



Mount Litera
Zee School

NUURTUNG POTENTIAL. UNLEASHING BRILLIANCE.

Mount Litera Zee School

Great School. Great Future



Grade: IX

Summer Holiday Homework



General Instructions:

- Complete all work neatly in a stick file/project file.
- Maintain proper presentation and handwriting.
- Use creativity, colours and illustrations wherever required.
- Read all instructions carefully before attempting the tasks.
- Holiday Homework will be assessed as Subject Enrichment Activity of Term I.
- Submission Date: 22nd June, 2026

A. Activity-Based Project

“Gifts of Grace: Honouring Our Vocations”

Prepare a creative scrapbook/project file based on the lesson “Gifts of Grace: Honouring Our Vocations” from the NCERT English textbook Kaveri.

Your Project Should Include:

1. Brief Summary of the chapter.
2. Values Learnt:
 - Respect for every profession
 - Dignity of labour
 - Importance of skills and dedication
3. Creative Section:
 - Draw or paste pictures of different professions/vocations.
 - Add slogans, quotations or captions related to dignity of labour.
4. Personal Reflection:

“Why Every Profession Deserves Equal Respect” (80–100 words)
5. Conclusion:

Explain how every vocation contributes to society.

Required Materials:

A4 sheets/chart paper, colours, sketch pens, printed pictures, decorative material and notebook/file.

B. Grammar Practice Worksheet

I. Determiners

1. Gap Filling

From the options given below, fill in the blanks by choosing the most suitable determiners.

(many, each, some, little, every, those, much, several, any)

In today’s world, _____ profession plays an important role in society. However, there are still _____ people who fail to respect traditional occupations such as pottery, weaving and farming. Very _____

students understand the hard work behind these skills. In villages, artisans spend _____ hours creating beautiful handmade items, yet they receive very _____ appreciation for their efforts. Teachers should encourage students to learn about _____ vocations that contribute to our culture and heritage. If _____ awareness is created among young people, they will begin valuing the dignity of labour. _____ child must understand that success is not limited to a single profession. Respect for work of all kinds can bring positive change in society.

2. Editing

Every students must carry their identity card.
Much people attended the annual function.
She did not buy some notebooks from the shop.
These kind of behaviour is unacceptable.
I have little apples in my bag.

| Incorrect Word | Correction |

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. Error Correction

i. Every boys participated in the match.

ERROR	CORRECTION

ii. There are much water in the bucket.

ERROR	CORRECTION

iii, I did not meet some student yesterday.

ERROR	CORRECTION

iv. This books belongs to me.

ERROR	CORRECTION

v. Few of the information was useful.

ERROR	CORRECTION

II. Tenses

1. Gap Filling

Fill in the blanks with the correct form of the verbs given in brackets.

(has inspired, were working, realised, are forgetting, had learnt, will preserve, created, have lost, is becoming)

As modern technology _____ rapidly popular, many traditional occupations _____ their importance among the younger generation. In the lesson The Pot Maker, Sentila _____ the beauty of pottery while watching her mother work patiently with clay. Her mother, who _____ in difficult conditions for years, initially believed that her daughter should choose a different career. However, Sentila's curiosity and determination _____ her deeply. By the end of the story, the family _____ that traditional art forms should not disappear with time. Many skilled artisans _____ wonderful creations for generations, but society often neglects their contributions. If people continue to support local crafts, future generations _____ these valuable traditions proudly.

2. Editing

She go to school every day.

They was playing football in the ground.

I am knowing the answer.

He have completed his work.

We will went to Delhi next month.

| Incorrect Word | Correction |

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. Error Correction

i. She were writing a letter.

ERROR	CORRECTION

ii. I has finished my project.

ERROR	CORRECTION

iii. They will going to the market tomorrow.

ERROR	CORRECTION

iv. We plays cricket every evening

ERROR	CORRECTION

v. He is study in Class IX.

ERROR	CORRECTION

III. Subject–Verb Concord

1. Gap Filling

From the options given below, choose the correct verb forms and complete the passage.

(is, are, has, have, was, were, remains, make, contributes)

The dignity of labour _____ an important value that every student should learn. Many traditional occupations _____ greatly to the development of society. A potter, along with other craftsmen, _____ essential goods for daily life. In many villages, the skills passed down through generations _____ still respected by the local people. However, one of the major concerns _____ the declining interest among the youth in traditional professions. Neither the government nor society _____ fully recognised the struggles faced by artisans. The efforts made by social organisations _____ helping many workers receive better opportunities today. Respect for every vocation _____ necessary for building an equal and compassionate society.

2. Editing

The list of items are on the table.
 One of the boys have won the prize.
 Neither the students nor the teacher were present.
 The furniture in the room are old.
 Each student have submitted the assignment.

Incorrect Word	Correction

3. Error Correction

i. The team are playing well.

ERROR	CORRECTION

ii. One of the girls have participated.

ERROR	CORRECTION

iii. Neither Ram nor his friends was ready.

ERROR	CORRECTION

iv. Bread and butter are my favourite breakfast.

ERROR	CORRECTION

v. The information given by him were useful.

ERROR	CORRECTION

C. Writing Skills

1. Notice Writing

You are the Cultural Secretary of Sunrise Dwarika Academy, Dhanbad. Draft a notice informing the students about an Inter-House Debate Competition to be held on 15th July, 2026 at 9:00 a.m. in the School Auditorium. Mention the topic, registration details and last date for submission of names.

2. Persuasive Writing

Write a persuasive paragraph/article in about 120–150 words on the following topic:

“Traditional Skills and Vocations Should Be Preserved Despite Hardships — with reference to Sentila’s passion for pottery in ‘The Pot Maker’.”

SOCIAL SCIENCE

TASK 1

Topic: Disaster Management-

A Project file is to be made on the following topic, with a strict adherence to the following instructions:

Guidelines

1. Every student has to compulsorily undertake project on Disaster Management.
2. Objectives: The main objectives of giving project work on Disaster Management to the students are to:
 - (a) Create awareness in them about different disasters, their consequences and management
 - (b) Prepare them in advance to face such situations
 - (c) Ensure their participation in disaster mitigation plans
 - (d) Enable them to create awareness and preparedness among the community.
3. The project work should also help in enhancing the Life Skills of the students.
4. If possible, different forms of art may be integrated in the project work.
5. The distribution of marks over different aspects relating to Project Work is as follows:
 - a. **Content accuracy, originality and analysis (2)**
 - b. **Presentation and creativity (1)**
 - c. **Viva Voce (2)**
6. The Project Report should be handwritten by the students themselves .

DISASTER MANAGEMENT

BE PREPARED, STAY SAFE

Name : _____
 Class & Sec : IX - _____
 Subject : Social Science
 Topic : Disaster Management
 School : _____

INDEX

S.No.	Content	Page No.
1.	Acknowledgement	1
2.	Introduction	2
3.	Types of Disasters	3
4.	Safety Measures	4
5.	Disaster Management Cycle	5
6.	Conclusion	6
7.	Bibliography	7

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my school for giving me this wonderful opportunity to work on this project.

I am thankful to my Social Science teacher for her guidance, support and valuable suggestions.

I also thank my parents for their constant encouragement and my friends for their help in completing this project.

Thank you all.

INTRODUCTION

- Meaning of Disaster**
A disaster is a sudden and severe event that causes great damage to life, property and environment.
- Importance of Disaster Management**
Disaster Management helps in reducing the risks, saving lives and property and restoring normal life quickly.
- Why awareness is necessary**
Awareness helps people to be prepared, take right action at the right time and minimize the loss during disasters.

TYPES OF DISASTERS

A. Natural Disasters

- Earthquake
- Flood
- Cyclone
- Drought

B. Man-made Disasters

- Fire
- Industrial Accidents
- Pollution

SAFETY MEASURES

Before a Disaster

- Be aware and prepared.
- Keep emergency kit ready.
- Follow safety rules.

During a Disaster

- Stay calm and do not panic.
- Follow instructions of authorities.
- Move to a safe place.

After a Disaster

- Check for injuries and help others.
- Do not touch broken wires.
- Follow official updates.

DISASTER MANAGEMENT CYCLE

1. Prevention
Activities taken to prevent disasters and reduce risks.

2. Preparedness
Planning, training and stockpiling resources.

3. Response
Immediate action during disaster to save lives.

4. Recovery
Restoring normal life and helping people to rebuild.

CASE STUDY

Kerala Floods - 2018

- Cause**
Heavy rainfall and overflow of dams caused severe floods in Kerala.
- Damage caused**
Many lives were lost. Houses, roads, bridges and crops were severely damaged.
- Relief work**
NDRF, Army and volunteers carried out rescue operations. Relief camps were set up and food, water and medicines were provided.
- Lessons learnt**
We learnt the importance of preparedness, early warning systems and protecting nature.

CONCLUSION

Disasters cannot be stopped but their impact can be reduced. Students and citizens should be aware, follow safety rules and help each other during difficult times. Together, we can build a safer and stronger nation.

**STAY ALERT
STAY SAFE**

BIBLIOGRAPHY

- NCERT Book
Social Science Textbook for Class IX
- Internet Sources
 - www.ndma.gov.in
 - www.wikipedia.org
 - www.unisdr.org
- Newspapers / Magazines
 - The Hindu
 - Times of India
 - India Today

SUBMISSION INSTRUCTIONS

- Submit in a neat handmade folder.
- Use proper headings and colourful presentation.
- Handwriting should be neat and legible.
- Draw diagrams and paste relevant pictures.
- Project must be creative and informative.

PUNCH LINE

**"Awareness,
Preparedness and
Cooperation
can save lives."**

MAP BASED - TASK 2

Q. On an outline map of the world, locate and label the major and minor plates of the world.

TASK 3 WORKSHEET HISTORY

Project 1: Creative Timeline (Compulsory)

- Track human evolution from **Nomadic Hunters** to **Settled Farmers**.
- Highlight four key eras: Palaeolithic, Mesolithic, Neolithic, and Chalcolithic.
- Include dates, main tools, and major lifestyle breakthroughs for each.
- Use a creative format like a fold-out scroll or 3D chart.

Project 2: Comparative Civilisation Study (Choose One Pair)

Research and compare **one** of the following pairs of ancient river valley civilisations:

- Option A:** Indus Valley Civilisation & Mesopotamian Civilisation
- Option B:** Egyptian Civilisation & Chinese Civilisation

WORKSHEET- TO BE DONE IN A4 SHEET(RULED)

- Which was the first animal to be tamed by early humans?
 - Sheep
 - Goat
 - Wild ancestor of the dog
 - Cow
- Which of the following Harappan sites is located in Gujarat?
 - Kalibangan
 - Lothal
 - Banawali
 - Ropar
- Burzahom, a Neolithic site where people lived in pit-houses, is located in:
 - Bihar
 - Karnataka
 - Jammu and Kashmir
 - Assam
- Microliths' are characteristic tools of which period?
 - Paleolithic
 - Mesolithic
 - Neolithic
 - Iron Age
- The first city to be discovered in the Indus Valley was:
 - Mohenjodaro
 - Harappa
 - Lothal
 - Kalibangan
- Which of the following is a Paleolithic site?
 - Bhimbetka
 - Burzahom
 - Inamgaon
 - Hallur
- The process in which people grow plants and look after animals is called:
 - Agriculture
 - Domestication
 - Herding
 - Farming
- Hunsgi is a site in which state of India?
 - Bihar
 - Andhra Pradesh
 - Karnataka
 - Tamil Nadu
- The 'Middle Stone Age' is also known as:
 - Paleolithic
 - Mesolithic
 - Neolithic
 - Megalithic
- In which state of India will you find Bhimbetka Caves?
 - Jharkhand
 - Chhatisgarh
 - Madhya Pradesh
 - Odisha

SECTION B – SHORT ANSWER QUESTIONS

- Write any three features of Palaeolithic age.
- Write a brief note on different stages of evolution of human ancestors.
- Explain about the scope and relevance of history.
- Mention the key highlights of Mesopotamian civilisation.

Geography

Choose the most appropriate answer.

- Which statement best explains why continents appear to “fit together” like puzzle pieces?
 - They were formed separately
 - They were once joined as a single landmass
 - Ocean currents pushed them together
 - Wind erosion shaped them similarly
- If convection currents inside the mantle became weaker, which process would be most directly affected?
 - Rainfall patterns
 - Movement of tectonic plates
 - Soil formation
 - Ocean tides
- Which of the following situations is an example of mechanical weathering?
 - Iron rusting in rocks
 - Acid rain dissolving limestone
 - Water freezing and widening cracks in rocks
 - Formation of caves by carbonic acid
- Why are fossils of similar plants and animals found on continents separated by oceans?
 - Birds carried them across oceans
 - Continents were once connected
 - Ocean currents moved the fossils
 - Similar climates created identical organisms
- Which layer of Earth acts as the main source of magma?
 - Crust
 - Mantle
 - Outer core
 - Inner core
- A farmer notices rocks in his field slowly breaking apart because plant roots are growing inside cracks. This is an example of:
 - Chemical weathering
 - Biological weathering
 - River erosion
 - Deposition
- Why are fold mountains usually formed near convergent plate boundaries?
 - Plates move apart there
 - Sediments get compressed and uplifted
 - Wind deposits sand there
 - Lava cools rapidly there
- Which situation would most likely increase the rate of weathering?
 - Cold and dry climate
 - Lack of vegetation
 - Frequent temperature changes and rainfall
 - Absence of water

9. Why is the inner core solid despite having extremely high temperatures?
 a) It contains cold metals
 b) High pressure keeps it solid
 c) It receives no heat from the mantle
 d) It is made of sedimentary rocks
10. Which human activity can increase the risk of erosion most significantly?
 a) Afforestation
 b) Terrace farming
 c) Mining and deforestation
 d) Rainwater harvesting

B. Short Answer Questions

1. Explain how the study of seismic waves helps scientists understand the interior structure of the Earth.
 2. "Human activities can accelerate natural erosion." Explain the statement with examples from daily life.

C. Long Answer Questions

1. Explain the structure of the Earth with the help of a labelled diagram. Discuss how each layer differs in composition, temperature, and physical state.
 2. How does the "Plate Tectonic Theory" help us understand earthquakes, volcanoes, and mountain formation?

POLITICAL SCIENCE

Section – A: MCQs (Competency Based)

Choose the correct answer:

1. Political Science mainly studies:
 a) Weather
 b) Government and State
 c) Business
 d) Sports
2. The word "Politics" is derived from the Greek word:
 a) Polis
 b) Politia
 c) Politico
 d) Polite
3. Which of the following is called the father of Political Science?
 a) Plato
 b) Aristotle
 c) Socrates
 d) Rousseau
4. The scope of Political Science includes:
 a) State and Government
 b) Rights and Duties
 c) International Relations
 d) All of these
5. Political Science helps citizens to:
 a) Ignore laws
 b) Become responsible citizens
 c) Avoid voting
 d) Increase pollution
6. Which institution makes laws in a democratic country?
 a) Judiciary
 b) Executive
 c) Legislature
 d) Army
7. The study of elections is a part of:
 a) Economics
 b) Political Science
 c) Geography
 d) History
8. Which of the following is NOT included in the scope of Political Science?
 a) Constitution
 b) Citizenship
 c) Plant Biology
 d) Public Administration
9. The modern study of Political Science focuses on:
 a) Human behavior and institutions
 b) Only kings and rulers
 c) Only wars
 d) Trade only
10. Democracy means:
 a) Rule by one king
 b) Rule by military
 c) Rule by the people
 d) Rule by judges

Section – B: Short Answer Questions

Answer the following in 30–40 words:

1. Define Political Science.
 2. What is meant by the term "State"?
 3. Mention any two scopes of Political Science.
 4. Why is Political Science important in modern society?
 5. Write any two differences between Political Science and History.

Section – C: Long Answer Questions

Answer the following in about 100–120 words:

1. Explain the meaning and nature of Political Science.
 2. Discuss the scope of Political Science in modern times.
 3. Describe the roots and origin of Political Science with reference to Greek thinkers.

Section – D: Paragraph Based Questions

Political Science is the study of the State, Government, political institutions, rights, duties, and public policies. It helps citizens understand their role in society and teaches them about democracy, justice, and equality. Ancient Greek philosophers like Plato and Aristotle contributed greatly to the development of Political Science.

1. What does Political Science study?
2. Name any one Greek philosopher mentioned above.
3. How does Political Science help citizens?
4. Write one value promoted by Political Science.
5. Which country is considered the birthplace of Political Science?

The scope of Political Science has expanded in modern times. Earlier, it mainly focused on the State and Government. Today, it also includes public administration, international relations, human rights, political behavior, and public policy.

1. What was the earlier focus of Political Science?
2. Name any two modern areas included in Political Science.
3. What is meant by public policy?
4. Why has the scope of Political Science expanded?
5. Which branch studies relations between nations?

Section – E: Critical Thinking Questions

1. Suppose citizens do not understand their rights and duties. How can Political Science education help improve society and democracy? Explain with examples.

ECONOMICS

Multiple choice questions(MCQ)

1. Economics is mainly concerned with:

- | | |
|-------------------------|-------------------------|
| (a) Entertainment | (b) Unlimited resources |
| (c) Scarcity and choice | (d) Weather |

2. The basic economic problem is:

- | | |
|----------------|---------------|
| (a) Pollution | (b) Scarcity |
| (c) Population | (d) Transport |

Opportunity cost means:

- | | |
|---|-------------------------|
| (a) Total money spent | (b) Cost of production |
| (c) Value of next best alternative given up | (d) Extra profit earned |

3. Which of the following is a human-made resource?

- | | |
|-------------|------------|
| (a) Water | (b) Forest |
| (c) Machine | (d) Soil |

4. Which factor of production receives wages?

- | | |
|----------|------------|
| (a) Land | (b) Labour |
|----------|------------|

Capital refers to:

- | | |
|--|-------------------------|
| (a) Only money | (b) Natural resources |
| (c) Tools, machines and equipment used in production | (d) Government property |

5. An entrepreneur mainly:

- | | |
|----------------------|--------------------------|
| (a) Consumes goods | (b) Organises production |
| (c) Wastes resources | (d) Collects taxes |

Which of these is an example of a want?

- | | |
|----------|----------------|
| (a) Food | (b) Water |
| (c) Air | (d) Luxury car |

6. Which activity belongs to the tertiary sector?

- | | |
|-------------|-------------|
| (a) Farming | (b) Mining |
| (c) Banking | (d) Fishing |

7. Goods used for further production are called:

- | | |
|--------------------|-------------------|
| (a) Consumer goods | (b) Capital goods |
| (c) Free goods | (d) Public goods |

B. Short answer type questions

8. Define scarcity.
9. What is opportunity cost?

10. Name the four factors of production.
11. Differentiate between needs and wants.
12. What is production?

Long answer type questions

13. Explain the central problems of an economy.
14. Describe the importance of the factors of production in economic activities.
15. Explain the concept of opportunity cost with suitable examples from daily life

Science

General Instructions:

- * The worksheet consists of questions in three sections.
- * Questions are to be solved in A4 sized sheet and submitted to the subject teachers in a stick file.
- * All questions are to be attempted
- * Questions and answers both are to be written in the A4 sheets

Section A (Biology)

- 1) Who coined the term "cell" and discovered them in 1665?
 - a) Antonie van Leeuwenhoek
 - b) Robert Hooke
 - c) Charles Darwin
 - d) Louis Pasteur
- 2) Which of the following is considered the structural and functional unit of life?
 - a) Tissue
 - b) Organ
 - c) Cell
 - d) Nucleus
- 3) The plasma membrane is mainly composed of:
 - a) Carbohydrates and Lipids
 - b) Proteins and Cellulose
 - c) Lipids and Proteins
 - d) Cellulose and Carbohydrates
- 4) The plasma membrane is called a selectively permeable membrane because it:
 - a) Allows all materials to pass through
 - b) Allows only water to pass through
 - c) Allows entry and exit of some materials
 - d) Prevents the passage of all materials
- 5) The movement of water molecules through a selectively permeable membrane is called:
 - a) Diffusion
 - b) Osmosis
 - c) Endocytosis
 - d) Plasmolysis
- 6) When a cell is placed in a hypotonic solution, it will:
 - a) Shrink
 - b) Remain the same size
 - c) Swell up (become turgid)
 - d) Burst immediately
- 7) How does Amoeba obtain its food?
- 8) Make a comparison and write down ways in which plant cells are different from animal cells.
- 9) Carry out the following osmosis experiment:
 Take four peeled potato halves and scoop each one out to make potato cups. One of these potato cups should be made from a boiled potato. Put each potato cup in a trough containing water.
 Now,
 - a) Keep cup A empty
 - b) Put one teaspoon sugar in cup B
 - c) Put one teaspoon salt in cup C
 - d) Put one teaspoon of sugar in the boiled potato cup D.
 Keep these for two hours. Then observe the four potato cups and answer the following:
 - (i) Explain why water gathers in the hollowed portion of B and C.
 - (ii) Why is potato A necessary for this experiment?
 - (iii) Explain why water does not gather in the hollowed-out portions of A and D.

Section B (Chemistry)

- 1) An element A forms oxide having formula A_2O . the formula of its sulphate is

A) A_2SO_4 B) $A_2(SO_4)_3$ C) ASO_4 D) $A_3(SO_4)_2$

2) The formula unit mass of K_2CO_3 is

A) 64 B) 138 C) 100 D) 120

3) The chemical formula of chromium sulphate is

A) Cr_2SO_4 B) $Cr_2(SO_4)_3$ C) $Cr(SO_4)_3$ D) $CrSO_4$

4) What is the ratio by mass of elements present in carbon dioxide?

A) 1:2 B) 2:9 C) 3:8 D) 2:1

5) What is the ratio of molecular masses of sulphur dioxide and carbon dioxide?

A) 4:5 B) 3:5 C) 3:7 D) 16:11

6) The valencies of two elements A and B are +2 and +4 respectively. If the difference in their atomic masses is 52 then the difference in the molecular masses of their chlorides will be

A) 71 B) 131 C) 123 D) 134

For the following questions (7-8) two statements are given one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

A) Both A and R are true and R is correct explanation of the assertion

B) Both A and R are true R is not the correct explanation of the assertion

C) A is true but R is false

D) A is false but R is true

7) Assertion : Nitrogen and oxygen combine in the ratio of 7:8 to form nitrogen dioxide.

Reason : Atomic mass of oxygen is more than that of nitrogen

8) Assertion : The formula of a metal carbonate is MCO_3 but formula of its metal sulphate is M_2SO_4

Reason : The valency of metal in metal carbonate is +2

9) (i) Define polyatomic ion. Give one example

(ii) Name two metal whose valency is +3

10) Calculate the unit formula mass of the following:

i) $Na_2CO_3 \cdot 10H_2O$

ii) $CaCl_2$

11) Write the formula and name of the compounds formed by

(i) Calcium ion and oxide ion

(ii) Silver ion and sulphide ion

12) Define law of constant proportion. Taking the example of water, explain the law.

13) Define the following.

i) Atomic mass

ii) Molecular mass

iii) Formula mass

14) (a) Write the chemical formula of aluminium carbonate.

b) Why is it not correct to speak a molecule of sodium chloride

c) Correct the symbols and formulae of the following

i) CDI_2

ii) CR

C) $SL(PO_4)_3$

15) a) Define atomic mass unit.

b) Carbon and oxygen combine in the ration 3: 8 by mass to form carbon dioxide. What mass of oxygen will be required to combine completely with 12g of carbon?

c) Define law of conservation of mass. Which postulate of Dalton's atomic theory is the basis of this law?

Section C (Physics)

1) A body when projected up with initial velocity 'u' goes to a height 'h' in time 't' and then comes back at the point of projection. The correct statement is:

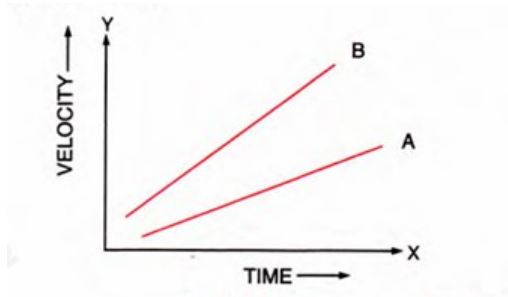
A) The average velocity is $2h/t$

B) The acceleration is zero

C) The final velocity on reaching the point of projection is $2u$

D) The displacement is zero

2) The given figure shows velocity-time graph for two cars A and B moving in same direction. Which car has greater acceleration :



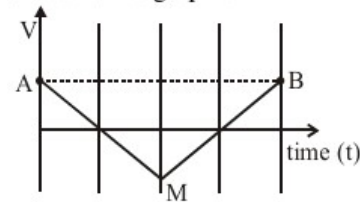
A) Car A

B) Car B

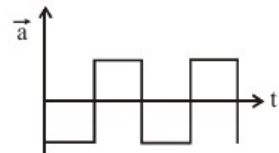
C) Both cars have equal acceleration

D) No inference can be drawn from the graph

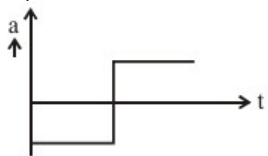
3) If the velocity time graph has the shape AMB, what would be the shape of corresponding acceleration-time graph:



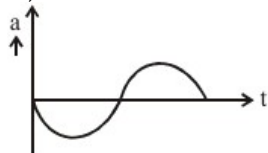
A)



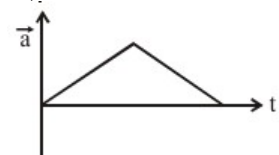
B)



C)



D)



4) In this question, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as:

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Both Assertion and Reason are false.

Assertion: The speedometer of a vehicle measures the instantaneous speed.

Reason: In case of a body moving with uniform speed, the instantaneous speed and the average speed are equal (same as uniform speed).

5) The table below shows the distance in cm, travelled by objects A, B and C during each second :

Time	Distance (in cm) covered in each second by A, B and C		
	Object A	Object B	Object C
1st second	20	20	20
2nd second	20	36	60
3rd second	20	24	100
4th second	20	30	140
5th second	20	48	180

- (i) Which object is moving with constant speed? Give reason to support your answer.
- (ii) Which object is moving with a constant acceleration? Give reason to support your answer.
- (iii) Which object is moving with irregular acceleration? Give reason to support your answer.

6) Mention three ways by which a moving body changes its velocity. Support your answer with examples.

7) A scooter accelerates from rest for time T_1 at a constant rate A_1 and then retards at a constant rate A_2 for time T_2 and comes to rest. The correct value of T_1/T_2 will be :

A) $\frac{A_1+A_2}{A_2}$

B) $\frac{A_1}{A_2}$

C) $\frac{A_2}{A_1}$

D) $\frac{A_1+A_2}{A_1}$

8) A body doubles its speed while travelling. Time taken for doubling the speed is average of initial and final velocity. Find the acceleration.

9) What can you say about the nature of motion of a body if its displacement -time graph is

- (i) a straight line parallel to time axis?
- (ii) a straight line inclined to time axis with an acute angle?
- (iii) a straight line inclined to time axis with an obtuse angle?
- (iv) a curve?

10) State the three equations of motion and derive it both mathematically and graphically.

Mathematics

Chapter - Number System.

SECTION-A

1. Find an irrational number between $\frac{1}{7}$ and $\frac{2}{7}$. Given that $\frac{1}{7} = 0.\overline{0.142857}$.
2. Simplify $\sqrt{72} + \sqrt{800} - \sqrt{18}$.
3. Simplify $64^{\frac{-1}{3}} [64^{\frac{1}{3}} - 64^{\frac{2}{3}}]$
4. In the following equations, examine whether x, y and z represents rational or irrational number
i) $x^3 = 27$ ii) $y^2 = 7$ iii) $z^2 = 0.16$
5. If $2^x \times 4^x = 8^{\frac{1}{3}} \times 32^{\frac{1}{5}}$, then find the value of x.

SECTION-B

6. Find the value of $\sqrt{\frac{2+\sqrt{3}}{2-\sqrt{3}}}$, if $\sqrt{3} = 1.73$.
7. Represent on number line: i) $\sqrt{2}$ ii) $\sqrt{7}$
8. If $x = 3+2\sqrt{2}$, then find whether $x + \frac{1}{x}$ is rational or irrational.
9. Express the following in the form of $\frac{p}{q}$, where p and q integers and $q \neq 0$:
i) $3.\overline{2}$ ii) $18.\overline{48}$
10. Visualise the representation of $6.4\overline{7}$ on the number line up to 5 decimal places, which is up to 6.47777 . Draw figure only.

SECTION-C

11. Find the value of a and b, if $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$
12. Represent $\sqrt{10.5}$ on then number line.
13. Simplify $\sqrt[4]{81} - 8(\sqrt[3]{216}) + 15(\sqrt[5]{32}) + \sqrt{225}$.
14. Which is greatest amongst $\sqrt{2}$, $\sqrt[3]{4}$, and $\sqrt[4]{3}$?
15. Prove that $\frac{2^{30} + 2^{29} + 2^{28}}{2^{31} + 2^{30} - 2^{29}} = \frac{7}{10}$

SECTION-D

16. If $x = \frac{\sqrt{2}+1}{\sqrt{2}-1}$ and $y = \frac{\sqrt{2}-1}{\sqrt{2}+1}$, find the value of $x^2 + y^2 + xy$.
17. Prove that $\frac{2^{36} + (\frac{1}{4} \times 2^{35}) + (\frac{1}{8} \times 2^{37})}{(\frac{1}{16} \times 2^{39}) + (\frac{1}{8} \times 2^{38})} = \frac{11}{8}$
18. If $x = \frac{5-\sqrt{21}}{2}$, then prove that $(x^3 + \frac{1}{x^3}) - 5(x^2 + \frac{1}{x^2}) + (x + \frac{1}{x}) = 0$
19. Prove that $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$
20. Rationalise the denominator of $\frac{4}{2+\sqrt{3}+\sqrt{7}}$

1. In which quadrant or on which axis do each of the points $(-2,4)$, $(3,-1)$, $(-4,0)$, $(2,3)$ lie?
2. What is the abscissa of origin?
3. At what point the axes intersect?
4. What is the sign of y-coordinate below the x-axis?
5. What are the coordinates of a point lying on the y-axis at negative 3 units?
6. If the y- coordinate of a point is zero, then where does this point lie?
7. What are the coordinates of a point whose ordinate is 5 and lying on the y-axis?
8. If the two points are A $(-3,7)$ and B $(-7,5)$, then what is $(\text{abscissa A}) - (\text{abscissa B})$?
9. What is the sign of x-coordinate in quadrant II?
10. A point is such that (abscissa of the point, other than zero) that it equals to the ordinate of the point. In which quadrants can the point lie?

Section B

1. Find a point on the y-axis equidistant from $(-5, 2)$ and $(9, -2)$.
2. Find the distance between the points $(-8/5, 2)$ and $(2/5, 2)$.
3. In triangle ABC, D and E are mid-points of the sides BC and AC respectively. Find the length of DE. Prove that $DE = 1/2AB$.
4. Points P $(5, -3)$ is one of the two points of trisection of the line segment joining points A $(7, -2)$ and B $(1, -5)$ near to A. find the coordinates of the other point of trisection.
5. Find the area of quadrilateral ABCD whose vertices are A $(1, 0)$, B $(5, 3)$, C $(2, 7)$, D $(-2, 4)$.
6. Points P, Q, R and S divide a line segment joining A $(2, 6)$ and B $(7, -4)$ in five equal parts. Find the coordinates of P and R.
7. Find the relation between x and y if points $(2, 1)$, (x, y) and $(7, 5)$ are collinear.
8. If A $(-2, 4)$, B $(0, 0)$ and C $(4, 2)$ are the vertices of triangle ABC, then find the length of the median through the vertex A.
9. If points A $(4, 3)$ and B $(x, 5)$ are on the circle with centre O $(2, 3)$, find the value of x.
10. If vertices of a triangles are $(1, k)$, $(4, -3)$ and $(-9, 7)$ and its area is 15 sq. units then find then the value of k.

PROJECT-WORK (ANY-ONE):

1. Number Systems – Spiral of Theodorus

Objective:

- i.) To represent irrational numbers geometrically and understand the concept of square roots.

Model Idea:

- ii.) Make a spiral using right-angled triangles – each new triangle's hypotenuse represents $\sqrt{2}$, $\sqrt{3}$, $\sqrt{4}$, etc.

2. Coordinate Geometry – Cartesian Plane Model

Objective:

To understand the concept of x-axis, y-axis, and plotting points using coordinates.

Model Idea:

Make a 3D graph board using threads for axes and movable pins for points that can form geometric shapes like triangles or quadrilaterals.

Project: **Smart Waste Management**

Using AI Project Phases with Google Teachable Machine

1. Problem Scoping

Identify the problem:

Many people throw dry and wet waste into the same dustbin, which makes recycling difficult.

Goal:

Create an AI model that can identify different types of waste like plastic, paper, metal, and wet waste.

2. Data Collection

Collect images of different waste materials such as:

- Plastic bottles
- Paper
- Food waste
- Metal cans

Take clear pictures from different angles and lighting conditions.

3. Data Exploration

Study the collected images and check:

- Are the images clear?
- Are all waste categories included properly?
- Is there enough variety in the data?

Remove blurry or repeated images.

4. Modelling

Use Google Teachable Machine to train the AI model.

Steps in Teachable Machine:

1. Open the website
2. Choose **Image Project**
3. Create classes like Plastic, Paper, Metal, Wet Waste
4. Upload collected images into each class
5. Click **Train Model**
6. Test the model using a webcam or new images

The AI model will learn to recognize different waste items automatically.

5. Evaluation

Test the model with new waste images and check:

- Is the prediction correct?
- Which category gives the best result?
- Does the model get confused between similar objects?

You can improve the model by adding more training images.

Final Deliverable

- Write a note on the above AI project phases in class notebook of AI

And

- Make A PowerPoint presentation about it. Include Charts and reports and a working demo using webcam detection in Teachable Machine.
- Send the PowerPoint to the following email ids-
 - IX B, IX C, IX D - mlzspatnacomputer@gmail.com
 - IX A, IX E - chauhanpatna@gmail.com

Sanskrit

साहित्य

अधोलिखितकथनेषु रेखांकितपदानि आधृत्य प्रश्ननिर्माणं क्रियताम् ।।

- (i) पाण्डुरङ्गः नामदेवस्य मित्रं आसीत्। (ii) देवः नामदेवं परितः भवति स्म।
(iii) ईश्वरः सर्वभूतेषु निवसति। (iv) शुनकः आगत्य रोटिकां खदति।
(v) स्वार्थान्धः मानवः पर्यावरणम् नाशयति।

- वित्तकोषस्य चित्रं रचयित्वा तस्य विभागस्य नामानि लिखत।

- संस्कृत भाषायां निबंधम् लिखत ।

‘संस्कृतस्य महत्वं’

व्याकरण

1. शब्दरूपं लिखत – किम्, ‘त्रिषुलिङ्गेषु (अस्मद्, मुनि)
2. ‘दृश्, नम्, पा – लृट्लकारे, लोट्लकारे च धातुरूपं लिखत।

Hindi

परियोजना कार्य

📖 विषय : दो बैलों की कथा

“हीरा और मोती” की यात्रा को केवल पढ़िए नहीं, उसे जीवंत बनाइए।

📖 गतिविधि - “यात्रा डायरी” बनाइए

एक सुंदर फ़ाइल/स्क्रेपबुक तैयार करें जिसमें हीरा और मोती की यात्रा के मुख्य दृश्य चित्रों, रंगों और संवादों के माध्यम से दिखाए जाएँ।

निम्न बिन्दु शामिल करें -

- गया के घर से भागना
- लड़की और बैलों का रिश्ता
- कांजीहौस से भागना
- दढ़ियल और हीरा- मोती का प्रसंग
- झूरी से मिलन

विशेष निर्देश

प्रत्येक दृश्य का चित्र बनाइए या चिपकाइए।

हर दृश्य के नीचे 3-4 पंक्तियों का छोटा वर्णन लिखिए।

सोचिए और लिखिए

1. विचार अभिव्यक्ति

- क्या आज के समय में भी पशु और मनुष्य का प्रेम उतना ही महत्वपूर्ण है और संभव है, जितना कहानी में दिखाया गया है?

☞ अपने विचार 120-150 शब्दों में लिखिए।

2. काव्य खोज गतिविधि

- "रैदास के पद" पढ़कर एक तुलना चार्ट बनाइए जिसमें कवि ने ईश्वर और भक्त की तुलना किन-किन वस्तुओं से की है।
- कवि अपने प्रभु के सिवा किसी और से रिश्ता क्यों नहीं रखना चाहता है ? पाठ के आधार पर अपने विचार लिखें।

नोट: सभी लिखित कार्य A4 साइज़ पेपर पर पूरा करें।