

**HOLIDAY HOMEWORK ( 2023 -24 )**

**CLASS : XII SCIENCE**

**ENGLISH**

Project work to be prepared as per instruction listed below.

1. The entire project should be in a file format.
2. The project should be hand written in blue/black pen (Highlighters can be used).
4. The project report should be developed in the following sequence–

- Cover page: School Name, logo, Title statement, Name of the Student and Year/session
- Index (list of contents)
- Acknowledgements and Preface
- Certificate
- Introduction statement (The purpose of the Project)
- Detailed Project
- Learning out comes/experiences
  - The project may consist of illustrations/photos/sketches as per the need and suitability in respect of the pattern of presentation

Choose any one of the topics:

1. Attempt a descriptive paragraph on each- Anees Jung, Saheb Alam, Mukesh, Savita, Grand Mother with reference to the chapter “The Lost spring (Stories of Stolen Childhood)”
2. Kamala Das and her mother as described in the given poem “My Mother at Sixty-Six”
3. “I am always sorry when any language is lost, because languages are the pedigrees of nations.”  
- Samuel Johnson (Comment and explain with reason the mentioned quote with reference to the chapter- The Last Lesson)

**PHYSICAL EDUCATION**

**Practical - 3**

IOA recognized Sport/Game: Volleyball or Badminton (any one)

1. Introduction
2. Labelled diagram of Field/Court
3. Equipments
4. Rules of Game
5. Terminologies
6. Skills

**Note:**

Use Inter leaf page to write your project.

Paste and Draw relevant picture (Use white sheet or page)

Project should be completely hand written.

**PAINTING**

1. Draw a composition of tea stall, can use any colour, use 1/4<sup>th</sup> size art paper.
2. Make a composition on any festival of India in 1/4<sup>th</sup> size art paper.
3. Arrange some vegetables in your home and make a still life with different grades of pencil in 1/4<sup>th</sup> size art paper.
4. Arrange some flowers with flower vase in your home and make a still life with water colour in 1/4<sup>th</sup> size art paper.

## STANDARD MATHEMATICS

1. Verify that the relation  $R$  in the set  $L$  of all lines in a plane, defined by  $R = \{(l, m) : l \perp m\}$  is symmetric but neither reflexive nor transitive.
2. Verify that the relation  $R$  in the set  $L$  of all lines in a plane, defined by  $R = \{(l, m) : l \parallel m\}$  is an equivalence relation.
3. Draw the graph of  $\sin^{-1}(x)$  using the graph of  $\sin x$  and demonstrate the concept of mirror reflection (about the line  $y = x$ ).

(Write these activities in your math practical copy)

## APPLIED MATHEMATICS

**PROJECT WORK :-** Each day newspaper tells us about the maximum temperature, minimum temperature and humidity. Collect the data for a period of 15 days and represent it graphically. Compare it with the data available for the same time period for the previous year.

### **NOTE :-**

- Draw any type of graph for comparison.
- Use graph sheet and paste each graph sheet on the separate interleaf page.
- Write proper scale and heading on each graph sheet.

### **PROJECT SHOULD HAVE THE FOLLOWING:-**

- Index
- Acknowledgement
- Content of the project
- Conclusion
- Bibliography

## PHYSICS

1. Prepare an investigatory project.
2. Write three activities in practical copy given from the school.

### **A. Write the following three activities in the shoe lace file given from school**

1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.
3. To assemble the components of a given electrical circuit.  
( Write these activities from any standard lab manual )

### **B. Prepare an investigatory project as per the format given below .**

#### **FORMAT**

- 1st page: Name of the school, Investigatory project, Name of the student, class, section, roll no., Subject, Guide teacher's name.
- 2nd page: Certificate
- 3rd page: Acknowledgement
- 4th page: Index
- 5th page: Aim/Objective
- 6th page onwards project report
- Conclusion
- Bibliography
- ❖ Maximum number of pages should not exceed 20.
- ❖ Project is to be written in channel file.
- ❖ Project should be printed .
- ❖ Pictures/diagrams (coloured) may be pasted.

1. To study various factors on which the internal resistance/EMF of a cell depends.
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance). (b) the distance of a incandescent lamp (of fixed power) used to 'illuminate' the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.
6. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
7. To study the earth's magnetic field using a compass needle -bar magnet by plotting  
(One demo investigatory project is given in link provided below )

[https://drive.google.com/file/d/1-tdx554Zx8qKu266WMT7BvgjUlGOI7-2/view?usp=share\\_link](https://drive.google.com/file/d/1-tdx554Zx8qKu266WMT7BvgjUlGOI7-2/view?usp=share_link)

## **CHEMISTRY**

### **A. Write the Practical experiments.**

#### **B. Prepare an investigatory project on the following topics**

1. Presence of pesticides in fruits and vegetables.
  2. To study the presence of insecticides and pesticides in various fruits and vegetables
  3. Sterilization of water using bleaching powder
  4. Estimation of content of Bone ash.
  5. Rusting of iron and its precautionary action.
  6. Fermentation of fruit juices.
  7. To determine the hardness of water.
- (Note: Any one project for each students.)

#### **Project content**

1. Front page with title of the project.
2. Acknowledgement.
3. Certificate.
4. Index.
5. Main topics.
6. Bibliography.

## **BIOLOGY**

1. Prepare an investigatory project.
2. Write the Practicals along with diagram in your practical copy.

## **INVESTIGATORY PROJECT [ BIOLOGY ]**

- a) 1st Page-Name of the school, Investigatory Project, name, class, section, Board roll no., subject, Guide teachers' name
- b) 2nd Page-Certificate
- c) 3rd Page-Acknowledgement
- d) 4thPage-Index
- e) 5thPage-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.Pollination-its types
- 2.Assisted Reproductive Technologies
3. Infertility and Test tube baby
- 4.Genetic Disorders-Mendelian & Chromosomal
- 5.Immunity-its types
- 6.AIDS
7. CANCER
- 8.Drugs and Alcohol abuse
9. Microbes in Human welfare
- 10.Biotechnological Applications in Agriculture
- 11.Biotechnological Applications in Medicine
- 12.Population Interactions in Ecosystem
- 13.Biodiversity-its loss and conservation
- 14.Environmental issues-Air pollution, Water pollution, Solid wastes, Radioactive wastes
- 15.Study of adaptation of plants and animals in aquatic conditions
16. Study of adaptation of plants and animals in xerophytic conditions

## **LIST OF PRACTICALS [ BIOLOGY ]**

- 1.Pollen germination on stigma through a permanent slide.
2. Prepare a temporary mount to observe pollen germination.
3. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens.
4. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from mice).
5. T.S. of blastula through permanent slides (Mammalian).

6. Meiosis in grasshopper testis through permanent slides.
  7. Isolate DNA from available plant material such as spinach, .
  8. Prepare a temporary mount of onion root tip to study mitosis.
- # PRACTICALS ARE TO BE WRITTEN IN HARD BOUND COPY  
# DIAGRAMS TO BE DRAWN WITH PENCIL ONLY.  
# MARGIN IS TO BE DRAWN ON THE WHITE PAGES

## **COMPUTER SCIENCE**

1. Write a program to show entered string is a palindrome or not.
2. Write a program to show statistics of characters in the given line (to count the number of alphabets, digits, uppercase, lowercase, spaces and other characters)
3. WAP to remove all odd numbers from the given list..
4. Write a program to display frequencies of all the elements of a list.
5. Write a program to display those strings which are starting with 'A' from the given list.
6. Write a program to find and display the sum of all the values which are ending with 3 from a list.
7. Write a program to show sorting of elements of a list step-by-step.
8. Write a program to swap the content with next value, if it is divisible by 7 so that the resultant array will look like : 3,5,21,6,8,14,3,14.
9. Write a program to accept values from a user and create a tuple.
10. Write a program to input total number of sections and stream name in 11th class and display all information on the output screen.
11. Write a program to read data from a text file DATA.TXT, and display each word with number of vowels and consonants.
12. Write a program to read data from a text file DATA.TXT, and display word which have maximum/minimum characters.
13. Write a program to show push and pop operation using stack.
14. Write a program that will write a string in binary file "school.dat" and display the words of the string in reverse order.
15. Write a program to show MySQL CONNECTIVITY for inserting two tuples in table: "student" inside database: " class12 " .

**Note: Write the above programs along with the output in the practical copy only.**

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