

SUMMER ASSIGNMENTS SESSION 2024-25 CLASS IX

SUBJECT: ENGLISH

Q.1 Write a story beginning as My friends and I were playing in the garden and suddenly......
(120-150 words)

Q.2 Think of yourself as Margie or Tommy in year 2100 in future where the automobiles and vehicles are using electricity or advanced hydrogen fuels and are driven automatically. You have found an old car from 2010 in your grandfather's junkyard. Write a diary entry in around 120-150 words describing features of that car.

Q.3 Read and learn at least 3 new words daily from an english newspaper and write them in notebook with date you learnt them.

Q.4 Write down at least 50 verbs in following format:

Verb	meaning	Past tense	Past participle form

- Q.5 Make a 3-D illustration of the poem "The Road not taken" (use cardboards)
- Q. 6 Revise all the syllabus covered in April month.

कक्षा - नवीं

विषय: हिंदी

1. आप इस ग्रीष्मावकाश में जहाँ भी घूमने जाएँ वहाँ का यात्रा वृतांत चित्र -सहित लिखें।

इसमें निम्नलिखित जानकारी समाहित करें -

- उस स्थान को देखने जाने का उचित समय
- होने वाले खर्च का अनुमान
- ठहरने की जगह
- देखने योग्य स्थल
- आपके शहर व उस शहर के तापमान, प्रदूषण के स्तर, खान-पान व्यंजन, अभिवादन का तरीका आदि में अंतर
- उस शहर की वह बात जो आपको बहुत अच्छी लगी, जो आप चाहते हैं कि आपके भी शहर में हो ।

कहाँ करें -A-4 रंगीन शीट में

कैसे करें -अपनी घूमने की फोटो लगाकर, रंगीन व आकर्षक

2. अपने घर के आस-पास पिक्षयों के लिए उचित स्थान पर दाना पानी रखे। बचे हुए नारियल के खोलों या अन्य सामान से उनके लिए घोंसलों का निर्माण कर के पेड़ों पर लगाए। इन सभी की फोटों खींच कर प्रोजेक्ट फाइल में लगाएँ ऐसा करके आपको कैसा महसूस हुआ अपने स्वानुभव को लगभग 100 शब्दों में लिखें।

कहाँ करें - A-4 शीट में

कैसे करें - सुंदर लेख में, चित्रों के साथ

3. आपकी पाठ्यपुस्तक संचयन में पाठ 'गिल्लू' को पूरा पढ़ें। उसके पश्चात आज के जमाने में पशु पालन उचित या अनुचित विषय पर अपने विचार ट्विट के रूप में लिखिए। (ट्विट संबंधी नियम देखने के लिए आप गूगल का प्रयोग करे।) इस संबंध में लगभग 100 शब्दों में चित्र सहित जानकारी ट्विटर लोगो (Twitter

logo) बनाकर दीजिए।

कहाँ करें –गतिविधि पुस्तिका में

कैसे करें- सुंदर लेख में, रंगीन चित्रों के साथ, चारों तरफ ट्विटर लोगो बनाएं।

4..प्रतिदिन 10 नए शब्द पाठ्यक्रम या समाचार पत्र से गतिविधि पुस्तिका में लेकर वर्तनी अभ्यास करें।

5.नैतिक मूल्यों पर आधारित पंचतंत्र, उपनिषदों आदि की कहानियाँ पढ़ें अवकाश के पश्चात कक्षा में सुनाएँ।



SUBJECT: MATHEMATICS

Instructions:

- * Complete your assignment in assignment copy. * Neat and clean work
- * Date of Submission: 13/06/2024
- A.Make a modal on any one from the following
- 1. Congruency of Triangles- Draw colourful triangles on a sheet of paper and show the congruent triangles by SSS, SAS, ASA and RHS congruency.
- 2. Angle Sum Property of Quadrilaterals Draw a quadrilateral in a paper chart and show its angles with different colours. Draw a circle with those different angles to prove the sum of interior angles of a quadrilateral is 360 degrees.
- 3.Area of Rhombus Draw a rectangle and colour it. Now draw a rhombus inside it with a different colour. Join the diagonals of the rhombus with dotted lines. This model is to prove that the area of a rhombus is equal to half of the product of its diagonals.
- 4. Types of Triangles Model- Draw different types of triangles on the basis of sides and on the basis of angles



SUBJECT: MATHEMATICS

B. Here is a two-player game with rational and irrational numbers. First player will pick either a rational or irrational number along with one of the 4 basic mathematical operations (addition, subtraction, multiplication, division); the second player should pick a number, either a rational or irrational number, so that the answer obtained with the selected operation belongs to the number set other than what is selected by the first player.

E.g.: If the first player selects a rational number and addition, the second player should select a number from the real number set so that adding them results in an irrational number. In the same example, if the first one had selected an irrational number, now the answer should be rational.

Fill in the blanks with the correct numbers to match with the operation, and by obeying the rules of the game.

SI.No.	No. given by Player 1	Number is	Operation	No. selected by Player 2	Answer	Answer is
1	2/3	Rational	÷	√2	$\frac{\sqrt{2}}{3}$	Irrational
2	√36		×			
3	-√21		+			
4	0.15		1-0			
5	<u>8π</u> 5		×			
6	√ <u>225</u>		÷			



CLASS IX SUBJECT: MATHEMATICS

4. Solve the following worksheet in a thin copy

- 1. Explain each of the following in $\frac{p}{a}$ form:
- 2. (i) 0.675(ii) $0.3\overline{2}$ (iii) $0.12\overline{3}$ (iv) $0.003\overline{52}$ (v) $4.\overline{32}$ (vi) 2.317317317....
- Find two irrational numbers and two rational numbers between 0.5 and 0.55
- Simplify each of the following by rationalizing the denominator.
- 5. (i) $\frac{7+3\sqrt{5}}{7-3\sqrt{5}}$ (ii) $\frac{2\sqrt{3}-\sqrt{5}}{2\sqrt{2}+3\sqrt{3}}$ (iii) $\frac{7\sqrt{3}-5\sqrt{2}}{\sqrt{48}+\sqrt{18}}$
- Simplify:- a) $3\sqrt{5} + -\sqrt{5} + \sqrt{180}$
- (b) √54+√150
- Give an example each of two irrational numbers, whose
 - (i) difference is a rational number
 - (ii) difference is an irrational number
 - (iii) sum is a rational number
- (v) product is a rational number
 - (vi) product is an irrational number
 - (vii) quotient is a rational number
- (iv) sum is an irrational number (viii) quotient is an irrational number
- 8. Without actual division decide which of following rational numbers have terminating decimal representation:-

- Examine whether the following numbers are rational or irrat

 $(2 + \sqrt{3})$

- (ii) $\left(\sqrt{2} + \frac{1}{2}\right)$
- - (iv) $(3 + \sqrt{2})(2 \sqrt{3})(3 \sqrt{2})$

- 11. Represent $\frac{8}{5}$ and $\sqrt{20}$ on a number line.
- 12. (a) Represent $\sqrt{5.2}$ on a number line.
- (b) Visualize 0.436 on the number line
- 13. Insert 6 rational numbers between $\frac{-2}{3}$ and $\frac{3}{4}$
- Find two irrational numbers between \$\sqrt{3}\$ and 2.
- 15. Rationalise the denominator of $\frac{1}{1-\sqrt{7}}$
- 16. Given $\sqrt{3} = 1.732$ app., find to three places of decimal the value of $\frac{1+2\sqrt{3}}{2-\sqrt{3}}$
- Find the values of 'a' and 'b' if
- 18. (a) $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a+b\sqrt{3}$
- (b) $\frac{5 + \sqrt{3}}{\sqrt{5} \sqrt{3}} = \frac{1}{2}a + 3b\sqrt{15}$
- Simplify:- (a) 3/√5 √3
- (b) $\frac{2\sqrt{7}}{\sqrt{5} + \sqrt{3}}$
- Evaluate:- a)(390625|6561)^{1/2}
- (b) (1296)^{1/4} x (1296)^{1/2}



CLASS IX SUBJECT: BIOLOGY

ACTIVITY PART

General instructions:

Week 1 activity: Perform the given activities at your home.

Choose any 1 activity and write all observations in your own words.

(Draw a diagram in support of the activity.)

Or

Prepare an educational video on the given activities.(any one)(Make sure your voice and video should be clear.)

Activities:

- 1.Demonstration of osmosis with raisins and apricots.
- 2. Demonstration of osmosis with roots of plant.

WRITTEN PART

Week 2 activity: Complete following experiment in your Biology practical file. Preparation of temporary mount of

(a) onion peel to record observations and draw their labelled diagrams.

Week 3 activity:

- Draw a flow chart/ppt depicting the story of discovery of Cell and Microscope.
- Design a model/poster describing the structure of prokaryotic and eukaryotic cell by using waste things present in the house like buttons, thread, decorative materials, old cards ,wool etc..
- Design the cartoon characters describing the structure and function of various organelles in the cell.

Week 4 activity: Solve the following questions

- Q1. Justify the following statement.
- (a) Earthworm dying on coming in contact with common salt.
- (b) Preserving pickles in salt.
- (c) Aquatic animals using oxygen dissolved in water during respiration.
- Q2. Put a drop of blood in three type of liquids:
- a. Pure water b. Salt solution c. Water

containing 5M glucose and 0.9% NaCl What will happen to the blood drop and why? Explain your answer.

Q3. Living organisms are made of cells. Animal and plant cells have several parts. Each part has a different function. Draw one line from each cell part to the correct function of that part.

CELL PART

Cell membrane

Mitochondria

Nucleus

Mitochondria

Where energy released in respiration

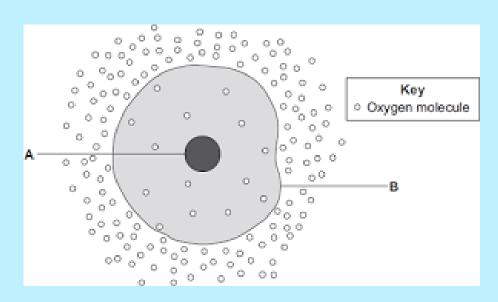
Controls activities of the cell.

Where proteins are synthesized.



CLASS IX SUBJECT: BIOLOGY

Q 4. The diagram shows a cell.



(i) Use words from the given below to name the structures labelled A and B.

Cell membrane, chloroplast, cytoplasm, nucleus

(ii) The cell in the diagram is an animal cell. How can you tell it is an animal cell and not a plant cell? Give two reasons.

(iii)Oxygen will diffuse into the cell in the diagram. Why? (Use information from diagram.)

Week 5 activity:

- During summer vacation, visit the crop field/farm house to understand the technique of-
- Irrigation
- Removal of weeds
- Chemical control of pests
- Cropping pattern etc used by the farmers for crop improvement.

Or

Visit poultry farm and collect photographs of different breeds of chicken and paste in your scrap book.

Or

Visit fish farm and study variety of fishes, feed ingredients and breeding methods used and also understand common problem faced by fish farm.



CLASS IX SUBJECT: CHEMISTRY

Activity part

General instructions:

Week 1 activity:

- Perform the given activities at your home and prepare a video.
- Choose any 2 activities and write it in your own words.
- Draw diagram in support of the activity.

Activities

- 1. To demonstrate that particles of matter have space between them
- 2. To demonstrate that the particles of matter are very small.
- 3. To demonstrate that particles of matter are continuously moving.
- 4. To demonstrate that rate of intermixing increases with temperature.
- 5. To demonstrate the strength of attractive forces between particles of different kinds of matter.

Written part

Week 2 activity:

Complete following experiments in your chemistry practical file.

(LIST OF EXPERIMENTS)

- 1. Preparation of:
- a) a true solution of common salt, sugar and alum
- b) a suspension of soil, chalk powder and fine sand in water
- c) a colloidal solution of starch in water and milk in water and distinguish between these on the basis of
 - transparency
 - filtration criterion
 - stability
- 2. Preparation of a) A mixture and b) A compound

Using iron filings and sulphur powder and distinguishing between these on the basis of:

- (i) Appearance, i.e., homogeneity and heterogeneity
- (ii) Behavior towards a magnet
- (iii) Behavior towards carbon disulphide as a solvent
- (iv) Effect of heat



CLASS IX SUBJECT: CHEMISTRY

Week 3 Activity: Solve the following questions

- Q1. A rubber band can change its shape on stretching. Will you classify it as solid or not? Justify?
- **Q2.**The smell of hot sizzling food reaches you several meters away, but to get the smell from cold food you have to go close. Why?
- Q3. Differentiate between solids, liquids and gases on the bases of packing, compressibility, and Kinetic energy of particles.
- Q4. Name the process which occurs when a drop of dettol is added to water.
- Q5. To which physical state of matter do the following statements apply?
- (i) Incompressible, no fixed shape
- (ii) Compressible, no definite volume
- Q6. In which of the following, the particles have highest forces of attraction? Water, NaCl (solid), ice or, wax.
- Q7.Which of the following represents the correct arrangement of substances arranged in an increasing order of "forces of attraction"

between their particles?

- (a) Water, air, wind. (b) Air, sugar, oil. (c) Oxygen, water, sugar. (d) Salt, juice, air.
- Q8. Fluids have a unique property of flowing. Which of the following statements is correct in this respect?
- (a) Only gases behave like fluids. (b) Gases and solids both behave like fluids.
- (c) Gases and liquids both behave like fluids. (d) Only liquids are fluids.

Week 4 activity:

Use your creativity to design a poster of periodic table up to atomic number 30.



CLASS IX SUBJECT: PHYSICS

- 1, Draw colourful pictures showing different types of motions.
- Suppose you are playing in a park near by your house and observing some of the children enjoying various activity like swing ,see saw, round turn swing slide etc. So on the basis of observation and knowledge express your view in the form of drawing.
- Complete all the assignments in the notebook.
- 2, According to shape of garden, May be circular, rectangular or any other shape take at least three and a half round and calculate distance and displacement.
- 3, Run along the boundary of park and calculate your speed.
- 4. Odometer is a device, which is used to measure the distance travelled by a vehicle. Calculate the average distance travelled by your vehicle during a week.
- 5. Plan to visit a place by your vehicle. Note the readings on the odometer and speedometer after every five minutes till you reach your destination. Record these observations in tabular form.



CLASS IX SUBJECT: PHYSICS

Answer the following questions:

- 1) Under what condition is the magnitude of average velocity of an object equal to its average speed?
- 2) What does odometer of an automobile measure?
- 3) What can you say about the motion of an object whose displacementtime graph is a straight line parallel to the time axis?
- 4) A body thrown in vertically upward direction rises up to a height h and comes back to the position of start. Calculate the total distance travelled by the body and its displacement.
- 5) What is the acceleration of a body moving with uniform velocity?
- 6) A body can have zero average velocity but not zero average speed. Justify.
- 7) A train 100m long is moving with a velocity of 60km/h. Find the time it takes to cross the bridge 1km long.
- 8) A body covers a semicircle of radius 7cm in 5second. Find its velocity.
- 9) Anand is moving in his car with a speed of 45km/h. How much distance will he cover in (i) one minute and (ii) one second?
- 10) It takes 6 minutes for the signal sent by an artificial satellite orbiting around the earth to reach the ground station. Calculate the distance of the artificial satellite from the ground station. The signal travels with the speed of light. $(3 \times 108 \text{m/s})$.
- 11) If a cheetah spots his prey at a distance of 100m, what is the minimum time it will take to get its prey if the average velocity attained by it is 90km/h?
- 12) Walk from one corner of the basketball court to its diagonally opposite corner along its sides. If the basketball court has the dimension of 15mx28m. a. What is the distance covered? b. What is the displacement?
- 13) Draw a velocity versus time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
- 14) A cyclist goes around a circular track of diameter 105m in 5minutes. Calculate his speed and velocity at the end of 7minutes30seconds.
- 15) A girl drove to a hospital from her home and noted the odometer reading of her car increased by 12 km. The trip took 18 minutes. (i) What was her average speed? (ii) If she returned home by the same path 7h30min after she left, what was her average speed and velocity for the entire trip?



- 1. Prepare a project on disaster management
- Topic including:-
- 1. Definition
- 2. What is disaster?
- 3. Disaster management agencies in India
 - a. National Disaster Management Authority (NDMA)
 - b. National Executive Committee (NEC)
- c. State Disaster Management Authority (SDMA)
- d. District Disaster Management Authority
- e. Local Authority
- 4. Types of Disaster management (Natural & Man made)
- A. Natural-Earthquake, Cyclone, Flood & Volcanic disasters
- B. Man Made-Road accidents, Building collapses & Terrorist attacks
- 2) Collect information about 'silk route'. Also find out the new developments which are improving communication routes in the regions of high altitudes
- Do the worksheet in your notebook
- 1. My friend hails from a country which does not share land boundary with India. Identify the country.
- A. Bhutan B. Tajikistan
- C. Bangladesh D. Nepal
- 2. What is the position of India in the world in respect of area?
- A. 8 th Position B. 7 th Position
- C. 6 th Position D. 2 nd Position
- 3. Tropic of Cancer passes through which of these states?
- A. Orissa B. Tripura
- C. Bihar D. Punjab
- 4. Which of the following is the oldest route of contact between India and other countries?
- A. Ocean route B. Maritime contact
- C. Land route D. Air route
- 5. Who is a person who put together land labour and capital?
- A. Money lender B. Entrepreneur
- C. Zamindar D. Manager
- 6. Tina's aunt lives in Sri Lanka. She wants to visit India. Which place will she have to cross to reach India?
- A. Gulf of Mannar B. Palk Strait
- C. Both A and B D. None of these



- 7. High Yielding Variety (HYV) seeds are developed in
- A. Research Institutes B. Factories
- C. Krishak Bharti Cooperatives D. None of the above
- 8. The Green Revolution in the late 1960s introduced the Indian farmers the cultivation of
- A. Wheat and Jowar B. Jowar and Barley
- C. Wheat and Sugarcane D. Wheat and Rice
- 9. The states that were first to try out modern farming methods are:-

IV) Read the source given below and answer the questions that follow:

- A. Punjab, Haryana and Western Uttar Pradesh
- B. Punjab, Haryana and Eastern Uttar Pradesh
- C. Punjab, Haryana, and West Bengal
- D. Orissa, West Bengal and Gujarat
- 10. Which Kharif Crop is used for cattle feeding?
- A. Sugarcane B. Potato
- C. Jowar and Bajra D. Wheat

In Pakistan, General Pervez Musharraf led a military coup in October 1999. He overthrew a democratically elected government and declared himself the 'Chief Executive' of the country. Later he changed his designation to President and in 2002 held a referendum in the country that granted him a five-year extension. Pakistani media, human rights organisations and democracy activists said that the referendum was based on malpractices and fraud. In August 2002 he issued a 'Legal Framework Order' that amended the Constitution of Pakistan. According to this Order, the President can dismiss the national and provincial assemblies. The work of the civilian cabinet is supervised by a National Security Council which is dominated by military officers. After passing this law, elections were held to the national and provincial assemblies. So Pakistan has had elections, elected representatives have some powers. But the final power rested with military officers and General Musharraf himself. Clearly, there are many reasons why Pakistan under General Musharraf should not be called a democracy. People may have elected their representatives to the national and provincial assemblies but those elected representatives were not really the rulers. They cannot take the final decisions. The power to take final decision rested with army officials and with General Musharraf, and none of them were elected by the people. This happens in many dictatorships and

monarchies. They formally have an elected parliament and government but



the real power is with those who are not elected.

In a few countries, the real power was with some external powers and not with locally elected representatives. This cannot be called people's rule.

Answer the following MCQs by choosing the most appropriate option:

What is the meaning of Referendum?

- 1. Direct vote in which the entire electorate is asked to either accept or reject a particular proposal
- 2. A form of government in which the rulers are elected by the people
- 3. A system where the majority or elected representatives are allowed to take decisions on behalf of all the people
- 4. All of these

In the question given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and chose the correct option:

Q Assertion (A): Pakistan not considered a democratic country even after having

elections

Reason (R): Despite elections to the national and provincial assemblies, the final powers rested with General Musharraf and military officers.

- 1. Both A and R are true and R is the correct explanation of A.
- 2. Both A and R are true but R is not the correct explanation of A.
- 3. A is correct but R is wrong.
- 4. A is wrong but R is correct.
- Q After the passage of the _____, elections were held to the national and state assemblies.
- 1. Military rule
- 2. Referendum
- 3. Legal Framework Order
- 4. Both (b) and (c)
- Q Does the given source explain the significance of which feature of democracy?
- 1. Democracy must be based on a free and fair election
- 2. In a democracy, the final decision-making power must rest with those elected by the people
- 3. In a democracy, each adult citizen must have one vote
- 4. Democratic government rules within limits set by constitutional law and citizens' rights



II) Read the source given below and answer the questions that follow:

The Himalayas, geologically young and structurally fold mountains stretch over the Himalayas northern borders of India. These mountain ranges run in a west- east direction from the Indus to the Brahmaputra. The Himalayas represent the loftiest and one of the most rugged mountain barriers of the world. They form an arc, which covers a distance of about 2,400 Km. Their width varies from 400 Km in Kashmir to 150 Km in Arunachal Pradesh. The altitudinal variations are greater in the eastern half than those in the western half. The Himalaya consists of three parallel ranges in its longitudinal extent. A number of valleys lie between these ranges. The northern most range is known as the Great or Inner Himalayas. It is the most continuous range consisting of the loftiest peaks with an average height of 6,000 metres. It contains all the prominent Himalayan peaks The folds of Great Himalayas are asymmetrical in nature. The core of this part of Himalayas is composed of granite. It is perennially snow bound, and a number of glaciers descend from this range.

Questions:

- 1. The Great or Inner Himalayas is also known as?
- 2. Give two features of the folds of Great Himalayas.

Give two features of the Inner Himalayas.



ART INTEGRATED PROJECT

Topic: (Pairing state BIHAR)

General Instructions:

- The project file must be made in A4 size paper.
- The front page should be decorated by hand made drawings as it is art project.
- Pictures, map, graphs, cartoons should be pasted.
- The project should be taken up in eco friendly manner, using available local resources.
- The marks awarded for these projects, as part of subject enrichment activities.
- Project are interdisciplinary, involving as many subjects as language ,Arts, Social science, Science,Maths,Science Drama,Dance etc.
- 1. Front page school name and school logo.
- 2. Students details.
- 3. Acknowledgement.
- 4. Index.
- 5. Introduction about the state Bihar.
- 6. Area size and location.
- 7. Language temples and monuments.
- 8. Development in terms of political economic and social.
- 9. Food festival and culture
- 10. Folk dance and music.
- 11. State famous symbols (animal, bird, Tree, crop, song etc.)
- 12. Wildlife sanctuaries

SUBJECT: ARTIFICIAL INTELLIGENCE

Here, the names of some important Al-enabled systems are given. Write at least two advantages and two ethical concerns related to these systems.

- Biometric system
- Smart Thermostats
- Smart Security System
- Smart Parking System
- Clinical Trial Matching

Rohan wants to interact with Amazon's Echo. However, he doesn't know how the interaction takes place? Can you help him to do the same?

"Automation of jobs can lead to future job loss, insecurity and income inequality". Which ethical concerns related to the implication of AI systems have been discussed here?

Prepare a presentation of any company that uses AI technology:

- Company name and its logo
- Name of owner of the company
- In which product company works
- Head office of company

Worksheet

- Q1. Write any four features of:
- (i) Smart Camera
- (ii) Smart Shoes
- Q2. Write positive impacts of Al on society.
- Q3. How is Al used in the following devices/industries?
- (i) Mobile Phones
- (ii) Automobile industry
- Q4. What can be done to prevent cyber crimes related to e-mails?

Q5. MCQ based

- 1. Which one of the following is an application of AI?
- a. Remote controlled Drone
- b. Self-Driving Car
- c. Self-Service Kiosk
- d. Self-Watering Plant System



SUBJECT: ARTIFICIAL INTELLIGENCE

- 2. This language is easy to learn and is one of the most popular language for AI today:
- a. C++
- b. Python
- c. Ruby
- d. Java
- 3. Which of the following is not a stage in the Al Project Cycle:
- a. Problem Scoping
- b. Data Acquisition
- c. Data Exploration
- d. Prototyping
- 4. This field is enabling computers to identify and process images like humans do:
- a. Face Recognition
- b. Model-view-controller
- c. Computer Vision
- d. Eye-in-Hand System
- 5. What does NLP stand for in AI?
- a. Neutral Learning Projection
- b. Neuro-Linguistic Programming
- c. Natural Language Processing
- d. Neural Logic Presentation Brief