

PRAYAG PUBLIC SCHOOL
Summer Vacation Holiday Homework (2026-27)
Class-9th

Subject: Social Science
Section A: Political Science

Chapter 1: Democracy

Written Work:

- Define Democracy in your own words.
- Explain any five features of Democracy.
- Write the merits and demerits of Democracy.
- Differentiate between Democracy and Dictatorship.
- Why is Democracy considered the best form of government?

Activity:

Make a chart showing the pillars of Democracy:

- Legislature
- Executive
- Judiciary
- Media

Project Work:

Collect newspaper articles related to democracy in India and paste them in a scrapbook.

Chapter 2: Election

Written Work:

- Define Election.
- Explain the importance of elections in a democratic country.
- Describe the election process in India.
- What is Universal Adult Franchise?
- Explain the role of the Election Commission of India.

Activity:

- Prepare a mock election in class/home with:
 - Candidate names
 - Symbols
 - Voting slips
 - Result chart

Map Work:

- Mark the capital of India and your state constituency.

Section B: Geography

Chapter 3: Oceans and Life

Written Work:

- Explain the major features of ocean relief.
- Differentiate between waves, tides, and currents.
- Describe the importance of marine resources.
- What are cyclones and tsunamis?
- Explain the role of international maritime rules.

Diagram Work:

Draw and label:

- Continental Shelf
- Continental Slope
- Ocean Trench
- Mid-Ocean Ridge

Activity:

- Make a poster on "Save Oceans, Save Life".

Project:

- Collect information on any one ocean disaster (tsunami/cyclone) and write a report.

Section C: Economics

Chapter 4: From Idea to Startups

Written Work:

- What is a Startup?
- Explain how ideas are converted into businesses.
- What qualities are needed to become an entrepreneur?

-: Describe the importance of innovation.

-: Write about successful Indian startups.

Activity:

-: Create your own startup idea and explain:

-: Name

-: Product/Service

-: Target customers

-: Benefits

Project:

-: Interview a local business owner and write how their business started.

Creative Assignment:

-: Prepare a Social Science Portfolio including:

-: Cover page

-: Index

-: All written answers

-: Charts

-: Diagrams

-: Projects

-: Newspaper cuttings

-: General Instructions:

Use neat handwriting.

-: Complete work in separate holiday homework notebook/file.

-: Add relevant pictures/maps/charts.

-: Submit after summer vacation.

-: Maintain cleanliness and creativity.

“Learning during holidays helps build knowledge, creativity, and confidence.”

Happy Learning & Have a Productive Summer Vacation!

विषय – हिंदी

- 1 उपसर्ग और प्रत्यय को उदाहरण सहित स्पष्ट कीजिए।
- 2 कृत एवं तद्धित प्रत्यय में अंतर स्पष्ट कीजिए।
- 3 संज्ञा तथा संज्ञा के भेद उदाहरण सहित स्पष्ट कीजिए।
- 4 'रैदास के पद' का भावार्थ लिखिए और याद कीजिए।
- 5 'दो बैलों की कथा' पाठ से संबंधित सभी प्रश्नों को याद कीजिए लिखिए।
- 6 अपनी पाठ्यपुस्तक से संबंधित कवियों एवं लेखकों का सचित्र संक्षिप्त जीवन परिचय एवं उनकी प्रमुख कृतियों को फाइल में लिखिए।
- 7 'एक भारत श्रेष्ठ भारत' विषय पर लगभग 150 शब्दों में एक अनुच्छेद लिखिए।
- 8 आपके क्षेत्र में लगने वाले किसी एक मेले का वर्णन लगभग 200 शब्दों में कीजिए।
- 9 पर्यटन हेतु पिता और पुत्र के बीच संवाद लिखिए।
- 10 अपने किसी भी यादगार यात्रा का वर्णन लगभग 200 शब्दों में लिखिए।

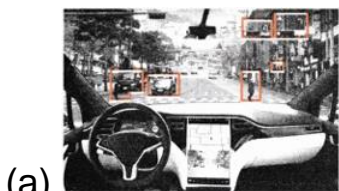
AI

ICT Skills

1. Name the fields where ICT applications are found?
2. What are the advantages of ICT in Education?
3. How ICT can be used in Healthcare?
4. Explain peripheral devices and its types
5. How ICT can be used in education?
6. Write short notes on a) ALU b) CU and c) MU

Introduction to AI

1. How can AI be used as a tool to transform the world into a better place?
2. Can you list down a few applications in your Smartphone that widely make use of computer vision?
3. Draw out the difference between the three domains of AI with respect to the types of data they use.
4. Identify the features and the domain of AI used in them:



5. Separate the following areas based on the kinds of domains widely used in them: (a) Crop productivity (b) Traffic regulation (c) Maps and navigation (d) Text editors and autocorrect (e) Identifying and predicting disease
6. Search for an online game that recognizes the image drawn by you. Write down the observations including the AI domain used by it.
7. Explain chat bots in brief.
8. Why training with information/data is important in Artificial Intelligent devices?
9. Explain how AI works in the following areas (any two): (a) Google Search Engine (b) Voice Assistants (c) E-commerce websites
10. Abash wants to understand why people think Artificial Intelligence is beneficial. Can you explain some of the advantages of AI, especially in areas like healthcare, transportation, and education?
11. What pros and cons of Artificial Intelligence?

AI Project Cycle

1. What are the different stages of AI Project Cycle?
2. Write short notes on a) Problem Scoping b) Data Acquisition c) Data Exploration d) Modeling e) Evaluation
3. Why is there a need to use a Problem Statement Template during problem scoping?
4. What is Problem Scoping? What are the steps of Problem Scoping?
5. Name a few government websites from where you can get open-source data.

English

“Use your time wisely, because time once gone never comes back.”

Q1. Read the passage given below and answer the questions that follow:

India, a land of profound antiquity and cultural opulence, stands as a beacon of diversity and unity. Its traditions, deeply rooted in history, have been passed down through generations like a priceless heirloom. From the spiritual chants along the Ganga River to the vibrant festivals celebrated across villages and cities, India’s culture reflects a harmonious blend of antiquity and modernity.

In recent times, India’s cultural diplomacy has gained global recognition. Countries like Japan and France have shown keen interest in Indian traditions such as yoga, Ayurveda, and classical arts. The celebration of International Yoga Day, embraced worldwide, is a testament to India’s soft power. It is rightly said, “*Old is gold,*” and India has proved this adage by preserving its customs while embracing innovation.

Moreover, recent collaborations between India and United States have highlighted cultural exchange programs, where Indian festivals like Diwali are celebrated with grandeur abroad. These initiatives have put India on the global pedestal, proving that culture knows no boundaries. Truly, India is “*a melting pot of traditions,*” where unity in diversity is not just a phrase but a lived reality.

However, in the fast-paced modern era, there is a growing need to safeguard these traditions. As the saying goes, “*A stitch in time saves nine,*” timely efforts are essential to preserve our heritage. Educational institutions and youth play a crucial role in keeping these traditions alive. By participating in cultural events and understanding their significance, they ensure that the legacy continues.

India’s customs, whether it is touching elders’ feet as a mark of respect or celebrating festivals with zeal, symbolize values of humility and togetherness. These practices not only define India’s identity but also inspire the world. Indeed, India’s culture is not just a relic of the past but a living, evolving force that continues to make the nation proud on the global stage.

1. What does India’s culture mainly represent?

- | | |
|--------------------------|------------------------|
| a) Uniformity | b) Diversity and unity |
| c) Modern lifestyle only | d) Western influence |

2. Which country is mentioned as showing interest in Indian traditions?

- | | | | |
|----------|----------|-----------|-----------|
| a) China | b) Japan | c) Russia | d) Brazil |
|----------|----------|-----------|-----------|

3. What is celebrated worldwide as India’s cultural contribution?

- | | | | |
|---------|-----------|---------------------------|-----------------|
| a) Holi | b) Diwali | c) International Yoga Day | d) Republic Day |
|---------|-----------|---------------------------|-----------------|

4. What does the idiom “*Old is gold*” suggest?

- a) Old things are useless
- b) Old traditions are valuable
- c) Gold is expensive
- d) Change is necessary

5. How does India’s culture make the country proud?

6. Explain the role of youth in preserving Indian traditions.

7. How are foreign countries connected to Indian culture today?

8. India’s culture is only relevant in the past. (True/False)

9. International Yoga Day shows India’s global cultural influence. (True/False)

10. Find a synonym from the passage for “richness”

11. Fill in the blanks:

India is described as a “_____ of traditions.”

12. Explain the meaning of the line:

"India is a melting pot of traditions."

Q2. Read the conversation carefully and complete the blanks given in the passage:

1. Choose the correct options to fill in the blanks to complete the narration of Betty's conversation with Sonu.



Sonu asked Betty. (a) About the news that a great explosion had occurred on the Sun. Betty said that (b) it on TV the day before. Sonu asked(c) the voice of the explosion from the sky.

- (a) (i) if she knew (ii) that she knows (iii) that who knows (iv) if you know
 (b) (i) she had watched (ii) she watches (iii) she was watching (iv) she has been watching
 (c) (i) if she hears (ii) if she had heard (iii) if she has heard (iv) if she was hearing

Q3. Fill in the blanks choosing the most appropriate option from the following:

1. Air pollution not only affects humans, it also (a)on trees, houses and archaeological structures as well. The Taj Mahal, a historical monument, (b)..... danger because of the air pollution. It is a pity that little (c)..... to abate air pollution.

- (a) (i) had bad impacts (ii) had bad impacts (iii) has bad impact (iv) having bad impact
 (b) (i) faces a grave (ii) face grave (iii) faces the grave (iv) facing grave
 (c) (i) being done (ii) was being done (iii) has been done (iv) will be done

2. Mohandas Karamchand Gandhi (a) as 'Mahatma Gandhi or Bapu' was born on 2nd October, 1869. He (b), both in personal force and in political effect. He was an Indian lawyer, politician, social activist and writer who (c) struggle for freedom in India.

- (a) (i) who was popularly known (ii) who has been known (iii) who is being known (iv) who is popularly known
 (b) (i) was undoubtedly a great man (ii) was undoubtedly the great man (iii) is certainly a great man
 (iv) was a great man
 (c) (i) moulded the character of the (ii) moulds the character of (iii) moulded a character of a (iv) moulding character to the

3. The Brahmo Samaj (a) emancipation. The ancient rules of purdah were broken and Brahmo women (b) society; but this was but a false dawn as it was far in advance of popular opinion. As even the educated classes generally showed a disinclination towards the emancipation of their women folk, (c)..... freedom was slow in taking shape.

- (a) (i) led a movement for (ii) led the movement to (iii) led the movement for (iv) leading movement at
 (b) (i) moved freely in (ii) move freely in (iii) moved freely into (iv) were moving freely on
 (c) (i) the movement for their (ii) a movement for her (iii) the movement to their (iv) a movement from her

Q4. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correction in the space provided.

1. Emotion can be describe as an excited state of mind and moving of the feelings in reaction of certain thoughts or stimuli. They could be positive as well as negative. The positive emotions is those when make a person happy.

	Error	Correction
(a)
(b)
(c)
(d)
(e)
(f)

2. In cities throughout the country, there are New direction into local campaign, coverage, Frequently in local elections, journalists are not give Voters enough information for understand

	Error	Correction
(a)
(b)
(c)
(d)

The issue but evaluate the candidates.

(e)

Q5. Rearrange the following word clusters to make meaningful sentences.

1. folk theatre/Gujarat/Bhavai/of/is/the
2. tend to/worry about/most of us/we take/the risks/in life
3. chemical/pure metals/elements/are
4. they/this means/broken down/that/other substances/into/cannot be
5. chemical elements/over hundred/there are/known/metals/about/and/50 of these/are

Q6. Write a notice as the Head Boy of Sunrise Public School, Varanasi, informing students about a Digital Awareness and Cyber Safety Workshop. Include date, time, venue, expert details, importance, instructions, and registration deadline. Ensure proper notice format with heading, date, body, and signature in about 50 words.

Q7. Write a paragraph to describe this personality. Use the verbal cues given below:

Hints:

Born on 18th July 1918 at Mvezo in South Africa Anti-apartheid activistfirst President of South Africacountry's first black head of state served 27 years in prison.....devout believer in democracyreceived awards like Nobel Peace Prize, Bharat Ratna, etc.....died on 5th December 2013.

Q8. Design a poster for Sunrise Public School, Varanasi, to create awareness about "Save Environment – Go Green".

Your poster should include:

- A catchy slogan
- Attractive visuals (trees, earth, etc.)
- Key messages on protecting nature
- Date and venue of the campaign
- Organizer's name (Eco Club of the school)

Make it creative, neat, and impactful.

Q9. You have recently read news reports about the low voter turnout in elections in many parts of India. This shows a lack of awareness and participation among citizens, especially the youth. Write a letter to the Editor of a national newspaper expressing your concern about this issue. Highlight the importance of voting in a democracy and suggest ways to encourage people to participate actively in elections.



Mathematics – Chapter 1 (Number Systems)

Very Short Answer Questions

1. Define a rational number and write any two examples.
2. Define an irrational number and write any two examples.
3. State whether the following numbers are rational or irrational: (a) $\sqrt{16}$ (b) $\sqrt{7}$ (c) 0.333...
4. Is every whole number a real number? Explain.
5. Write three irrational numbers between 5 and 6.
6. Express 0.125 in the form of p/q .
7. Find the decimal expansion of $13/25$.
8. Find the value of $\sqrt{225}$.
9. State whether π is terminating or non-terminating.
10. Write four irrational numbers.

Short Answer Questions

11. Represent $\sqrt{3}$ on the number line.
12. Find five rational numbers between $3/5$ and $4/5$.
13. Find three irrational numbers between 2 and 3.
14. Express 0.875 in the form of p/q .
15. Find the decimal expansion of $11/40$.
16. Simplify $\sqrt{196} + \sqrt{144} - \sqrt{25}$.
17. Simplify $\sqrt{169} - \sqrt{81} + \sqrt{49}$.
18. Find the value of $(\sqrt{7})^2 + (\sqrt{5})^2$.
19. Rationalize the denominator of $5/\sqrt{3}$.
20. Rationalize the denominator of $4/(3\sqrt{2})$.

Moderate Level Questions

21. Prove that $\sqrt{2}$ is an irrational number.
22. Prove that $\sqrt{5}$ is an irrational number.
23. Simplify $\sqrt{72} + \sqrt{32}$.
24. Simplify $3\sqrt{45} - 2\sqrt{20}$.

25. Find the value of $(\sqrt{8} \times \sqrt{18})$.
26. Simplify $(\sqrt{6} + \sqrt{5})(\sqrt{6} - \sqrt{5})$.
27. Find the square root of 0.0049.
28. Arrange the following numbers in ascending order: $\sqrt{2}$, 1.41, 1.414, 1.5
29. If $x = \sqrt{5} + \sqrt{3}$ and $y = \sqrt{5} - \sqrt{3}$, find the value of xy .
30. Rationalize the denominator of $7/(2+\sqrt{5})$.

Higher Thinking Questions

31. Explain why the decimal expansion of $2/7$ is non-terminating recurring.
32. Find two irrational numbers between 7 and 8.
33. Simplify $\sqrt{200} - \sqrt{128} + \sqrt{72}$.
34. Find the value of $(\sqrt{3} + \sqrt{2})^2$.
35. A square park has an area of 225 m^2 . Find its side length.
36. Find the value of: $(\sqrt{5} + \sqrt{7})(\sqrt{5} - \sqrt{7})$
37. Express $0.272727\dots$ in the form of p/q .
38. Find whether $\sqrt{50}$ is rational or irrational.
39. Find three different irrational numbers between 1 and 2.
40. Draw a number line and represent $\sqrt{2}$, $\sqrt{3}$ and $\sqrt{7}$ on it neatly.

Science

Chapters: Motion & The Fundamental Unit of Life (Cell)

1. Define motion. Give one example from daily life.
2. Differentiate between distance and displacement with one example.
3. A car travels 150 km in 3 hours. Calculate its average speed using the formula $v = s/t$.
4. What is acceleration? Write its SI unit.
5. A body starts from rest and attains a velocity of 20 m/s in 5 seconds. Find its acceleration using $a = (v-u)/t$.
6. Draw and explain a distance-time graph for uniform motion.
7. Why is velocity considered a vector quantity while speed is a scalar quantity?
8. Explain why an object moving in a circular path is said to be in accelerated motion even if its speed is constant.
9. Why is the cell called the structural and functional unit of life?
10. Write any four differences between plant cell and animal cell.
11. Name the following organelles and write one function of each: Mitochondria, Nucleus, Vacuole, Chloroplast.
12. Explain the role of mitochondria in cellular respiration and ATP production.
13. How does the plasma membrane control movement of substances inside and outside the cell?

Experiment-Based Questions

14. Experiment – Motion

Aim: To study uniform and non-uniform motion using a toy car.

Materials: Toy car, stopwatch, measuring tape.

Procedure:

1. Mark equal distances on the floor.
2. Move the toy car and record time taken.
3. Compare distance and time values.

Conclusion: State whether the motion is uniform or non-uniform.

15. Experiment – Cell Observation

Aim: To prepare and observe onion peel cells.

Materials: Onion peel, microscope, slide, cover slip, stain.

Procedure:

- | | |
|------------------------------|------------------------------------|
| 1. Take a thin onion peel. | 2. Place it on a slide with water. |
| 3. Add stain and cover slip. | 4. Observe under microscope. |

Conclusion: Write two features observed in plant cells.

1. A student mixes sand, iron filings, and salt in a beaker. Explain the steps and methods by which each component can be separated.
2. Ravi prepared lemonade by mixing sugar, water, and lemon juice. Identify the solute, solvent, and solution. Also mention whether it is a homogeneous or heterogeneous mixture.
3. During a science experiment, muddy water was passed through filter paper. What process is used here? Why does clear water collect below the filter paper?

4. Sea water is heated in a shallow container under sunlight to obtain salt. Name the separation technique used and explain its principle.
5. A mixture contains camphor powder and common salt. Suggest a suitable method to separate them and explain why it works.
6. A shopkeeper accidentally mixed rice grains with small stones. Which separation method should be used at home? Why is this method suitable?
7. Two liquids, kerosene and water, are mixed together in a container. How can they be separated? Name the apparatus used.
8. A student observes that ink spreads uniformly in water. What does this observation tell about the nature of the mixture?
9. Explain with one example how evaporation is useful in daily life for separating substances.
10. A chemist wants to separate different colours present in black ink. Which method should be used? What principle does this method depend on?

Project Work

- Model of plant cell
- Chart on types of motion
- Working model of distance-time graph

Teacher's Instructions

- Complete all work neatly in a separate notebook.
- Draw diagrams using pencil only.
- Submit homework after holidays.