KENDRIYA VIDYALAYA GUNUPUR

AUTUMN HOLIDAY HOMEWORK

Subjects – SST Class-IX

1. Describe the political and economic conditions of Germany after the First World War. How did these lead to the rise of Hitler?

2. Explain the provisions of the Treaty of Versailles and its impact on Germany. Why was it called a humiliating treaty?

3. Discuss the political instability of the Weimar Republic. Why was it unable to gain the confidence of the German people?

4. Explain the effects of the Great Depression (1929) on Germany. How did it help Hitler rise to power?

5. Describe the early career of Adolf Hitler and the formation of the Nazi Party.

6. What were the main features of Nazi ideology? Explain how they justified expansion and war.

7. Discuss Hitler's policies towards women and youth in Nazi Germany.

8. Discuss the role of education in transforming population into human capital. Give examples.

9. Explain the importance of health in the development of human resources.

10. How does unemployment affect the overall economy of a country? Explain with reference to India.

11. Distinguish between disguised unemployment and seasonal unemployment with examples

12. What are the major employment opportunities available in the primary, secondary, and tertiary sectors? Explain with examples.

KENDRIYA VIDYALAYA GUNUPUR
HOLIDAY HOMEWORK
SUBJECT:ARTIFICIAL INTELIGENCE(417)
CLASS:IX

SECTION – A: OBJECTIVE TYPE QUESTIONS

1. Answer any 4 out of the given 6 questions on Employability Skills. (1x4=4marks)

(i) 'Prepare yourself for new changes, so that you can transition seamlessly'. Which term can you relate the given sentence to?

(a) Self-awareness (b) Responsibility
(c) Adaptability (d) Time-management

(ii) _____are computer programs that can damage the data and software programs or steal the information stored on a computer.

(a) Spam (b) Viruses
(b) Junk Mail (d) BIOS

(iii) Which one of the following is Not true for entrepreneurs?

(a) They create needs and demands
(b) They provide raw materials
(c) They do not create jobs
(d) They help society by supporting infrastructure development

(iv) Khushi spends all her after-school hours to practice more and more sample question papers. She wants to score full marks in her exam. This is an example of _____ .

(a) Self-awareness (b) Self-Motivation
(c) Self-Regulation (d) Self-Confidence

(v) Which of the following is Not an element of communication within the communication rocess cycle?

(a) Channel (b) Receiver
(c) Sender (d) Time

(vi) Statement 1: Economic development is using up resources of the world.
Statement 2: This would have serious environmental problems, much worse than those that we are facing at present.

(a) Both Statement 1 and Statement 2 are correct.
(b) Both Statement 1 and Statement 2 are incorrect.
(c) Statement 1 correct and Statement 2 are incorrect.
(d) Statement 1 incorrect and Statement 2 are correct.

2. Answer any 5 out of the given 6 questions. 1x5=5marks)

(i) Identify the incorrect domain-application pair from the following:

I. Data Science: Price Comparison websites
II. Computer Vision: Image Processing Software
III. Natural Language Processing: Alexa
IV. Artificial Intelligence: Spreadsheet

(a) Only (IV)
(b) (I) and (III)
(c) (II) and (IV)
(d) (III) and (IV)

(ii) Unscramble the letters and find the correct answer Machine Learning + _____= Artificial Intelligence.

(a) TRNUALA GNLAGAUE CPSISEROGN (b) UTECPOMR ISOVNI

(c) EPED RIGLENAN (d) URAENL KNWTEOR

(iii) Name the 4Ws of problem canvas under the Problem Scoping stage of the AI Project Cycle. Choose the correct option:

(a) Who, What, Where, Why
(b) Who, What, Where, When
(c) Who, When, Why, Whom
(d) Who, What, Why, Whose

(iv) Which of the following is related to function of layers in a neural network?

(a) Information -> Input Layer -> Output Layer
(b) Bias -> Output layer -> Hidden Layer
(c) Hidden Layer -> Algorithms -> Output Layer
(d) Input Layer -> Output Layer -> Algorithms

(v) What is the main focus of Data Science?

(a) Collecting data from various sources

(b) Analyzing and interpreting the collected data
(c) Developing databases for record maintenance
(d) Only implementing artificial intelligence in data analysis

(vi) Which of the following is the type of data used by NLP applications?

(a) Images (b) Numerical Data
(c) Graphical Data (d) Text and Speech

3. Answer any 5 out of the given 6 questions. 1x5=5marks)

(i) Artificial Intelligence (AI) is a discipline that aims to create robots that are intelligent enough to do jobs that are typically performed by humans only. Identify which of the following aspects is still beyond the capabilities of artificial intelligence.

I. Numerical ability
II. High processing power
III. Emotional intelligence
IV. Speech recognition

(a) (I) and (III) only (b)(II) and (III) only

(c)(I), (II) and (III) (d) Only (III)

(ii) A large number of input features can result in poor performance for machine learning algorithms. Which of the following helps in reducing the number of input features?

(a)Supervised Learning (b) Decision Tree

(c) Classification (d) Dimensionality Reduction

(iii) Companies were fed up of bad debts and losses every year. However, they had a lot of data which use to get collected during the initial paper work while sanctioning loans. They decided to bring in data scientists in order to rescue them from losses. Identify the field of AI application that can be used for the above scenario:

(a) Genetics and Genomics (b) Fraud and Risk detection

(c) Internet search (d) Targeted Advertising

(iv) _____is the process of finding instances of real-world objects in images or videos.

(a) Instance Segmentation (b) Object detection

(c) Classification (d) Image Segmentation

(v) Assertion (A): Siri and Alexa like smart assistants make use of NLP.
Reason (R) : NLP enables technology to process human languages in the form of text or voice data, to understand its full meaning.

(a) Both assertion and reason are correct and reason is the correct explanation for asse tion
(b) Both assertion and reason are correct and reason is not the correct explanation for assertion
(c) Assertion is true but reason is false
(d) Assertion is false but reason is true

(vi) _____is defined as the percentage of correct predictions out of all the observations.

(a) Predictions (b) Accuracy
(c) Reality (d) F1 Score

4. Answer any 5 out of the given 6 questions. 1x5=5marks)

(i) A machine is called an intelligent machine only if it can:

I. Click photos II. Do complex decision-making
III. Do speech recognition IV. Mimic human intelligence

(a) (I) and (II) (b)(II) and (III)
(c) (I), (III) and (IV) (d)(II), (III) and (IV)

(ii) Recall-Evaluation method is

(a) Defined as the fraction of positive cases that are correctly identified.
(b) Defined as the percentage of true positive cases versus all the cases where the prediction is true.
(c) Defined as the percentage of correct predictions out of all the observations.
(d) Comparison between the predictions and reality.

(iii) A _____refers to a system that is capable of predicting the future preferences of a set of items for a user, and recommending the top items.

(a) Targeted advertising (b) Recommender System (RS)
(c) Route Planner (d) Digital Advertising

(iv) _____is the task of assigning an input image one label from a fixed set of categories.

(a) Image Classification (b) Localisation
(c) Object Detection (d) Instance Segmentation

(v) Identify the type of chatbot with the information given below
These bots work on pre-programmed instructions inside the application/machine and are generally easy to develop. They are deployed in the customer care section of various companies. Their job is to answer some basic queries that they are coded for and connect them to human executives once they are unable to handle the conversation.

(vi) Which of the following statements is Not true about overfitting models?

(a) This model learns the pattern and noise in the data to such extent that it harms the performance of the model on the new dataset.
(b) Training result is very good and the test result is poor
(c) It interprets noise as patterns in the data
(d) The training accuracy and test accuracy both are low

5. Answer any 5 out of the given 6 questions. 1x5=5marks)

(i) Which of the following best describes Machine Learning (ML)?

(a) A technique that enables machines to understand and respond to human voice commands
(b) A subset of AI that allows machines to improve their accuracy through experience
(c) A technology that designs neural networks for AI
(d) A method to create intelligent machines without using data

(ii) What will be the outcome, if the Prediction is "No" and it does not match with the Reali y? What will be the outcome, if the Prediction is "Yes" and it does not match the Reality.

(a) True Negative, False Negative
(b) False Negative, False Positive
(c) True Negative, False Positive
(d) True Positive, False Positive

(iii) Which of the following is Not a task of computer vision?

(a) Guest Recognition (b) Airline Route Plan
(c) Attendance System (d) Snapchat Filters

(iv) Ayushi was learning about NLP. She wanted to know the term used for the whole textual data from all the documents altogether. Help her in identifying the term used for it.

(v) A corpus contains 12 documents. How many document vectors will be there for that corpus?

(a) 12 (b)1
(c) 24 (d)1/12

(vi) Assertion (A): The confusion Matrix is a performance measuring technique for an AI model.
Reason (R) : The confusion Matrix lists the predicted value of an AI Model and the actual / correct outcome values.

(a) Both assertion and reason are correct and reason is the correct explanation for asse tion
(b) Both assertion and reason are correct and reason is not the correct explanation for assertion
(c) Assertion is true but reason is false
(d) Assertion is false but reason is true

SECTION – B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills.(2x3=6 marks) Answer each question in 20-30 words.

6. Discuss any two barriers of effective communication.
7. How does meditation help in managing stress? Discuss briefly.
8. Enlist any two methods to protect our data on the computer.
9. "Entrepreneurs are born, not made." Do you agree with this statement? Justify your answer.
10. Sustainable development can actually happen only when each one of us works towards it. Mention any four ways which we can do at our end to reduce inequality.

11. Create a 4W project Canvas for the following: (4)

As more and more new technologies get into play, risks will get more concentrated into a common network. Cybersecurity becomes extremely complicated in such scenarios and goes beyond the control of firewalls. It will not be able to detect unusual activity and patterns including the movement of data.

Think how AI algorithms can scrape through vast amounts of logs to identify susceptible user behaviour. Use an AI project cycle to clearly identify the scope, how you will collect data, model and evaluation parameters.

KENDRIYA VIDYALAYA GUNUPUR

HOLIDAY HOMEWORK

Subjects – Science (Subject code:086)

Class-IX

Physics

1. Define velocity and acceleration. How are they different?

2. A car moves with a uniform velocity of 20 m/s for 10 seconds. Find the distance travelled.

3. State Newton's first law of motion with one example.

4. Write the equation of motion for uniform acceleration.

5. What is momentum? State the law of conservation of momentum.

6. Differentiate between mass and weight.

7. A stone is thrown vertically upward with a velocity of 15 m/s. Calculate the maximum height reached. ($g = 9.8\ m/s^2$)

Chemistry

1. Define matter. List its physical states.

2. Differentiate between elements, compounds, and mixtures?

3. What is a solution? Write its characteristics?

4. Define solute, solvent, and concentration of solution with examples?

5. Explain the term "suspension" and list any two of its properties?

6. What is a colloid? Explain any two examples of colloids used in daily life?

7. Name the different types of colloids based on the physical state of dispersed phase and dispersion medium?

Biology

1. Define the cell. Why is it called the structural and functional unit of life?

2. Differentiate between prokaryotic and eukaryotic cells?

3. What are plastids? Mention their types and functions?

4. Explain the structure and function of mitochondria?

5. Define osmosis. How is it important in plants?

6. What is tissue? Name the different types of plant tissues?

7. Differentiate between xylem and phloem?

8. Write two functions of:

(a) Red blood cells

(b) White blood cells

(c) Platelets

KENDRIYA VIDYALAYA GUNUPUR
AUTUMN BREAK HOLIDAY HOMEWORK
CLASS – IX SUBJECT – MATHS

Number Systems

1. Aman claims that all non-terminating decimals are irrational numbers. Is he correct? Justify your answer by giving suitable examples and reasoning.
2. There are two bottles of juice; one contains 2.75 L and the other 2.759759..... Which bottle contains a rational amount of juice? Explain by referring to their decimal expansions.
3. Your friend challenges you to find an irrational number between 3 and 4. How will you construct such a number? Describe a method with a specific example.

Polynomials

1. Two gardens have boundary lengths represented by polynomials $4x + 6$ and $5x + 3$, where x is the number of units. If both gardens together have a boundary of 50 units for $x = 4$, set up the equation and solve for x. Is your answer reasonable in context?
2. The area of a plot is given by $x^2 + 6x + 9$ square meters, where x is the length in meters. Explain how algebraic identities help in simplifying this expression, and find an alternative representation using the identity.
3. The polynomial $p(x) = x^3 - 3x^2 + 2x$ represents the profit for selling x items. For which value(s) of x will the profit be zero? Explain how you arrive at your answer.

Coordinate Geometry

1. Imagine a city with roads forming a coordinate grid. If a hospital is at (2,5) and a fire station is at (2,1), what is the shortest route between them using grid units? Use the concept of distance and explain your steps.
2. A travel company uses coordinates to plan trips. If a bus moves from (2,3) to (5,7), explain how to find the change in its east-west and north-south travel distance separately.
3. Design a seating arrangement for a classroom using coordinates, ensuring that no two students have the same pair of coordinates and every seat is filled. Explain your criteria.

Linear Equations in Two Variables

1. The temperature of a chemical solution is controlled by mixing hot and cold water. If the temperature T can be modeled by $T = 2x + 3y$, where x and y are liters of two solutions, set up two scenarios to achieve $T = 24$. Solve for x and y and interpret both solutions.
2. A family spends Rs. 50 on fruits and vegetables where the cost of fruits is twice that of vegetables. Formulate the situation as a linear equation in two variables and solve for the expenditure on both.
3. The sum of two numbers is 18, and their difference is 4. Frame the situation as a pair of linear equations and find the two numbers. Justify each step using algebra.

Introduction to Euclid's Geometry

1. Euclid's postulates are used in map-making. Explain which postulates are applied when drawing boundaries between adjacent fields, and justify their real-world significance.
2. Given three towns at the vertices of a triangle, a road must be laid such that all towns are connected. Use Euclid's definitions to explain how the minimum network is related to geometric concepts.
3. The bricks of a building have the ratio of length, breadth, thickness as 4:2:1. How does this relate to geometric reasoning and mensuration? Discuss using concepts from the chapter.

Lines and Angles

1. An architect planning a bridge draws two lines representing roads that will intersect. If the intersection creates vertically opposite angles, prove how these angles are helpful for construction design.
2. Analyze whether it is possible for two adjacent angles formed by a ray standing on a line to add up to less than 180°. Justify your answer using axioms from lines and angles.
3. Prove, using reasoning, that if two lines are parallel to the same line, they are parallel to each other. Give a real-life example of where this property is used.

Triangles

1. A manufacturer wants to create triangular plates congruent to each other for assembling a structure. List which criteria of triangle congruence will ensure the plates fit perfectly, and justify why others do not.
2. Your friend constructs two triangles with sides 4 cm, 5 cm, and 7 cm and claims they are congruent. Examine and explain whether the claim is valid using SSS congruence criterion.
3. In an isosceles triangle, the altitudes drawn to the equal sides are also equal. Explain why this is true and discuss its application in engineering.

Instructions for Mathematics Portfolio (Class IX)

1. **Cover Page**
   - Design an attractive cover page with the title *Mathematics Portfolio – Class IX*.
   - Mention your name, class, section, roll number, academic year, and school name (*Kendriya Vidyalaya Gunupur*).
2. **Basic Details (First Page)**
   - Name:
   - Class & Section:
   - Roll Number:
   - Admission No.:
   - Your Hobby:
   - You can add more points.
3. **Index Page**
   - Prepare an index mentioning all contents of your portfolio in order with page numbers.
4. **Mind Maps of Chapters**
   - Draw *neat mind maps* (handwritten) for **each Mathematics chapter taught** till the current date.
   - Each mind map should include:
     - Key concepts and formulas
     - Important theorems/properties
     - Applications in daily life (wherever possible)
   - Use diagrams, colors, and arrows to show connections and make them visually clear.
5. **Mathematical Creativity**
   - At the end of the mind maps, add *1 page of creativity* (for example: math art, number patterns, puzzles, or any math-related activity you enjoy).
6. **Neatness & Presentation**
   - Use only A4 size sheets (ruled or plain).
   - Maintain **good handwriting, proper margin, and clear diagrams**.
   - Avoid overwriting—use black/blue pen for writing and colored pens/pencils for highlighting.
7. **Submission**

The completed portfolio should be submitted in a **spiral binding/file** on the very first date of opening your school after Autumn Break.

केन्द्रीयविद्यालयः गुणपुरः

कक्षा – नवमी - 9 विषय- संस्कृतम्

अवकाश-गृहकार्यम् 2025-2026

संस्कृत विषय का 10 दिवसीय अवकाश गृहकार्य -

प्रिय छात्र/छात्राएँ,

कृपया निम्नलिखित कार्य को अपनी नोटबुक में पूरा करें:

1. प्रतिदिन एक धातु रूप लिखें और उसका अभ्यास करें। (syllabus के आधार से)
2. निम्नलिखित शब्द रुप अभ्यास -

   कवि, लता, नदी,किम्, अस्मद्, युष्मद्, भवत् , तद्,एतद्
3. माध्यमिकी परीक्षा के प्रश्नपत्र अपने खाते पर हल करें ।
4. माध्यमिक परीक्षा के प्रश्नपत्र अपने खाते में हल करें ।

पीएमश्री केंद्रीय विद्यालय ढेंकानाल।

शरदकालीन अवकाशीय गृहकार्य

कक्षा – नवी विषय हिंदी

1.पाठ– " ल्हासा की ओर" पढ़िए।

इसमें यात्रा-वर्णन की विशेषताओं को लिखिए।

अपने जीवन की किसी छोटी यात्रा का संक्षिप्त यात्रा-वृत्तांत लिखिए (100 शब्दों में)।

2.पाठ– " प्रेमचंद के फटे जूते"

पाठ का सारांश लिखिए।

अपने घर या समाज से जुड़ा कोई हास्यप्रद प्रसंग लिखिए, जिसे पढ़कर लोग मुस्कुरा उठे|

3.कविता – " कैदी और कोकिला" (माखनलाल चतुर्वेदी)

कविता का एक चित्रात्मक पोस्टर बनाइए जिसमें चित्रों के माध्यम से अर्थ स्पष्ट हो।

4. अलंकार परिचय

(अनुप्रास, यमक और श्लेष) की परिभाषा और पाँच-पाँच उदाहरण लिखिए।

5.वाक्य परिभाषा एवं भेद लिखिए।

प्रत्येक के 5– 5 उदाहरण बनाइए।

6..I.निम्न विषयों पर अनुच्छेद लिखिए:-

ओजोन दिवस

संकेत बिंदु:-

ओजोन परत का महत्व

इसे बचाने की ज़रूरत

विद्यालय/समाज में गतिविधियाँ

" बचाएँ ओजोन – बचाएँ जीवन" संदेश

ii. स्वच्छ भारत अभियान

संकेत बिंदु :-

अभियान का उद्देश्य

सफाई की स्थिति पहले और अब

विद्यार्थियों की भूमिका

“ जहाँ स्वच्छता, वहाँ स्वास्थ्य”

7 अपने शरदकालीन अवकाश के अनुभव को लिखिए।

KENDRIYA VIDYALAYA GUNUPUR

AUTUM – BREAK HOME WORK

CLASS – IX

ENGLISH

Activity 1 : Reading skill

Read the following passage and answer the following questions.

SO, YOU WANT TO BE A CARTOONIST?

What writers struggle to express through numerous newspaper columns, the cartoon manages in a pointed one-liner. Little wonder then, that the first thing most of us like to see when we pickup a newspaper is the cartoon. Simple though it may seem, making a cartoon is an art that requires a combination of hard work, training and a good sense of humour. Cartoonists say that the cartoons that make us laugh the most are in fact the cartoons that are hardest to make. Even celebrated cartoonists like R.K.Laxman admit that making a cartoon is not a piece of cake. Laxman says he has to wait for over six hours, which includes spending a lot of time scanning newspapers and television channels before any idea strikes him.

So how does one become a cartoonist? Which of us has the talent to make it? How can we master the rib-tickling strokes and the witty one-liners? How can we make people smile or laugh? There are few colleges or schools for cartoonists. Most cartoonists come from art colleges, while some learn the craft on their own. Most established cartoonists are of the view that no institute can teach you to make a cartoon. "You can pick up the craft, you may learn to sketch and draw in institutes, but no one can teach anyone how to make a good cartoon," says Uday Shanker, a cartoonist with Navbharat Times. While basics, like drawing and sketching can be learnt in an art college, and are important skills, these alone, do not make a good cartoonist. Because it's a question of one's creativity and sense of humour; two qualities one simply may not have. The advice established cartoonists give is that just because you can sketch, don't take it for granted that you will become a cartoonist. Read the questions given below and write the option you consider the most appropriate in your answer sheet.

(a) What, according to Laxman, is the challenge in creating a good cartoon?

(i) waiting for the right thought and television. (ii) browsing newspapers to emerge.

(iii) getting the right kind of skills. (iv) good drawing and sketching training.

(b) Which of these words BEST describes this passage?

(i) humorous (ii) technical

(iii) challenging (iv) informative

(c) Of the many qualities that cartoonists should have, which of the following is not referred to directly but can be inferred from the passage?

(i) knowledge of current institutions. (ii) knowledge of educational technologies.

(iii) knowledge of news and languages. (iv) knowledge of different current affairs.

(d) According to the passage, which group of people is of the opinion that one cannot learn to make a cartoon in institutions?

(i) many struggling writers. (ii) highly creative artists.

(iii) well-respected cartoonist. (iv) all newspaper editors.

(e) "Don't take it for granted that you will become a cartoonist." Choose the option that is closest in meaning to the sentence.

(i) Don't assume that you will become a cartoonist.

(ii) Don't hope that you will become a cartoonist.

(iii) Don't believe that you will become a cartoonist.

(iv) Don't imagine that you will become a cartoonist.

ACTIVITY 2 : WRITING SKILL

a) COMPOSE A POEM OR WRITE A SHORTDESCRIPTIVE PARAGRAPH:

*Compose a poem or write a short descriptive paragraph using similes and colourful expressions.

Choose ONE of these themes: Waves, Stars and Moon, Rocks, Sunset or Sunrise.

b) DIARYENTRY:

A. An emotional moment with your grandparents
B. Any elderly person you love and respect the most

ACTIVITY 3 : GRAMMAR

a) Look at the words and phrases given below in jumbled form. Re-arrange them to Form meaningful sentences. The first one has been done as an example.

1. e.g.: Wheel is/ Human beings'/ inventithe/ greatest.

The wheel is human beings' greatest invention.

A. People/ Carried/ their belongings/ backs/ on their/ earlier
B. Their life/ very adventurous/ made/ wheel/ easy/ and
C. like to/travel/ distances/ people now-a-days/ long/ enjoy life/ and
D. So much/ man/ his/ country/ did/ other/ ever/ for/ as he/ no

E. the world/ speak/ Alfred/ people/ of/ all over/ the great/ now/ as/ him
F. have/ life/ in/ easy/ those/ did/ not/ very/ days/ a/ a king
G. all/ there/ time/ was/ almost/ war/ the

1. The following passage has not been edited. Edit the passage by choosing the appropriate option from the brackets. Write the correct word in your answer sheet as given in the example :

	Incorrect word	Correct word
Like all insects, ants has (had, have, having) six legs.	**Eg**. has	have
Each leg has three joint.(Joint , joints , joined)	**a.**_____	_____
The legs of the ants is (was, are, were) very strong	**b.**_____	_____
so that they can ran (runs, running, run) very quickly.	**c.**_____	_____
Ants can lift 20 times of there (their, his, hers) own body weight.	**d.** _____	_____

2. There is a mistake in each line in the passages given below. Find out the error and write both the error and the correction:

	ERROR	CORRECTION
A. The students of the present generation madly ran after	a) ----------	----------
Mobile phones. They knew its different functions and apps.	b) ----------	----------
During Chennai floods, technology is of great help.	c) ----------	----------
People could communicate with each other and help a needy.	d) ----------	----------

	ERROR	CORRECTION
B. Ram was a naughty boy that lived	(a) _____	_____
in the village of Tenali. Her Principal	(b)_____	_____
advised him one day and he realize	(c)_____	_____
his mistake and study very hard.	(d)_____	_____

Note:

1. **Complete your Holiday Homework in the English HOMEWORK notebook.**
2. Each Activity should be started in a new page of your notebook.