

Lt. Col. MEHAR LITTLE ANGELS SR. SEC. SCHOOL

SUMMER HOLIDAY HOMEWORK

CLASS: XI (2026-27)

ENGLISH CORE

1. Make a project on the lesson – *The Portrait of a Lady* (by Khushwant Singh)

Depict the emotional bond and changing relationship between the author and his grandmother. Highlight values like love, respect, and companionship. Paste relevant pictures.

OR

Prepare a project based on the poem – *A Photograph* (by Shirley Toulson)

(Cover the aspects like – about the poet, theme of the poem, summary of the poem, poetic devices, analysis, etc.)

Creative Task:

Compose a short paragraph/poem expressing your feelings and bond with your mother. (Paste related photographs)

2. Interview-Based Research Project Work “Importance of Mental Well-being among Students”

Research Question:

How does mental well-being influence the academic performance, behaviour, and overall development of students?

Guidelines:

1. Conduct interviews with:

- a. School students
- b. Parents

2. Prepare a Questionnaire (you may include):

- Name
- Age
- Class/Profession
- What do you understand by mental well-being?
- Do you think mental health is as important as physical health? Why?
- Do you think stress or anxiety affects students’ academic performance?
- Have you ever experienced stress related to studies? How did it affect you?
- How does mental well-being affect behaviour and relationships?

- What are the common causes of stress among students today?
- Do social media or academic pressure affect students' mental health? How?
- What activities help you feel relaxed or mentally refreshed?
- How do you manage stress or negative emotions?
- Do students feel comfortable sharing their problems with parents or teachers?
- What role should schools play in supporting students' mental well-being?
- Suggestions for improving students' mental well-being

3. Keep separate pages for each interview

4. Write a Report (400–500 words) including:

- Introduction
- Key Findings
- Conclusion
- Suggestions

PROJECT PORTFOLIO MUST INCLUDE:

1. Cover Page
2. Statement of Purpose / Objectives
3. Certificate of Completion
4. Action Plan
5. Questionnaire
6. Interview Records
7. Analysis / Findings
8. Final Report (400–500 words)
9. Photographs
10. Bibliography (list of books, websites, articles, or any other materials you referred to while completing your project)

Instructions to be followed:

- All work should be done on A4 size sheets
- Maintain neatness and proper presentation
- Both projects are **COMPULSORY**
- Viva will be conducted based on the research project • Marks will be included in Internal Assessment

CHEMISTRY

Complete the practical file work (Experiment no 1-13) in chemistry practical notebook from the pdf file.

MATHEMATICS

- . Attempt all questions in a separate notebook.
 - . Show complete steps for every solution.
 - . Use proper mathematical notations.
1. Write and learn all formulae of trigonometry.

2. Write and learn number system.
3. Write and learn all mathematical notations and symbols.
4. Do all question of the followings
 - a) Two finite sets have m and k elements. If the total number of subsets of first set is 56 more than the total number of subsets of second set, then find the values of m and k.
 - b) If $L = \{1,2,3,4\}$, $M = \{3,4,5,6\}$, and $N = \{1,3,5\}$, then verify that

$$L - (M \cup N) = (L - M) \cap (L - N)$$

- c) If $n(A - B) = 10$, $n(B - A) = 8$ and $n(A \cap B) = 3$, find

$$\text{i) } n(A \cup B) \quad \text{ii) } n(A) \quad \text{iii) } n(B)$$

- d) A and B are two sets such that $n(A - B) = 14 + x$, $n(B - A) = 3x$

and $n(A \cap B) = x$. Draw a Venn diagram to illustrate this information. If $n(A) = n(B)$, find (i) the value of x (ii) $n(A \cup B)$.

- e) Prove distributive laws by algebraic method.

$$\begin{aligned} \text{i) } A \cup (B \cap C) &= (A \cup B) \cap (A \cup C) \quad \text{ii) } A \cap (B \cup C) \\ &= (A \cap B) \cup (A \cap C) \end{aligned}$$

- f) State and prove De Morgan's Laws by algebraic method.

PHYSICS

Section A

Dimensional Analysis & Errors

1. Check the dimensional consistency of the following equation:

$$h = \frac{2Scos\theta}{prg},$$

2. The time period (T) of a simple pendulum depends on its length (l) and acceleration due to gravity (g) mass of object (m). Use dimensional analysis to derive the formula for T.

1. Significant Figures: Solve and express the result to the correct number of significant figures:

- $4.28 + 0.015 + 0.0024$
- $3.8 * 0.125$

Section B: Conceptual

- Distinguish between Accuracy and Precision using a real-world example (like an archery target).

- Why is it necessary to have a "standard" for any physical quantity?

Part 2: Motion in a Straight Line

Section A: Graphs & Kinematics

1. Graph Interpretation: Draw the velocity-time (v-t) graph for an object:
 - Moving with constant positive acceleration.
 - Moving with constant negative acceleration (retardation) until it stops.
2. Equation Derivation: Derive the following equations of motion using the calculus method:
 - $v = u + at$ ○ $s = ut + \frac{1}{2}at^2$ ○ $v^2 = u^2 + 2as$

Section B: Numerical Problems

1. A car traveling at 72 km/h is brought to rest by applying brakes which produce a uniform retardation of 5m/s^2 . Calculate the distance covered by the car before it stops.
2. A ball is thrown vertically upward with a velocity of 20 m/s from the top of a building 25 m high.
 - How high will the ball rise?
 - How long will it be before the ball hits the ground? (Take $g = 10\text{ m/s}^2$)

COMPUTER SCIENCE (CS)

I. Create a PowerPoint Presentation on Emerging Trends (AI, IoT, Blockchain, etc.)

Include the following topics: Meaning, History, Advantages, Applications/Uses, Software Involved, Types

Note: Prepare 17 – 20 slides and make effective use of all PowerPoint tools and features.

II. Create a Poster on Computer System components or Network devices.

III. Practice the python programs syntaxes from the assignment provided and prepare a document file.

IV. Learn and practice Chapter 1: Computer System Overview and Chapter 4: Python Fundamentals.

Note: Bring your work in a clear bag.

Write the output of the following output of the following code

```
A,B,C=10,20,30
```

```
A=A+B
```

```
B=B-C
```

```

C=A+B
Print(A,B,C)
T=0
T=A+C
B=T*2
C = A+T
Print(A,B,C,T)
X,Y,Z = 2,4,6
X=X+2
Y=Y*3
Z=X+Y
Print(X,Y,Z)

```

Q2 Write the python code for the following Questions:

1. WAP to accept the P,R,T from user and display the SI(Simple Interest).
2. WAP to display the distance between 2 cities in meter but accept values in KM.
3. WAP to print the Annual Sal of an emp, where Basic Sal accepted from user.
4. WAP to display the area and perimeter of circle by accepting radius from user, $PI=3.14$
5. WAP to display the SP of an item where CP accepted by user and TAX is 15% on it.
6. WAP to display the 2 Nos from users and display their swap values by using temp and Eq. method
7. WAP to display the water bill amount by accepting units from user(1U=1.80/-) add Tax 12% on it
8. WAP to display the remaining age of an emp by accepting age from user(Retirement age at 60)
9. WAP to accept the year of birth from user and calculate the current age of the user.
10. WAP to accept L,B,H from user and display area, perimeter and volume of a rectangular box

BIOLOGY

1. Visit the botanical garden and prepare a report on
Learning, your experience and make a list of 20 plants with a scientific name .
2. Make a mind map of Ch - 1 and 2 in Biology register .3. Revise ch 1 and 2

PHYSICAL EDUCATION

INSTRUCTIONS:

- Prepare a Practical File neatly on A4 size sheets.
- Use proper headings, diagrams, and pictures wherever required.
- The file should be handwritten.

PRACTICAL FILE CONTENT

1. SAI KHELO INDIA YOUTH FITNESS TEST

Prepare the following details:

- Introduction of Khelo India Program
- Importance of Fitness Testing
- List and explanation of fitness tests:
 - 50m Speed Test
 - 600m Run/Walk
 - Sit and Reach Test
 - Strength Test (Push-ups / Modified Push-ups)
 - Standing Broad Jump
 - Procedure of each test
 - Benefits of fitness assessment

2. YOGA FOR COMMON LIFESTYLE DISEASES

Prepare the following for each condition:

Diseases:

- Asthma
- Hypertension
- Obesity
- Diabetes
- Back Pain & Arthritis

For each disease include:

- Meaning / Definition

- Causes
- Symptoms
- Yoga Asanas (at least 2–3)
- Benefits of Yoga
- Picture of Asanas

3. GAME / SPORT (ANY ONE OF YOUR CHOICE)

Choose any one game (e.g., Cricket, Football, Basketball, Volleyball, etc.) and include:

- Introduction of the game
- History
- Number of players
- Field & Equipment
- Basic Rules
- Skills involved
- Important tournaments

Your project file must include the following:-

1. A cover page. Mention your name, class and subject on it.
2. First page should consist of your Project topic.
3. Certificate and acknowledgement
4. Index
5. Introduction
6. Explanation of the topic (Variety of Contents)
7. Conclusion
8. Bibliography

HOME SCIENCE

- (1) Write mind Maps & NCERT Question Answers of chapter 1 to 3.
- (2) Complete Assignment 1 to 3.
- (3) Learn and revise chapter 1 to 3.

BUSINESS STUDIES

Section A: Project Work (Compulsory)

Topic: “My Business Idea”

Students will create their own business/start-up idea. Include the following:

1. Name of the Business
2. Type of Product/Service
3. Target Customers
4. Unique Selling Proposition (USP)
5. Initial Investment Required

6. Sources of Finance

7. Marketing Strategy 8. Challenges and Risk Factors Instructions:

- 12–15 handwritten pages

- Add drawings/pictures/logo

- Include cover page, index & conclusion

Section B: Activity-Based Task Interview

an entrepreneur. Ask:

- Why did you start this business?

- What difficulties did you face initially?

- How do you manage competition?

- What advice would you give to young entrepreneurs?

Present in Q&A format (2–3 pages)

Section C: Creative Task

Design a Business Logo & Tagline

- Create a logo for your business idea

- Write a catchy tagline

- Explain the meaning behind your design (1 page)

ACCOUNTANCY

1. Godrej Ltd. imported from Germany one machinery for sale in India and another machinery for production purpose. Will you treat them goods or fixed assets?

2. Mr. Jaspal Singh dealing in electronic goods sold 20 TV sets costing 30,000 each at 40,000 each. Out of this 5,00,000 were received in cash and the balance is not yet received. State the amount of revenue.

3. Mr. Dinanath who owed us 50,000 became insolvent and paid only 40% of this amount. What is term used for the amount not received?

4. Why assets are classified into current and non- current?

5. Why receipts are classified into capital and revenue?

6. Why expenditure is classified into capital and revenue.

7. What is the reason that the capital expenditure is shown in the Balance Sheet?

8. Explain the accounting process.

9. Case Study: Identifying Accounting Terms

Aarav started a business named *Green Leaf Café* on 1st July 2026 with an investment of ₹3,00,000. He used ₹2,20,000 to purchase kitchen equipment, furniture, and a coffee machine for the café. He also paid ₹30,000 as advance rent for three months to the shop owner. The remaining amount was kept in the bank for future business needs.

To make the café attractive, Aarav purchased decorative lights and paintings worth ₹15,000. He hired two employees and agreed to pay them salaries at the end of every month. During the first month, the café earned ₹1,20,000 from food and beverage sales. Out of this, ₹90,000 was received immediately through cash and UPI payments, while the remaining amount was yet to be received from customers who had organised small parties at the café.

The café purchased raw materials such as coffee beans, milk, bread, and vegetables from Fresh Mart Suppliers. Some payments were made immediately, while some amounts remained unpaid. Aarav also paid electricity charges, internet bills, and newspaper expenses for the café.

At the end of the month, the accountant found that some coffee powder and bakery items were still unused in the store room. The accountant also noticed that the coffee machine had reduced in value due to regular use. Aarav withdrew ₹8,000 from the business bank account for his personal shopping.

One day, Aarav's cousin gifted him a personal laptop for his birthday, but it was not used for café operations.

The accountant asked the students visiting the café to identify different accounting terms and concepts from the above situation.

Questions:

1. Identify the **capital** introduced in the business.
2. Name any two **assets** mentioned in the case study.
3. Identify one example of a **liability**.
4. Which item represents **stock/inventory** at the end of the month?
5. Identify one example of **expense** and one example of **income/revenue**.
6. Which transaction shows **depreciation**?
7. Identify the example of **drawings**.
8. Which item should not be recorded in the books of the café and why?
9. Identify one example of a **credit transaction** from the case study.

10. Case Study

Riya, a Class 11 student, started a small stationery shop named *Bright Future Stationers* near her school on 1st April 2026. She invested ₹1,50,000 from her personal savings to begin the business. Out of this amount, she deposited ₹1,20,000 into the business bank account and kept the remaining amount as cash in hand for daily expenses.

On the very first day, she purchased furniture worth ₹25,000 from Modern Furniture House and paid the amount through cheque. She also bought stationery items such as notebooks, pens, and files worth ₹40,000 from Sharma Traders on credit. Later, she purchased packaging material worth ₹2,000 and paid cash immediately.

During the first week, the shop sold goods worth ₹18,000 for cash and goods worth ₹12,000 on credit to a nearby coaching centre. Riya deposited ₹10,000 received from cash sales into the bank account. She also paid shop rent of ₹5,000 and electricity charges of ₹1,200 through online banking.

One customer returned damaged goods worth ₹1,500, which were accepted by the business. Similarly, Riya returned some defective stationery worth ₹3,000 to Sharma Traders. At the end of the month, she withdrew ₹4,000 from the business for her personal use and donated old newspapers from home to a recycling centre without involving the business.

Riya's friend advised her to identify which activities should be recorded in the books of accounts and which should not be recorded.

Questions:

1. Identify any five financial transactions from the case study.
2. Which transaction represents capital introduced by the owner?
3. Identify one cash transaction and one credit transaction.
4. Which transaction is considered drawings?
5. Which event should not be recorded in the books of accounts and why?
6. Name the source document that may be used for purchase of furniture.

ECONOMICS

1. Complete the economics project file on any one of the following topics as per the points discussed in the class.

- a. PPC
- b. Theory of Demand
- c. Consumer's Equilibrium
- d. Price determination
- e. Production Function

Expected Checklist:

- Introduction of topic/title
- Identifying the causes, consequences and/or remedies
- Various stakeholders and effect on each of them
- Advantages and disadvantages of situations or issues identified
- Short-term and long-term implications of economic strategies suggested in the course of research
- Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

2. Make a PPT on Chapter No- 1 "Introduction" of Microeconomics 3.

Revise chapter -1 of Microeconomics for PT -1

HISTORY

- I. On an A4 size sheet draw the timeline given in the textbook.
- II. Project Work
- III. Collect information and pictures on the following topics to be done in the class after holidays.
 1. Facets of the Industrialization in sixteenth- eighteenth centuries.
 2. Crusades: causes; rationale; events; outcomes; Holy Alliance
 3. Ancient History in depth: Mesopotamia
 4. Greek Philosophy and City States
 5. Contributions of Roman Civilization
 6. The spirit of Renaissance: Manifestation in art; Literature; Sculpture; Influence on Trading
Community; Social Fabric; Philosophy; Political Values; Rational Thinking; Existentialism
 7. Aspects of Development -South American States /Central American States
 8. Different schools of thoughts- Realism: Humanism: Romanticism
 9. Piecing together the past of Genghis Khan
 10. Myriad Realms of Slavery in ancient, medieval, and modern world
 11. History of Aborigines – America /Australia 12. Facets of Modernization – China
/Japan/Korea
- IV. Revise chapter 1 for periodic test.

POLITICAL SCIENCE

Complete your project files as per the following topics allotted to you;

Project topics-

1. Making of the Constitution
2. Elections in India.
3. Working of the Indian Judiciary System.
4. Social Justice: Are ethics followed in Indian Politics

5. Human Rights Act and gratification in India

6. Political impact on Indian Legislation

Your project file must include the following:-

1. A cover page. Mention your name, class and subject on it.

2. First page should consist of your Project topic.

3. Certificate and acknowledgement

4. Index

5. Introduction

6. Explanation of the topic (Variety of Contents)

7. Conclusion

8. Bibliography

INFORMATICS PRACTICES (I.P)

I. Create a PowerPoint Presentation on Emerging Trends (AI, IoT, Blockchain, etc.)

Include the following topics: Meaning, History, Advantages, Applications/Uses, Software Involved, Types

Note: Prepare 17 – 20 slides and make effective use of all PowerPoint tools and features.

II. Create a Poster on AI – Tools and Database Concepts.

III. Practice the SQL queries from the assignment provided and prepare a document file.

IV. Learn and practice Chapter 8: Database Concepts and Chapter 9: SQL. Note: Bring your work in a clear bag.

Q1. Write the SQL commands on the basis of the given table:

Table: Student

Sid	Sname	Class	Sec	Sage	Scity	Per
S12	RAM	X	A	15	Delhi	85
S13	RADHIKA	X	B	15	Delhi	95
S45	AMAN	XI	C	14	Pune	85
S66	SUBHAM	XI	A	13	Pune	75
S23	KRITIKA	X	C	16	Delhi	53
S98	AMITA	X	A	16	Agra	49
S78	SUMIT	XI	B	15	Delhi	99
S90	RAJ	X	B	15	Agra	82
S22	ANIL	XI	C	14	Pune	63
S33	HIMANSHI	X	C	15	Delhi	45

Write SQL queries on the basis of above table Student.

1. Create the given table.
2. Add any 3 records in the table.
3. Display full table.
4. Display studentid, students name and age.
5. Display details of all students who are in class XI.
6. Display all the student details those who belongs to Delhi City.
7. Display all the student details that belong to Delhi and Pune.
8. Display all the student details who scored 80% and above.
9. Display all the student details who scored in the range of 40 to 60.
10. Show the details according to the age in descending order.
11. Show the details according to the student id in ascending order.
12. Change the percentage of S33 to 48.
13. Modify the Sec of Anil to B.
14. Update the city of Raj to Pune.
15. Remove the details of S33.

Q2 Write the SQL commands on the basis of the given table:

Table:-SUPPLIER

SNo	Pname	SName	Qty	Price	City
S1	Bread	Britannia	150	30	Delhi
S2	Cake	Britannia	250	20	Mumbai
S3	Coffee	Nescafe	170	45	Mumbai
S4	Chocolate	Amul	380	10	Delhi
S5	Sauce	Kissan	470	36	Jaipur

1. Create a database SHOP.
2. Create table Supplier.
3. To insert first record in the table.
4. To select all the columns of the above table.
5. To Display the structure of the table.
6. To select the Pname and SName from the above table.
7. Display data for all products whose quantity is between 170 and 370.
8. Display data for all products sorted by their quantity.
9. Give Sname for that entire product whose name starts with "C".
10. Display the product name and quantity whose name contains "A".
11. To list Pname, Sname, Price for all the products whose quantity is less than 200.
12. Display all the Pname with their Price in descending order.
13. To display the distinct Supplier Name from the table.
14. To list the product name which are in 150, 170, 200.
15. Update the price of the Product – Kissan to Rs. 40.00 of Jaipur City.
16. Add one more column Phone of type int(10) in the table.
17. Drop the column Phone from the table.
18. Modify the column Phone of varchar (10).
19. Change the column name from Phone to the MobileNo.
20. Delete the record from the table whose SNo is S10.