



Holiday Homework

HOLIDAY HOMEWORK FOR SESSION 2026-27

CLASS X

General Instructions

- Complete all work on time.
- Maintain neatness and proper presentation throughout.
- Submit all work on the given submission date.
- Write your name, class, and section clearly on all submissions.

English :

Project Work

Total Word Count: 1,500 words

The project must include: Acknowledgement, Index, Introduction, main content (as detailed below), Conclusion, and Bibliography.

Part A – Drama: Julius Caesar (250 + 250 Words)

Q1. Compare the funeral speeches of Brutus and Mark Antony in Act 3. How does language manipulate the Roman mob? How does each speaker justify Caesar's death, and what techniques do they use to influence the Roman citizens?

Hints: Contrast Brutus' logical, honour-based appeal with Antony's emotional, ironic rhetoric.

Q2. Describe the quarrel between Brutus and Cassius in Act 4. What are the reasons behind their disagreement and how does this conflict reveal individual



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character traits? Discuss how this scene reflects the internal weaknesses of the conspirators and foreshadows future events in the play.

Part B – Poetry: Treasure Chest (250 + 250 Words)

Q3. Explore the theme of the presence of spirits in everyday life in the poem 'Haunted House' by H.W. Longfellow. How does the poet present the idea that the past continues to exist alongside the present? Analyse the tone and imagery used to convey this subtle and philosophical concept of life and death.

Q4. Contrast the characters of Count de Largé and the Lady in the poem 'Glove and the Lion'. What does the poem say about the qualities of a true knight and a true lady? Comment on the narrative style of the poet. What message does the poem convey?

Part C – Prose: Treasure Chest (250 + 250 Words)

Q5. How does Stephen Leacock use humour and satire in the story 'With the Photographer' to criticize society's obsession with artificial beauty and perfection? Analyse the behaviour and attitude of the photographer towards the narrator. How do the narrator's reactions enhance the comic effect? Discuss the deeper message conveyed through this humorous yet thought-provoking story, and its relevance to the present times.

Q6. Martin's fear of the Elevator grows with each ride. Trace how the author builds psychological tension through setting and Martin's thoughts. Discuss the theme of confrontation with fear.



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1. English Literature

Complete the extracts of the lessons taught:

- Haunted House
- Julius Caesar – Act 3, Scene 1

2. English Language

Complete Model Test Papers 4 & 5.

Hindi :

Project Work (2026)

Students of Class 10 are required to prepare a project covering the following topics:

- हिंदी एकांकीकार
- डॉ रामकुमार वर्मा
- हिंदी व्याकरण
- निबंध
- पत्र

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A. Learn the Following Grammar Topics

1. पर्यायवाची (Synonyms)
2. विलोम (Antonyms)
3. विशेषण (Adjectives)



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- वर्तनी शुद्ध कीजिए (Spelling Correction)
- तत्सम, तद्भव (Sanskrit-origin word forms)

B. Revise Lessons Taught

Revise all the lessons covered in class.

C. Writing Assignment (पत्र लेखन)

अपने क्षेत्र के थानाप्रभारी को पत्र लिखकर क्षेत्र में बढ़ते हुए अपराधों की ओर ध्यान आकर्षित कीजिए।

Mathematics :

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Chapter 20 – Solids: Cylinder, Cone and Sphere

Complete all exercises from Chapter 20 as instructed in class.

Project Work

Topic 1 – Tax System in India (GST)

Prepare a detailed project on the Goods and Services Tax (GST) system in India.

Topic 2 – Trigonometry and Its Applications

Prepare a project on Trigonometry, covering its principles and real-life applications.

History & Civics :

Project Work

Total Word Count: 1,500 words

The project must include: Acknowledgement, Index, Introduction (per topic), main content, Conclusion, and Bibliography.

History – Topic 1 (500 Words)

First War of Independence and the Role of Social Reformers



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Write on: Causes and Consequences of the Revolt of 1857, and the role of Raja Rammohan Roy and Swami Vivekananda in socio-religious reform movements.

History – Topic 2 (500 Words)

Role of the United Nations (UN) and Its Agencies in Promoting World Peace and Development

Cover the roles and functions of: UNICEF, UNESCO, and WHO.

Civics – Topic 3 (500 Words)

Two Houses of Parliament: Co-partners, Not Competing Centres of Power

Do you think that the Lok Sabha and Rajya Sabha are not competing centres of power but are co-partners in the functioning of government? Give your views and prepare a report covering their formation, role, and functions.

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History

- Learn Lessons 1, 2, and 3; mark answers.
- Frame extra questions from these lessons.
- Complete class notes.

Civics

- Learn and mark answers from Lesson 1.
- Complete class notes.

Geography :

Project Work

Topic: Seeds of Growth – Agriculture and Development

Students are required to prepare a 20–25 page project on the above topic.



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Crops to be Studied

Food Crops:

- Wheat
- Rice

Cash Crops:

- Cotton
- Sugarcane

Subtopics Required for Each Crop

6. Nature of the Crop – type of crop, season of cultivation, major producing areas
7. Climate and Soil Requirements – temperature, rainfall, and soil type suitable for growth
8. Uses of the Crop – food uses, industrial uses, and economic importance

Presentation Guidelines

- The project must be completed in a green spiral file.
- All content should be neatly handwritten.
- Use proper headings and subheadings for clarity.
- Include relevant pictures (drawn or pasted) related to crops, farming, and uses.
- Maintain cleanliness, neatness, and proper spacing throughout the project.

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- Revise all the lessons taught.
- Practice all the maps.
- Complete Toposheet G43S7.



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Physics :

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- Revise Chapter 1 – Force
- Revise Chapter 3 – Machines

Project Work

Topic: Study of Simple Machines and Their Applications

Prepare a detailed project on simple machines, including their types, working principles, mechanical advantage, and real-life applications.

Chemistry :

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- Learn Chapters 1, 2, 3, and complete practical work.
- Read Chapters 4 and 6.
- Solve questions from the chapters taught using previous years' Board question papers.
- Do all the Numericals of the exercises from Chapter 5 – Mole Concept.

Project Work – Practical File

- Write all the experiments in the practical file using blue or black pen only.
- Start each experiment from a new page.
- Cover the practical file with blue chart paper.

Biology :

Written Work

- Do all the Structure-Based Questions (Part E) from the exercises of the chapters taught.
- Read Chapter 4 and Chapter 5.
- Learn and revise all the chapters that have been taught.



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- Solve all the questions from previous years' Board question papers related to the chapters taught.

Project Work – Practical File

- Write all experiments neatly in the practical file using blue or black pen only.
- Draw each diagram neatly and clearly.
- Properly cover the Biology Practical Manual file.

General Instructions

- Maintain neatness and proper presentation.
- Complete all work on time.

Computers :

Theory

Q1. What is OOPs? Explain in Detail.

Q2. Data Types with Examples

Define all Java data types and provide relevant examples for each.

Q3. String Class Methods – Syntax and Example

Write the syntax and a working example for each of the following String class method

String Class Methods – Syntax and Examples Required
String trim()
String toLowerCase()
String toUpperCase()
int length()
char charAt(int n)



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`int indexOf(char ch)`

`int lastIndexOf(char ch)`

`String concat(String str)`

`boolean equals(String str)`

`boolean equalsIgnoreCase(String str)`

`int compareTo(String str)`

`int compareToIgnoreCase(String str)`

`String replace(char oldChar, char newChar)`

`String substring(int beginIndex)`

`String substring(int beginIndex, int endIndex)`

`boolean startsWith(String str)`

`boolean endsWith(String str)`

`String valueOf(all types)`

Java Programs

Note: Use proper comments in each program and attach output screenshots.

1. Armstrong Number

Write a program to input a three-digit number. Use a method `int Armstrong(int n)` to accept the number. The method returns 1 if the number is Armstrong, otherwise 0.

Sample Input: 153



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Sample Output: $153 \Rightarrow 1^3 + 5^3 + 3^3 = 153$. It is an Armstrong Number.

2. Palindrome Number

Write a program to accept a number from the user and check whether it is a Palindrome number or not. A number is a Palindrome which, when read in reverse order, is the same as in the right order.

Sample Input: 242 Sample Output: A Palindrome Number

Sample Input: 467 Sample Output: Not a Palindrome Number

3. Prime Number

Write a program in Java to accept a number. Check and print whether it is a prime number or not. A prime number is divisible only by 1 and itself.

Example: 2, 3, 5, 7, 11, 13.

4. Niven Number

Write a program to input a number. Check and display whether it is a Niven number or not. (A number is Niven if it is divisible by the sum of its digits.)

Example – Sample Input: 126

Sum of digits = $1 + 2 + 6 = 9$. Since 126 is divisible by 9, it is a Niven Number.

5. Spy Number

Write a program to accept a number and check whether it is a 'Spy Number' or not. (A number is a Spy Number if the sum of its digits equals the product of its digits.)

Example – Sample Input: 1124

Sum of digits = $1 + 1 + 2 + 4 = 8$ | Product of digits = $1 \times 1 \times 2 \times 4 = 8$

6. Buzz Numbers

Write a program to display all 'Buzz Numbers' between p and q (where $p < q$). A Buzz Number either ends with 7 or is divisible by 7.



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7. Dudeney Number

A Dudeney number is a positive integer that is a perfect cube such that the sum of its digits equals the cube root of the number.

Example: Consider 512. Sum of digits = $5 + 1 + 2 = 8$. Cube root of 512 = 8.
Since Sum of digits = Cube root, 512 is a Dudeney Number.

8. Pattern Printing

Write a program to print the following pattern:

```
1
3 1
5 3 1
7 5 3 1
9 7 5 3 1
```

9. Series Sum

Write a program to compute and display the sum of the following series:

$$S = (1+2)/(1 \times 2) + (1+2+3)/(1 \times 2 \times 3) + \dots + (1+2+\dots+n)/(1 \times 2 \times \dots \times n)$$

10. Series – First Ten Terms

Write a program in Java to display the first ten terms of the following series:

2, 5, 10, 17, ... n

11. Series Sum with Variable

Write a program to find the sum of the following series:

$$S = (a+1) + (a+2) + (a+3) + \dots + (a+n)$$

12. Pronic Number

Write a program to input a number and check whether it is a Pronic number or not. (A Pronic number is the product of two consecutive integers.)

Examples: $12 = 3 \times 4$ | $20 = 4 \times 5$ | $42 = 6 \times 7$



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Robotics & Artificial Intelligence :

Q1 – Robot Comparison

Create a comparison table of Humanoid Robot vs. Industrial Robot vs. Service Robot on the following bases:

- Purpose
- Environment
- Intelligence Level
- Human Interaction
- One Real-life Example

Basis	Humanoid	Industrial	Service
Purpose			
Environment			
Intelligence Level			
Human Interaction			
Real-life Example			

Q2 – A writeup (150–200 Words)

Topic: "Robots in Disaster Management: Boon or Risk?"

Your writeup must include:

- Where robots are used in disaster management
- Advantages of using robots
- Limitations of robots in such scenarios
- One ethical concern



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Artificial Intelligence :

Q1 – Concept Map

Draw a neat concept map of a Smart City Transport System.

Include the following components and show connections with arrows:

- AI Traffic Signals
- Self-driving Buses
- Smart Parking
- Pollution Sensors
- Route Optimization
- Passenger App

Q2 – AI Domains with Real-Life Examples

Explain each of the following AI domains with one real-life example:

- a. Machine Learning
- b. Natural Language Processing
- c. Computer Vision
- d. Expert Systems
- e. Robotics

PROGRAMMING

Note: Use proper comments in all programs. Attach output screenshots for each question.

All work must be done in a file with a black colour cover.

Q1 – List & Dictionary

Create a list of 10 items in your school bag. Sort them alphabetically. Convert the list into a dictionary with the item name as the key and quantity as the value.

Q2 – NumPy Arrays



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Create NumPy arrays `temperature_readings` (for 7 days) and `day_names`.
Perform the following operations:

- Display days when temperature > 35°C using array index numbers.
- Get the temperature of Wednesday using index values.
- Perform NumPy array slicing to get the temperature of the first 3 days.
- Get the NumPy array shape and reshape a 1D array of 9 elements into a 3×3 array.
- Iterate through the temperature array and print each value.
- Join two NumPy arrays of morning and evening temperatures. Split an array of 10 readings into 2 equal parts.
- Search for temperature = 30°C in the array. Sort the temperature array in ascending order.
- Use `np.mean()`, `np.median()`, and `scipy.stats.mode()` to find the mean, median, and mode of temperatures.

Q3 – Image with Matplotlib & NumPy

Display any sample image using `matplotlib.pyplot` and convert it into its NumPy array form. Print the shape, dimensions, and data type of the array.

Economic Applications :

Project Work

Choose any four topics from the following:

Topic 1 – The Role of the Reserve Bank of India in Controlling Inflation

Study the following aspects:

- Functions of the RBI
- Repo rate and reverse repo rate
- Monetary policy tools
- RBI actions during recent inflationary periods

Topic 2 – Monopolistic Competition in the Fast Food Industry

Study competition among brands through the following:



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- Pricing strategies
- Advertising methods
- Product differentiation

Topic 3 – Elasticity of Supply in Perishable and Non-Perishable Goods

Compare supply responsiveness across the following goods:

- Milk
- Vegetables
- Electronics
- Clothing

Topic 4 – Division of Labour and Its Impact on Productivity

Study the following aspects of specialization in production processes:

- Advantages of division of labour and specialization
- Disadvantages of division of labour and specialization

Topic 5 – Land as a Factor of Production

Study the following:

- Significance of land resources in production
- Challenges faced in effective utilization of land resources

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- Learn the degrees of elasticity of demand and supply. Prepare their graphs in the fair register.
- Solve the numerical problems of Chapter 3 in the register.

Physical Education :

Project Work

Prepare a detailed project on three major sports as outlined below.

Sport 1 – Cricket



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Field	Details
Introduction	Cricket is one of the most popular sports in the world and especially loved in India. It is played between two teams of 11 players each.
History	Cricket originated in England in the 16th century. The first international match was played in 1844. The sport is governed by the ICC.
Playing Area	Oval field with a 22-yard pitch in the centre.
Equipment	Bat, ball, wickets, gloves, pads, helmet.
Players	11 per team.
Rules	Teams bat and bowl. Runs are scored by hitting the ball and running between wickets.
Fundamental Skills	Batting, bowling, fielding, catching.
Tournaments	ICC Cricket World Cup, T20 World Cup, IPL.
Famous Players	Sachin Tendulkar, Virat Kohli, MS Dhoni.
Conclusion	Cricket teaches teamwork, patience, and discipline.

Sport 2 – Football

Field	Details
Introduction	Football is the most popular sport globally.
History	Modern football started in England in 1863. The sport is governed by FIFA.
Playing Area	Rectangular grass field with goalposts.



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Equipment	Football, shin guards, boots.
Players	11 per team.
Rules	Score by kicking ball into the goal. No hands except for the goalkeeper.
Fundamental Skills	Passing, dribbling, shooting, defending.
Tournaments	FIFA World Cup, UEFA Champions League.
Famous Players	Lionel Messi, Cristiano Ronaldo, Neymar.
Conclusion	Football builds stamina and teamwork.

Sport 3 – Basketball

Field	Details
Introduction	Basketball is a fast indoor sport.
History	Invented by James Naismith in 1891 in the USA.
Playing Area	Rectangular court with hoops.
Equipment	Basketball, hoop, shoes.
Players	5 per team.
Rules	Score by shooting ball through the hoop.
Fundamental Skills	Dribbling, shooting, passing, defense.
Tournaments	NBA, FIBA World Cup.
Famous Players	Michael Jordan, LeBron James, Kobe Bryant.



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Conclusion

Basketball improves speed and coordination.

Art :

Classes IX & X — Students are required to complete the following holiday homework neatly and creatively. Maintain proper presentation and submit all work on time.

Paper 1 – Still Life

You need to complete five pencil sketches of still life subjects. Examples include:

- **Fruit bowl**
- **Vegetables**
- **Vases**
- **Everyday objects**

Paper 2 – Nature Study

You need to create five colour paintings based on nature. Subjects may include:

- **Flowers**
- **Fruits**
- **Vegetables**
- **Plants**
- **Bunch of flowers**

S.U.P.W.

You have to complete two project works neatly and creatively.

General Instructions

- **Use good quality sheets or drawing file.**
- **Maintain cleanliness and proper presentation.**
- **Write your name, class, and section clearly on every sheet.**
- **Submit the homework on the given submission date.**