



## ST. FIDELIS COLLEGE, ALIGANJ, LUCKNOW

(Affiliated to Indian School Certificate Examinations, New Delhi)

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School Code: UP055 UDISE Code: 09270906106

# PROJECTS/ASSIGNMENTS (XI)

## 1. ENGLISH

Choose any one of the topics given below and elaborate it in 500 words:

- List of suggested assignments for Project Work:
- The text of a brochure
- A product description
- A process description (e.g. instruction to operate device, a recipe, a scientific experiment)
- Description of a sporting event
- An autobiographical experience
- Review of a television serial

### Presentation Guidelines

- Use neat handwriting.
- Use A4 size ruled sheets.
- Maintain margins.
- Use headings and subheadings.
- Decorate the cover page neatly.
- Attach relevant pictures/drawings.
- Number all pages properly.
- Acknowledgement
- Index
- Content

- Conclusion
- Bibliography

### Cover Page

Include:

- Title of the Project
- Student's Name
- Class & Section
- Roll Number
- Subject
- Teacher's Name
- School Name

## 2. PHYSICS

- Prepare a scientific model based on
- **Magnetic Levitation Model:** Demonstrate frictionless transport by using repelling neodymium magnets to float a small train platform.
- **Hydraulic Crane or Arm:** Use syringes and plastic tubing filled with water to show Pascal's Law and mechanical advantage in action.
- **Archimedes 'screw':** Create a working water pump using PVC pipe and aquarium tubing to showcase early fluid mechanics and simple
- **Hydraulic Lift** Use syringes and tubing filled with water to demonstrate Pascal's Principle, showing how small forces can lift heavy objects.
- **Magnetic Levitation (Maglev):** Build a model train or platform that hovers using repelling magnets to demonstrate frictionless movement.
- **Wind Turbine:** Craft a working generator using small DC motor, cardboard blades, and an LED to show renewable energy generation.
- These are examples, students can do work on any other innovative ideas.
- Also prepare a written material based on your scientific model about 10 A<sub>4</sub> sheets only.

### 3. CHEMISTRY

#### LIST OF PROJECTS

##### GENERAL INSTRUCTIONS:

ROLL NO.	TITLE
1, 16, 31, 46	Amino acids: Peptides, structure and classification, proteins structure and their role in the growth of living beings.
2, 17, 32, 47	Nucleic Acid: DNA and RNA - their structure. Unique nature. Importance in evolution and their characteristic features.
3, 18, 33, 48	Carbohydrates and their metabolism, Blood - haemoglobin and respiration.
4, 19, 34, 49	Vitamins and hormones
5, 20, 35, 50	Simple idea of chemical evolution
6, 21, 36	Natural polymers (any five) - structure, characteristics, uses. Synthetic polymers (any five) - method of preparation, structure, characteristics and uses.
7, 22, 37	Types of Dyes - methods of preparation, characteristics and uses
8, 23, 38	Chemicals in medicines: antiseptics, antibiotics, antacids, etc. and their uses
9, 24, 39	Preparation of soap, nail polish, boot polish, varnish, nail polish remover, shampoo and perfumes
10, 25, 40	Chemicals and chemical processes in forensic studies
11, 26, 41	Insecticides, pesticides and chemical fertilisers
12, 27, 42	Ancient Indian medicines and medicinal plants
13, 28, 43	Organic Chemistry in Nutrition, Food Science and Biotechnology
14, 29, 44	Effect of Green House Gases
15, 30, 45	How Plastics have changed the world, both socially and economically

Students must prepare a handwritten project file including:

1. Cover Page (Name, Class, Section and Roll No.)
2. Title Page
3. Assessment Sheet
4. Acknowledgement
5. Index
6. Content (40 Pages)
7. Conclusion
8. Bibliography

Note: Chemical reactions and pictures should be on left hand side (plain page). The project file should be covered by **Black paper** and cellophane.

### 4. MATHEMATICS

**Note: The project must be handwritten. You have to make a project on any Two TOPICS.**

List of suggested assignments for Project Work: (DO ANY 2)

## TOPICS:

### CH- Set Theory

1.) Using Venn diagram, verify the distributive law for three given non-empty sets A, B and C.

### CH - Relation and function

2.) Identify distinction between a relation and a function with suitable examples and illustrate graphically.

### CH - Quadratic Equation

3.) Draw the graph of quadratic function  $f(x) = ax^2 + bx + c$ . From the graph find maximum/minimum value of the function. Also determine the sign of the expression.

### CH -Trigonometry

4.) Establish the relationship between the measures of an angle in degrees and in radians with suitable examples by drawing a rough sketch.

### CH - Complex number

\*5.) Using Argand plane, interpret geometrically, the meaning of  $i = \sqrt{-1}$  and its integral powers.

### The sequences of the pages in the project are as follows:

- Cover page: It includes the name of the school, names of the persons whom the project is submitted to and submitted by.
- Index Page: It includes the indexing of the project with the page numbers. (The page numbers start from title page of the project.)
- Title of the project: It is the page containing the title or name of the project.
- Aims and observations: Aims define the broader aspect of the student learning from the project while Objectives define how the students will achieve the project.
- Previous knowledge: It is the required knowledge that the student must know to complete the project.
- Content: It includes the detailed explanation of the project with suitable illustrations.

### Instructions for the Project:

- Take a Simple file Register
- Cover your project Registers with BLACK CHART PAPER and CELLOPHANE. (No other coloured chart paper is allowed)
- All writing part should be on both sides of the register pages.
- Your project should be of 25 to 30 pages (not more than 30 and not less than 25 pages).
- Page numbering you will start from the page Introduction..... and you will continue till Conclusion. On the cover page you will write

## 5. BIOLOGY (TOPICS FOR THE PROJECTS)

- Study of the parts of a compound microscope and draw a labelled diagram
- To demonstrate plasmolysis using plant cell

**Note: All the above work must be done in the practical book**

## 6. COMPUTER

### TOPIC: INTRODUCTION TO PYTHON PROGRAMMING

## 7. HINDI: हिंदी परियोजना कार्य

1. "पुत्रप्रेम" कहानी के प्रसिद्ध लेखक मुंशी प्रेमचंद के जीवन पर प्रकाश डालते हुए पुत्रप्रेम कहानी के उद्देश्य को स्पष्ट कीजिये इस कहानी में एक पिता की हृदयहीनता को किस प्रकार दर्शाया गया है? स्पष्ट कीजिये। कहानी के प्रमुख पात्र के चरित्र पर प्रकाश डालिये।

२. आज के युग में ए. आई. के बढ़ते चलन का मनुष्य के जीवन पर क्या असर पड़ रहा है? इस से होने वाले लाभ एवं हानि के विषय में अपने विचार व्यक्त कीजिये।

## **8. COMMERCE**

### **Project 1:**

Each student is required to prepare an individual project on the topic personally assigned to them by the Commerce teacher in class. The project should be well-presented, neatly organized, and contain a minimum of 30 pages.

### **Project 2:**

Prepare a project on "Career Opportunities in Commerce" by listing at least 20 career options along with the courses, qualifications, or paths required to achieve them. From these 20 options, choose any five careers that you feel are most suitable for you and explain them in detail, including why you selected them, the skills required, and how you plan to achieve your career goals.

## **9. ECONOMICS**

### **Topics:**

1. Basic Problem of an Economy
2. Measures of Central Tendency

## **10. HISTORY**

### **WRITE A PROJECT ON ANY ONE OF THE TOPICS**

- Impact of the British colonial from and after 1857
- Changes in the nature of war in the late 19th and early 20th century i.e. World War 1 conflict
- Write and discuss any three national leaders regarding their contribution in the field of national struggle.

## **11. GEOGRAPHY**

TOPIC: CHOOSE ANY ISLAND AREA OF THE WORLD OR INDIA AND: Trace the map area and show physical features; towns and port cities.

## **12. POLITICAL SCIENCE**

- FORMATION AND EVOLUTION OF BRICS AND ITS ROLE IN GLOBAL AND POLITICAL AFFAIRS  
OR
- CONCEPT OF COMMUNISM AND ITS BASIC PRINCIPLES

## **13. ACCOUNTS (Project Topics)**

- Basic Accounting Terms
- Journal Entries

### **Basic Accounting Terms**

Explain important accounting terms with definitions and suitable examples, such as:

- |            |               |
|------------|---------------|
| • Capital  | • Liabilities |
| • Drawings | • Revenue     |
| • Assets   | • Expenses    |

- Goods
- Purchases
- Sales
- Debtors
- Creditors

- Stock
- Profit & Loss
- Voucher
- Discount, etc.

### **Journal Entries:**

- Meaning and importance of Journal
- Rules of Debit and Credit
- Types of Accounts
- Format of Journal Entry
- Minimum 20–25 journal entries with narration.

### **Practical Questions:**

Prepare journal entries for business transactions of a small business.

### **Conclusion:**

- Write what you learned from the project.

### **Project Guidelines**

- Include real-life business examples to make the project practical and interesting.
- Use blue/black pen for writing and colored pens only for headings/highlighting.

**Note: Please follow these common guidelines for all the subjects for your projects/assignments.**

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