried sample weighed 52 g. Deduce the formula of the hydrated salt. (atomic mass, Ba = 137 amu, Cl = 35.5 amu)
2. At 300 K and 1 atmospheric pressure, 10 mL of a hydrocarbon required 55 mL of  $O_2$  for complete combustion and 40 mL of  $CO_2$  is formed. What is the formula of the hydrocarbon?
3. 85 g ammonia is allowed to react with 128 g of oxygen at a specific temperature and pressure (STP). How much nitric oxide gas is formed at STP after completion of the reaction? What is limiting reagent here?
4. Concentrated  $HNO_3$  is 63%  $HNO_3$  by mass and has a density of 1.4 g/ml.
  - (i) How much mL of this solution are required to prepare 250 mL of a 1.20 M  $HNO_3$  solution?
  - (ii) How much volume of 2 (M)  $Ca(OH)_2$  is required to neutralise this  $HNO_3$  solution?
5. Calculate the mass per cent of calcium, phosphorus and oxygen in calcium phosphate  $Ca_3(PO_4)_2$
6. Find molality and molarity of an aqueous solution of glucose having mole fraction 0.1 and density of solution is 1.1 g/mL.
7. The vapour density of a mixture containing  $NO_2$  and  $N_2O_4$  is 38.3 at  $27^\circ C$ . Calculate the mole of  $NO_2$  in 100 mole mixture.

### **BIOLOGY**

#### **A. Write the following practicals in your practical copy.**

1. To study the parts of a compound microscope.
2. To study osmosis by potato osmometer.
3. To study the virtual specimens/slides/models and write the identifying features of - Amoeba, Hydra, Liver fluke, Ascaris, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
4. To study and describe locally available common flowering plants including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious);
5. To study specimens/slides/models and write the identifying features with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
6. To study mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides

7. To test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials
8. To study plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or fleshy scale leaves of onion bulb. in urine.

### **B. TO PREPARE AN INVESTIGATORY PROJECT ON ANY TOPIC OF YOUR CHOICE**

#### **FORMAT TO BE FOLLOWED:-**

- a) 1st Page-Name of the school, Investigatory Project, name, class, section, Board roll no., subject, Guide teachers' name
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- e) 5th Page-Aim/Objective
- f) 6th Page onwards-Project Report
- g) Conclusion
- h) Bibliography

# Maximum no. of page should not exceed 20

# Project is to be written in shoelace file

# Project should be handwritten

# Pictures/diagrams (coloured) may be pasted

### **SUGGESTED TOPICS FOR THE INVESTIGATORY PROJECT**

1. Diabetes and health
2. HIV and AIDS
3. Drug addiction
4. Sickle Cell Anaemia: Molecular basis
5. Covid-19: the pandemic
6. Ozone depletion and its effect on mankind
7. Effects of Parthenium on humans
8. Cancer and cell division
9. Biological Nitrogen Fixation
10. Blood grouping: Bombay phenotype
11. Cloning in organisms..
12. Alzheimer's and Dementia
13. Possible effects of maternal behaviour on foetal development
14. Biological Oxygen Demand (BOD) as pollution indicator in water body
15. Agrochemicals and their effects
16. Impact of local industry on environment
17. Drug resistance in bacteria
18. Coral reef: existence and depletion

## **ECONOMICS**

### **A) Statistics for Economics**

Read the following Case Study carefully and answer the questions on the basis of the same:

Census of India is a decennial publication of the Government of India. It is published by Registrar General and Census Commissioner, Under Ministry of Home Affairs, Government of India. It is a very comprehensive source of secondary data. It relates to population size and various aspects of demographic changes in India. Under the Ministry of Home Affairs, Government of India. It may be of historical interest that though the population census of India is a major administrative function; the Census Organization was set up on an ad-hoc basis for each Census till the 1951 Census. The Census Act was enacted in 1948 to provide for the scheme of conducting population census with duties and responsibilities of census officers. The Government of India decided in May 1949 to initiate steps for developing systematic collection of statistics on the size of the population, its growth, etc., and established an organization in the Ministry of Home Affairs under Registrar General and ex-Officio Census Commissioner, India.

- I. Data originally collected in the process of investigation are known as \_\_\_\_ (Primary data/ Secondary data).
- II. The problem of double conclusion arises in \_\_\_\_ (indirect oral investigation/ direct personal interview).
- III. Post-independence, the first census of India was conducted in \_\_\_\_ (1949/1951)
- IV. Census of India is carried out once in \_\_\_\_ years. (10/ 5)

### **B) MICROECONOMICS**

- I. Massive unemployment will shift the PPF to the left. Defend or refute.
- II. What is the opportunity cost of an input which has no alternative use?

Project Report

- III. Prepare a short project report on Census Survey and Sample Survey.

## **COMPUTER SCIENCE**

1. WAP for calculating simple interest( $SI = PRT/100$ )
2. WAP to accept a number from the user and display whether it is an even number or odd number.
3. WAP to calculate area of a circle.
4. WAP to calculate the perimeter of a rectangle.
5. WAP to calculate the factorial of a number.
6. WAP to check whether the person is eligible for vote or not.
7. WAP to find LCM and GCD of two numbers.
8. WAP to calculate the root of quadratic equation.
9. WAP to check whether the year is leap year or not.
10. WAP to accept percentage of a student and display its grade accordingly.

Percentage	Grade
>=90	A+
>=80	A
>=70	B
>=60	C
>=50	D
<50	F

### **PHYSICAL ACTIVITY TRAINER**

1. Draw and label a chart on the **Health Triangle**.
2. Prepare a poster showing different **props and equipment used in physical and sports activities**. (*Pasted photographs should be used.*)
3. Prepare a detailed list of equipment required for conducting various **physical and sports activities**.

### **PHYSICAL EDUCATION**

#### **1. PRACTICAL – 1 (Procedure, Benefits and Contraindications of Asanas for Lifestyle Diseases)**

**Objective:** To understand the correct techniques, therapeutic benefits, and safety precautions of selected yogic asanas used in the prevention and management of common lifestyle diseases.

##### **Lifestyle Diseases and Related Asanas:**

- **Obesity** – Tadasana, Halasana
- **Diabetes** – Paschimottanasana, Ardha Matsyendrasana
- **Asthma** – Gomukhasana, Bhujangasana
- **Hypertension** – Katichakrasana, Makarasana
- **Back Pain / Arthritis** – Ardha Chakrasana, Ushtrasana

##### **For Each Disease and Asana, Include:**

- Definition of the Disease
- Step-wise Procedure of the Asanas
- Posture Sketch / picture of Asanas
- Benefits of the Asanas
- Contraindications of Asanas

#### **2. PRACTICAL – 2 (IOA-Recognized Sports / Games)**

**Select Any One Sport / Game:** Volleyball / Kho-Kho /Badminton / Football /Handball

**Include the Following Details:**

- Introduction of the Game
- Labelled Diagram of Court / Field with Dimensions
- Equipment Used
- Basic Rules and Regulations
- Important Terminologies
- Fundamental Skills / Techniques
- Names of Important National or International Tournaments

**Instructions:**

- Maintain neatness and proper presentation.
- Draw diagrams using pencil and scale.
- Submit the practical file after the vacation as instructed by the subject teacher.

**PSYCHOLOGY**

**Project :Understanding Scientific Investigation of Human Behaviour**

1. Main Points to Include in the Project:

- Introduction to Psychological Enquiry
- Goals of Psychological Enquiry
- Steps in Conducting Scientific Research
- Nature of Psychological Data
- Important Methods in Psychology

**Long question:[In A4 sheet]**

- Psychology is not just an academic discipline; it has immense application in everyday life." Justify this statement with examples.
- Trace the historical development of modern psychology by highlighting the major schools of thought.
- Discuss the various fields/branches of psychology. Explain in details.

**PAINTING**

1. Still life 3 or 4 pages (pencil shade and colour)
2. Composition 2 or 3 pages (daily life)(use any colour)

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