SUMMER HOLIDAY HOMEWORK

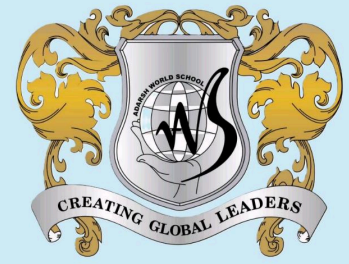## CLASS- IX

VACATION

LEARNING

FUN

ADVENTURE

Dear Parents,

As the holiday break approaches, it presents an opportune time for students to unwind, rejuvenate, and spend meaningful moments with family. It is also a period that can be thoughtfully utilized to reinforce learning and cultivate essential skills beyond the confines of the classroom.

The holiday homework has been meticulously designed to promote independent learning, critical thinking, and creative expression. The assignments aim to integrate scholastic concepts with reallife applications, thereby fostering a deeper understanding and appreciation of the subjects. These tasks include a balanced blend of reading, research-based exploration, experiential learning, and reflective writing, all aligned with the overall educational objectives of holistic development.

We earnestly request your cooperation in motivating and monitoring your child's academic engagement during the break. Your support plays a pivotal role in encouraging self-discipline, responsibility, and a positive attitude toward learning. Kindly ensure that the work is completed with sincerity and originality, and that the process remains stress-free and enjoyable.

Let this holiday be a time not only for rest and recreation but also for meaningful intellectual engagement and personal growth.

With warm regards
Adarsh World School

ENGLISH	1. Describe your daily routine in a diary entry, including activities, challenges, and emotions experienced. Reflect on how these aspects affect your well-being and academic performance. 2. Describe a person who has had a significant impact on your life. This could be a family member, friend, teacher, or someone else who has influenced you. Consider their physical appearance, personality traits, and the role they play in your life. 3. Describe a cherished object and why it holds significance for you. 4. Describe a memorable experience and its impact on you. 5. Read any novel and write a review in your own words. (Use an A4-sized sheet for all the above assignments.) 6. Design a handwritten travel brochure for 'Sikkim'. The brochure should feature a colourful cover page and consist of a minimum of 4 sides. Each picture included in the brochure should have a caption explaining or elaborating on the image. You can cover details such as location, transportation options (by bus, train, or plane), best time to visit, local activities and festivals, cuisine, and two significant historical sites. (Use A4 size sheets for the brochure activity.) 7. Complete the given worksheet on A4 sheets.
HINDI	1- वर्कशीट का प्रिंट निकाले व किए हुए प्रश्नों को हल करे । 2- सिक्किम के पर्यटन स्थलों को दर्शाते हुए A4 रंगीन शीट पर सुन्दर विज्ञापन बनाएं । 3- निम्नलिखित हिंदी उपन्यास पर आधारित फिल्मों के विषय में A3 साइज की काली रंग की शीट पर चित्र सहित संक्षेप में लिखें। IX A रोल न. 1-10 (देवदास) रोल न. 11-20 (तीसरी कसम) रोल न. 21-30 (गोदान) रोल न. 31-43 (नदिया के पार) IX B रोल न. 1-10 (गबन) रोल न. 11-20 (आलम आरा) रोल न. 21-30 (तमस) रोल न. 31-43 (शतरंज के खिलाड़ी)
SCIENCE	(EACH STUDENT MUST INDIVIDUALLY) Prepare an A2-size science poster on the theme" Sikkim: India's First Organic State — A Living Lab of Sustainable Science" integrating the concepts of Physics, Chemistry and Biology. Design a poster showcasing the significance of Physics, Chemistry,Biology in Organic Farming. EXAMPLE- BIOLOGY IN ORGANIC FARMING (Microorganisms and Soil Health, Plant Physiology, Biodiversity, Pest Control) EXAMPLE- CHEMISTRY IN ORGANIC FARMING (Chemical Composition of Organic Fertilizers, Soil pH and Nutrient Availability, Decomposition Reactions, Avoiding Synthetic Chemicals) EXAMPLE- PHYSICS IN ORGANIC FARMING (Energy Flow , Irrigation Techniques , Tools and Machinery Thermal Properties) CHEMISTRY- 1) Complete the worksheet in your Chemistry register. 2) Roll No. 1-14 : Make an individual Model on any topic of your choice - 3D model showing particle arrangement in solids, liquids, gases, Separation Techniques in Daily Life (filtration, sedimentation, decantation), Physical vs Chemical Change , Tyndall effect in colloids.

	PHYSICS– **1)** Complete the worksheet in your Physics register. **2)** Roll No. 15-28 : Make an individual Model on any topic of your choice - Types of Forces(contact/ Non-contact), Newton's Third Law Model, Model depicting circular motion , Law of Inertia, Uniform Vs Non- Uniform motion. **BIOLOGY–** **1)** Complete the worksheet in Biology register. **2)** Roll No. 29-43 : Make an individual Model on any topic of your choice - 3D Plant cell / Animal Cell, Cell Organelle Functions Display, Types of Plant tissues model, Xylem and Phloem tissue model, DNA and Cell Nucleus Model
MATHEMATICS	**1)** Make a chart on Title : "Exploring Sikkim through Mathematics"(You can integrate geography, population, tourism, and economy using mathematical concepts like graphs, statistics, geometry, and data handling.) **2)** Make a model (or working model) on any of the topic related to your Mathematics NCERT book (like formula detector on surface area and volume. Pythagoras Theorem, Square root spiral, geometry or any other topic of your interest). **3)** Do the assessment worksheet in your Mathematics notebook. **4)** Make a portfolio on the topic : "Pythagoras theorem in real life" . (The portfolio should be of 8-10 pages, should have relevant pictures and should be well decorated).
ARTIFICIAL INTELLIGENCE	1. Complete the Worksheets of Unit 1 and Unit 2 in your AI Notebooks. 2. Complete the Python programs as per your roll numbers and submit them in a Report File. 3. Create a working model according to your roll numbers as follows: **Roll No 1-11** Topic : Digital Calculator (Eg: Create a cardboard calculator with flip cards or sliding numbers to simulate basic math operations and show digital calculations.) **Roll No. 12-22** Topic : Impact of AI on Farming (Eg: Create a cardboard farm with labeled zones to show how AI helps in watering crops, detecting pests, and predicting weather for smarter, efficient farming.) **Roll No. 23-33** Topic: AI Chatbot (Eg: Design a cardboard mobile or laptop with question-answer cards to demonstrate how AI chatbots respond using preset replies, mimicking natural conversation.) **Roll No. 34-43** Topic: AI Traffic Light System (Eg: Build a model road with toy vehicles and colored lights to show how AI adjusts traffic signals based on vehicle count, improving traffic flow and safety.)

SOCIAL STUDIES	**1. On an outline map of India locate and label the following -** • **Mountain and Hill ranges - Karakoram, Zaskar, Vindhya, Jaintia, Patkai Bum, Aravali, Cardamom Hills** • **Peaks - Anai Mudi, K2, Nanga Parbat, Kanchenjunga** • **Plateau - Malwa, Chhotanagpur** • **Indian Desert, Ghats (Eastern and Western), Islands (Lakshadweep and Andaman & Nicobar)** *(Note : Kindly use one map for each and paste in your geography notebook.)* **2. Read Ch-2 of History, Geography, Economics and Political Science and complete the attached worksheets and paste in your SST notebook. Learn the P.A. 2 Syllabus as well.** **3. Explore and create a model how India's tribal communities contribute to the conservation of vegetation and wildlife through traditional knowledge, cultural practices and sustainable living according to your roll numbers.** **I. Tribal Village Diorama (Roll No. 1-7)** *Show the structure of a traditional tribal settlement* • **Huts made of mud and thatch, fireplace or meeting area, trees & forests.** • **People practicing farming, weaving or dancing, Domestic animals.** **II. Forest Ecosystem and Tribal Dependence (Roll No. 8-14)** *Display how tribal people depend on forests* • **Forest with labelled trees (teak, mahua, bamboo) and shelter.** • **Tribal person collecting firewood, honey, fruits, herbs, food, fuel.** **III. Interactive Map Model of Tribal Areas in India (Roll No. 15-21)** *Learn geography and distribution of tribal groups* • **Pins or flags marking tribal belts (e.g., Gond in MP, Santhal in Jharkhand).** • **Tribal names, language, customs, and forests they inhabit.** **IV. Layers of a Forest Model (Vertical Cross-section) (Roll No. 22-28)** *Show forest structure and types of vegetation at different levels* • **Forest floor → Shrub layer → Understory → Canopy → Emergent layer.** • **Animals and birds in their appropriate levels with proper tags.** **V. Wildlife Corridors and Conservation Model (Roll No. 29-35)** *Explain the importance of connected habitats* • **Corridors for elephants, tigers and Barriers: roads, farms.** • **Solution: Green bridges, underpasses.** **VI. Deforestation & Displacement Model (Roll No. 36-45)** *How tribal lives are affected by deforestation or development projects.* • **Split base: Tribal village v/s Industrial project (dam/mining)** • **Tribal people forced to move** **4. Discover the Land of Pristine Beauty and Harmony - Sikkim. Design a Collage highlighting the following aspects on A-3 size sheet.** • **Mesmerizing Geographical Features** • **Flavours of Sikkim (Food) and Weaving Stories (Handicrafts)** • **Vibrant Festivals, Cultural and Religious Beliefs** • **Tourism - Fueling the Economy** • **Green Champion - Sustainable Practices** **5. Explore the untold stories of Trees, Tribes and Rulers! Create an interdisciplinary project that blends your knowledge and creativity according to your Roll Numbers -**

	Roll No. (01-09)- <u>Impact of Colonial Forest Policies on Tribal Life</u> • **Introduction to forest-dwelling communities** • **Traditional forest use and livelihoods** • **Colonial forest laws and restrictions** • **Forced migration and labour (plantations, railways)** • **Resistance and rebellion by tribes** • **Lasting effects on tribal culture and economy** **Roll No. (10-18) -** <u>Scientific Forestry vs Traditional Knowledge</u> • **What is scientific forestry?** • **Origins and aims of British forest policies** • **Traditional forest management practices of tribes** • **Conflicts between colonial officials and local people** • **Environmental impact of British forest policies** • **Relevance of traditional practices today** **Roll No. (19-27) -** <u>Forests and the Making of the Colonial Economy</u> • **Forests as a resource: timber, rubber, etc.** • **Use of timber for ships and railways** • **Plantation economy: tea, coffee, and rubber** • **Role of tribal labour in plantations** • **Export of forest resources to Europe** • **Impact on Indian economy and environment** **Roll No. (28-36) -** <u>Forest Rebellions and Tribal Resistance</u> • **Reasons behind tribal discontent** • **Famous revolts (e.g., Bastar Rebellion, Santhal Uprising)** • **Leadership and participation in rebellions** • **British response and suppression tactics** • **Role of oral traditions in preserving memory** • **Legacy of tribal resistance in modern India** **Roll No. (37-45) -** <u>Case Study: Forest Movements in India and Java</u> • **Overview of forest control in India and Java** • **Dutch forest policies in Java vs British in India** • **The Saminist Movement in Java** • **Tribal movements in India (E.g. Bastar)** • **Comparison of resistance methods** • **Common themes and outcomes** *Instructions :* <u>*FORMAT OF PROJECT FILE*</u> • ***Cover Page -*** *Project Title, Student's Name, Class & Section, Roll Number, Subject: Social Science – History, School Name, Academic Year* • ***Acknowledgement -*** *Briefly thank those who helped (teacher, parents)* • ***Certificate -*** *A declaration that the project is the student's original work.* • ***Index -*** *List of topics/sub-headings with page numbers* • ***Introduction -*** *A short paragraph introducing your topic and its importance* • ***Main Content (Sub headings) -*** *Use factual information, pictures, maps, diagrams, timeline, Speeches, Newspapers and explanations.* • *Case Study / Examples - Add real or historical examples* • ***Conclusion -*** *Summarize your findings and learnings.* • ***Bibliography -*** *List of sources you used (books, websites, newspapers)* <u>*CONTENT & PRESENTATION*</u> • *Project should be hand written and well formatted* • *Use A4-size sheets (Prefer White)* • *Do not use Red Pen/Sketch in the file* • *Highlight headings and subheadings for clarity* • *Content should be concise and relevant* • *Submit the original work only*
<u>ART EDUCATION</u>	1.Make a A3 Size Panting of Krishna of any style given in bracket (Gond art, madhubani, rajasthani style,Kalamkari,) 2. Make a beautiful Mandala art of Sikkim on size A3 3. Draw and complete pages of book on file from 17-29

Q1. Read the following passage and answer the following questions.

Necessity, they say, is the mother of invention. And Indian doctors have been quite creative when hamstrung by few or no tools to perform specific surgeries. They simply design it themselves at one-fourth the price they are sold abroad. In fact, some of their innovations are priced at as much as hundreds of dollars abroad.

Take 47-year-old Dr Burjor P Banaji, pioneer of Lasik surgery in India. He's invented over a dozen surgical instruments. When this senior eye surgeon at Max Eye Care started Lasik, there were few surgeons doing it worldwide and no specific instruments were available either. "As I want things super-perfect, I designed a whole slew of instruments that made my surgery more efficient," says Banaji. The most popular instruments are Banaji Lasik Shield and Banaji Lasik Spatula and Canulae. "It was simple. I had the designs in my head. Putting them down on paper was the simplest thing," he says. Instruments manufacturers and large multinationals in the US snapped them up. "They would send me computer generated drawings which I would correct and send back. Their level of execution was astounding. Within two weeks of the designs being finalised, the instruments were in the world market."

His instruments are priced at hundreds of dollars each in the US, and are also sold in Switzerland, South America, Korea, Eastern Europe, Africa and Japan. They're available in India at a fraction of the price.

Write the option that you consider the most appropriate in your sheets.
a) Why have some Indian doctors created their own surgical tools?
(i) they have no tools to perform specific surgeries
(ii) they have a hamstring problem
(iii) the tools they get from abroad cost four times as much
(iv) they can sell these tools at a very high price.
b) What has Dr Burjor P Banaji created?
(i) Lasik surgery
(ii) Max Eye Care Centre
(iii) two surgical instruments called Banaji Lasik Shield and Banaji Lasik Spatula and Canulae
(iv) more than a dozen instruments for operating on the eye.
c) Where does Dr Banaji get the instruments manufactured?
(i) India (ii) the United States of America
(iii) Switzerland (iv) Japan
d) The term hamstrung refers to _____
(i) restricted (ii) helped
(iii) harmed (iv) liberated
e) What does the phrase slew of instruments refer to?
(i) a wide range of instruments (ii) instruments used for slaying
(iii) tools of a similar nature (iv) surgical instruments

Q2. Read the following prompt and weave a story an about 150- 200 words. Provide a suitable title also.
The moment Hari stepped down from the train he was greeted at the platform by the people of his small town. They had gathered there with garlands and a band_____

Q3. Your friend has behaved very selfishly in the canteen today and so you are very upset. Write a diary entry in 100-120 words expressing your feelings.

Q4. Fill in the blanks with appropriate modals.

a. Peter………study harder if he wants to pass the medical exam.
b. The members………arrive on time for the meeting.
c. I………love to go on vacation to Switzerland.
d. She……. go to the party if she finishes her English homework on time.
e. We………go to the beach this Sunday.
f. You………call your parents and check on them.
g. It………rain later, so bring an umbrella with you.
h. ………you speak English fluently?

Q5. Fill in the blanks with the correct form of the verbs given in brackets.

a. The cat ……. (drink) all the milk.
b. They……… (not arrive) yet.
c. She ………. (not qualify) the written test.
d. We ………. (be) already ……… (see) the movie.
e. I ……… (think) of inviting all my friends.
f. My brother ……. (not see) the Red Fort yet.
g. The teacher ………. (has) just ………. (enter) the class
h. Rajeev ……. (stop) learning piano.

Q6. Answer the following questions with reference to the context.
A. Wind, come softly.
   Don't break the shutters of the windows.
   Don't scatter the papers.
   Don't throw down the books on the shelf."
Questions:
(i)What does the poet request the wind to do?
(ii)List the destructive actions of the wind mentioned here.
(iii)What mood does the speaker convey in these lines?
(iv)Identify any poetic device used in this stanza.

B.   But it was for your b-b-birth day." Down came the ruler on her   little, pink palms. Hours later, when grandmother had wrapped her in a shawl and rocked her in the rocking-chair, the child clung to her soft body. "What did God make fathers for?" she sobbed.
Questions:
(i)Who is responding in the first line and to whom?
(ii)How did the father react?
(iii)What did the grandmother do?
(iv)Why did the girl say "What did God make fathers for"?

Q7. Answer the following questions in about 40-50 words.
i)How does the memory of his mother haunt the poet?(Rain on the Roof)
ii)What does the wind symbolise?(Wind)
iii)How did Toto's love for taking bathe almost led to his being half – boiled ?(The Adventures of Toto)
(iv) Kezia felt that Mr McDonald was a better father as compared to her own.Why?(The Little Girl)
(v)What destruction did the elephant cause in the town?(Iswaran the storyteller)

Q8. Answer the following questions, in about 100-120 words.
(i)How does the poet portray the sights, sounds, and memories evoked by the falling rain?(Rain on the Roof)
(ii)How can you say that Toto was a mischievous pet ?(The adventures of Toto)
(iii) Human life is full of hardships. How does the poet reveal it?(Wind)
(iv) Do you think Mahendra was fearful of ghosts. Give reasons for your answer.(Iswaran the storyteller.
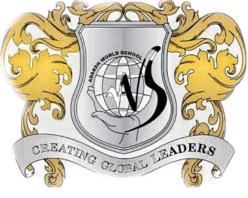
कक्षा- नौवी
व्याकरण कार्य पत्रक

विद्यार्थी का नाम_____   कक्षा और सेक्शन_____

' उपसर्ग' से सम्बंधित प्रश्न

1- निम्नलिखित प्रश्नों से उपसर्ग और मूल शब्द अलग करके लिखे।

	उपसर्ग	मूल शब्द
(क) विदेश	_____	_____
(ख) प्रसिद्ध	_____	_____
(ग) प्रदर्शन	_____	_____
(घ) अधिकार	_____	_____
(ङ) उपमान	_____	_____

2- निम्नलिखित बहुवैकल्पीय प्रश्नों के उचित उत्तर पर (✓) चिह्न लगाए-

(क) 'अधिकार' शब्द किस उपसर्ग का प्रयोग हुआ है?

    i.   अधि   iii.   अध
    ii.   अ   iv.   आ

(ख) 'सम्मान' शब्द किस उपसर्ग का प्रयोग हुआ है?

    i.   सं   iii.   स्म
    ii.   सम्   iv.   स्म्

(ग) 'अत्यधिक' शब्द किस उपसर्ग का प्रयोग हुआ है?

    i.   अ   iii.   अत
    ii.   अति   iv.   अत्य

(घ) 'गैरकानूनी' शब्द किस उपसर्ग का प्रयोग हुआ है?

    i.   ग   iii.   गै
    ii.   गैर   iv.   गेर्

(ङ) 'स्वाभिमान' शब्द किस उपसर्ग का प्रयोग हुआ है?

    i.   स्वा + अभि   iii.   स्व + अभि
    ii.   स्वा + आभि   iv.   स् + अभि

' प्रत्यय' से सम्बंधित प्रश्न

3- निम्नलिखित प्रश्नों से प्रत्यय और मूल शब्द अलग करके लिखे।

	मूल शब्द	प्रत्यय
(क) झपकी	_____	_____
(ख) सुंदरता	_____	_____
(ग) तेजस्वी	_____	_____
(घ) पागलपन	_____	_____
(ङ) चिकनाई	_____	_____

4- निम्नलिखित प्रत्यय से दो-दो शब्द बनाइए।

प्रत्यय	शब्द
(क) ऐला	_____ _____
(ख) सार	_____ _____
(ग) आन	_____ _____
(घ) आलू	_____ _____
(ङ) आइन	_____ _____

'अर्थ के आधार वाक्य भेद' सम्बंधित प्रश्न

5- अर्थ के आधार पर निम्नलिखित वाक्यों में भेद लिखिए।

(i) तुम खाना खाकर जाना।   _____

(ii) मैं उससे बात नहीं करूँगी।   _____

(iii) वह मिट्टी के बर्तन में खाना बनाती है।   _____

(iv) क्या आप आज रुकेंगे?   _____

(v) ईश्वर करें सब कुशल लौटें।   _____

(vi) अगर हम थोड़ा और तेज़ चलते तो बस नहीं छूटती।   _____

(vii) वाह! कितनी सुंदर तस्वीर बनाई है।   _____

(viii) मुझसे बात मत करो।   _____

6- निम्नलिखित बहुवैकल्पीय प्रश्नों के उचित उत्तर पर (✔) चिह्न लगाए-

(क) ' क्या मेरा भाई आपसे मिला ?' इस वाक्य में अर्थ के आधार पर वाक्य का कौन सा वाक्य भेद है ?

   i.   विधान वाचक वाक्य   iii.   प्रश्न वाचक वाक्य

   ii.   संदेह वाचक वाक्य   iv.   आज्ञा वाचक वाक्य

(ख) मुझे आज बाहर घूमने का मन हो रहा है।' यह वाक्य किस प्रकार का वाक्य है –

   i.   आज्ञा वाचक वाक्य   iii.   इच्छा वाचक वाक्य

   ii.   संकेत वाचक वाक्य   iv.   विस्मयादिबोधक वाक्य

(ग) जिन वाक्यों में संदेह / संभावना का बोध होता है' वहाँ अर्थ की दृष्टि से कौन सा वाक्य भेद होता है –

   i.   संदेह वाचक वाक्य   iii.   इच्छा वाचक वाक्य

   ii.   संकेत वाचक वाक्य   iv.   विस्मयादिबोधक वाक्य

(घ) ' बहुत सुन्दर दृश्य है।' इस वाक्य को 'विस्मय वाचक' वाक्य में बदल कर लिखिए –

   i.   शायद बहुत सुन्दर दृश्य है।   iii.   वाह ! कितना सुन्दर दृश्य है।

   ii.   क्या सुन्दर दृश्य है।   iv.   बहुत सुन्दर दृश्य नहीं है।

(ङ) 'जिन वाक्यों में किसी काम के न होने या न करने का बोध हो' वहाँ अर्थ की दृष्टि से कौन सा वाक्य भेद होता है –

   i.   संदेह वाचक वाक्य   iii.   इच्छा वाचक वाक्य

   ii.   संकेत वाचक वाक्य   iv.   निषेधात्मक वाक्य

'अनौपचारिक पत्र' सम्बंधित प्रश्न

7- अपनी बहन को पत्र लिखकर योगासन करने के लिए प्रेरित कीजिए।

(प्रेषक/पत्र लिखने वाले का पता)

_____

_____

दिनांक- _____

_____(संबोधन)

_____
_____(कुशल-मंगल समाचार/ पहला अनुच्छेद)

_____
_____
_____
_____
_____
_____
_____ (विषय-वस्तु-जिस बारे में पत्र लिखना है/दूसरा अनुच्छेद)

_____
_____(समाप्ति/तीसरा अनुच्छेद)

_____(प्रापक के साथ प्रेषक का संबंध)
_____(प्रेषक का नाम)

BIOLOGY HOLIDAY HOMEWORK WORKSHEET

THE FUNDAMENTAL UNIT OF LIFE AND TISSUES

Q1. **Name the tissue which show the analogy written as under.**

i. Lining of blood vessels is made up of ——————-.

ii. Lining of the small intestine is made up of—————.

iii. Lining of kidney tubules is made up of——————-.

iv. Lining of respiratory tract is made up of——————.

v. Lining of gastric glands is made up of——————

Q2. Name the organelles which show the analogy written as under.

i. Transporting channels of the cells. ——————-.

ii. Digestive bag of the cell. ——————-.

iii. Control room of the cell. ——————-.

iv. Kitchen of the cell. ——————-

v. Packing & dispatching unit of the cell. ——————-.

Q3. Give reasons, why.

i. Roots of plants have mostly leucoplasts in them than chloroplasts.

ii. We get a crunchy and granular feeling, when we chew pear fruit.

iii. Animals of colder regions and fish of colder waters have a thicker layer of body fat under the skin.

iv. Water hyacinth floats on the water surface.

In the following questions, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(c) Assertion is true but the Reason is false.

(d) Assertion is false but the Reason is true.

4. Assertion (A): Multicellular organisms have higher survival rate than unicellular organisms.

Reason (R): In Multicellular organism, dead cells are replaced by new cells.

5. Assertion (A): Lysosomes are known as suicidal bag of cells.

Reason (R): Lysosomes contain powerful enzymes capable of breaking down all organic material.

6. Assertion : Surface of skin is impervious to water.

Reason : Surface of skin is covered by stratified cuboidal epithelium.

7. Assertion : Parenchyma cells help in storage of food.

Reason : Parenchyma cells are the main seats of photosynthesis.

8. Match the column (A) with the column (B)

(A)	(B)
(a) Parenchyma	(i) Thin walled, packing cells
(b) Photosynthesis	(ii) Carbon fixation
(c) Cartilage	(iii) Localized thickenings
(d) Permanent tissue	(iv) Sclerenchyma
(e) Areolar tissue	(v) Subcutaneous layer
(f) Skeletal muscle	(vi) Surface of joints
(g) Collenchyma	(vii) Striated muscle
(h) Adipose tissue	(viii) Packing tissue between various organs

Q9. Case study

Bone is a solid, hard porous tissue. It forms the natural skeleton and gives the body its basic structure and also supports the body. Its matrix is impregnated with phosphates and carbonates of calcium and magnesium which provides hardness to it. The matrix also contains ossein protein. The matrix is arranged in concentric rings which are called lamellae. Bone cells lie between the lamellae in fluid-filled spaces called lacunae.

(i) Bone cells are also called……………

(ii) The matrix inside the bone is arranged in concentric rings called ……………

(iii) To form natural skeleton and to give support to the body is the main function of ……………..

(iv) The matrix of bone is impregnated with…………….

(v) Bone cells lie between the lamellae in fluid-filled spaces called ………….

Q10. Draw the well labelled diagrams:

   i. Different types of simple tissues and complex tissues.

   ii. Different types of epithelial tissues.

  iii. Different types of muscle fibre and a neuron.

HOLIDAY HW WORKSHEET - CLASS 9th (CHEMISTRY)

Q1- What happens to the kinetic energy of particles when the temperature is increased?

    A. It decreases   B. It remains the same   C. It becomes zero   D. It increases

Q2- Which phenomenon occurs when we open a bottle of perfume in one corner of a room?

    A. Melting   B. Sublimation   C. Diffusion   D. Evaporation

Q3- Brass is a mixture of:

    A. Copper and Zinc

    B. Copper and Tin

    C. Zinc and Tin

    D. Iron and Copper

Q4- **Assertion (A):** A gas can easily be compressed by applying pressure

  Reason (R): Since the inter-particle spaces between gases are very large, they can decrease by applying pressure.

    A. Both A and R are true, and R is the correct explanation of A.

    B. Both A and R are true, but R is not the correct explanation of A.

    C. A is true, but R is false.

    D. A is false, but R is true.

Q5-**Assertion (A):** Colloids show Tyndall effect.

  Reason (R): Colloidal particles are large enough to scatter light.

    A. Both A and R are true, and R is the correct explanation of A.

    B. Both A and R are true, but R is not the correct explanation of A.

    C. A is true, but R is false.

    D. A is false, but R is true.

Q6- Read the case below and answer the questions:

The phenomenon of change of a liquid into vapours at any given temperature below its boiling point is called evaporation. Evaporation is different from boiling as boiling is a bulk phenomenon i.e., particles from the whole of the liquid change into vapour state whereas evaporation is a surface phenomenon i.e., only the particles from the surface gain enough energy to overcome the forces of attraction present in the liquid and change into vapour state.
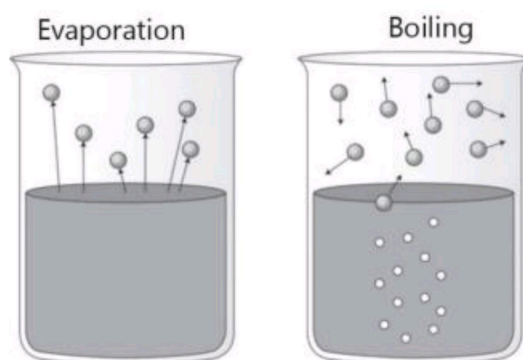
The process of evaporation uses the energy of the liquid particles. This results in cooling of the surrounding area. The rate of evaporation depends upon the surface area exposed to the atmosphere, the temperature, the humidity and the wind speed. Read the given passage carefully and give the answer of the following questions:

1. Differentiate between evaporation and boiling. Give any two differences.
2. Which one among evaporation or boiling is known as a surface phenomenon. Why?
3. Which one among evaporation or boiling is a slow process?
4. Based on the figure given below, suggest in which of the vessels A, B, C or D, the rate of evaporation be the highest?
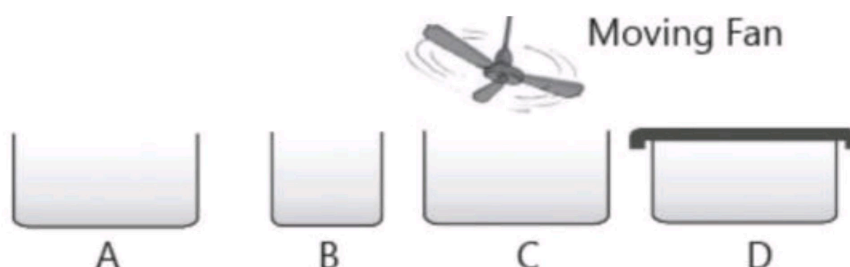
5. What is the effect of humidity on rate of evaporation?

Q7- To make a saturated solution, 37 g of Aluminium chloride is dissolved in 100 g of water at 293K. Find its concentration at this temperature.

Q8- Give two examples each of the following colloids-

1. Foam (gas in liquid)   3. Emulsion
2. Solid sol   4. Aerosol (solid in gas)

Q9- It is a hot summer day Priyanshi and Ali are wearing cotton and nylon clothes respectively. Who do you think would be more comfortable and why?

Q10- Write differences between Solution, Suspension and Colloids.

HOLIDAY HW WORKSHEET - CLASS 9th (PHYSICS)

Q1- The area under speed – time graph is represented in units of

   A. m   B. m^2 C. m^3 D. m^{-1}

Q2- The motion of the wheel of a cycle is

   A. Rectilinear   B. Rotatory

   C. BOTH B and D   D. Translatory

Q3- A car increases its speed from 15 km/h to 30km/hr. in 12 seconds. Its acceleration is

   A. 30 m/s^2

   B. 0.3 m/s^2

   C. 50 m/s^2

   D. 18 m/s^2

Q4- **Assertion (A):** The displacement of an object can be either positive, negative or zero.
   Reason (R): Displacement has both the magnitude and direction.

   A. Both A and R are true, and R is the correct explanation of A.

   B. Both A and R are true, but R is not the correct explanation of A.

   C. A is true, but R is false.

   D. A is false, but R is true.

Q5-**Assertion (A):** An object may have acceleration even if it is moving with uniform speed.
   Reason (R): An object may be moving with uniform speed but it may be changing its
                Direction of motion.

   A. Both A and R are true, and R is the correct explanation of A.

   B. Both A and R are true, but R is not the correct explanation of A.

   C. A is true, but R is false.

   D. A is false, but R is true.

Q6- Read the case below and answer the questions:

The change in the position of an object with time can be represented on the distance-time graph adopting a convenient scale of choice. In this graph, time is taken along the X-axis and distance is taken along the Y-axis. This graph shows that the distance travelled by the trains is directly proportional to time taken. Study the graph related to distance-time graph of two trains and answer the questions that follow:
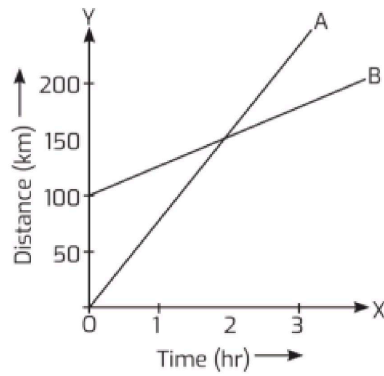
1. How much ahead of A is B when the motion starts?
2. What is the speed of B?
3. When and where will A catch B?
4. What is the difference between the speeds of A and B?
5. Is the speed of both the trains uniform? Justify your answer.

Q7- A bullet hits a wall with a velocity of 20m/s and penetrates it up to a distance of 5 cm. Find the deceleration of the bullet in the wall.

Q8- Draw the graph of the following:

1) Uniformly accelerated motion with a non-zero velocity.
2) D-T Graph when object is at rest.
3) V-T graph for constant velocity.
4) V-T graph for uniformly retarded motion.

Q9-
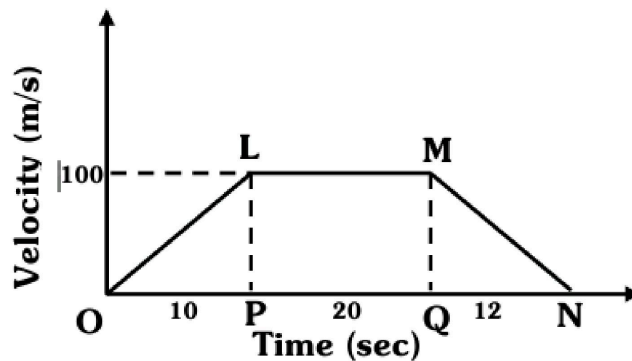
The graph shows velocity of a moving bus during different time intervals. Calculate

a) Total distance covered by the bus from 0 to N.
b) The uniform acceleration and retardation of the bus.

Q10- Differentiate between (i) Scalar and Vector quantities (ii) speed and velocity

Objective Type Questions

Q1) Degree of the polynomial $p(x) = 3x^4 + 6x + 7$ is:

   (a) 4   (b) 5   (c) 3   (d) 1

Q2) Degree of the polynomial $p(x) = (x + 2)(x - 2)$ is:

   (a) 2   (b) 1   (c) 0   (d) 3

Q3) If $a + b + c = 0$, then $a^3 + b^3 + c^3 =$ _____.

   (a) abc   (b) 3abc   (c) 2abc   (d) -3abc

Q4) If $x + y = 5$ and $xy = 6$, then the value of $x^3 + y^3$ is:

   (a) 35   (b) 45   (c) 30   (d) 125

Q5) Degree of the polynomial $f(x) = 4x^4 + 0x^3 + 0x^5 + 5x + 7$ is:

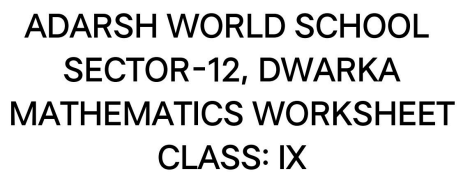   (a) 4   (b) 5   (c) 3   (d) 7

Q6) Degree of the zero polynomial is:

   (a) 0   (b) 1   (c) any natural number   (d) not defined

Q7) $\sqrt{2}$ is a polynomial of degree:

   (a) 2   (b) 0   (c) 1   (d) 1/2

Q8) Zero of the polynomial $f(x) = x + 7$ is:

   (a) -7   (b) 7   (c) 0   (d) x

Q9) If $x - 2$ is a factor of $x^2 + 3ax - 2a$, then $a =$ _____.

   (a) 2   (b) -2   (c) 1   (d) -1

Q10) If $x + 1$ is a factor of the polynomial $2x^2 + kx$, then $k =$ _____.

   (a) -2   (b) -3   (c) 4   (d) 2

Q11) The point of intersect of the coordinate axes is:

   (a) Ordinate   (b) abscissa   (c) quadrant   (d) origin

Q12) The abscissa and ordinate of the origin are:

   (a) (0 ,0)   (b) (1, 0)   (c) (0, 1)   (d) (1, 1)

Q13) The measure of the angle between the coordinate axes is:

   (a) 0°   (b) 90°   (c) 180°   (d) 360°

Q14) Two points having same abscissae but different ordinates lie on:

   (a) x-axis   (b) a line parallel to y-axis (c) y-axis   (d) a line parallel to x-axis

Q15) A point whose abscissa and ordinate are 2 and - 5 respectively, lies in:

   (a) first quadrant   (b) second quadrant   (c) third quadrant   (d) fourth quadrant

Q16) Signs of the abscissa and ordinate of a point in the second quadrant are respectively:

   (a) +, +   (b) -, -   (c) -, +   (d) +, -

Q17) A point whose abscissa and ordinate both are negative will lie in:

   (a) I quadrant   (b) II quadrant   (c) III quadrant   (d) IV quadrant

Q18) Abscissa of a point is positive in:

   (a) I and II quadrants   (b) I and IV quadrants   (c) I quadrant only   (d) II quadrant

Q19) The points whose abscissa and ordinate have different signs will lie in:

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

Q20) Points (-4,0) and (7, 0) lie:

   (a) on x-axis   (b) y-axis   (c) in first quadrant   (d) in second quadrant

Subjective Type Questions

Q21) If $2x + 3y = 13$ and $xy = 6$, find the value of $8x^3 + 27y^3$.

Q22) If $a + b = 10$ and $a^2 + b^2 = 58$, find the value of $a^3 + b^3$.

Q23) Find the value of k if (x-3) is a factor of $k^2x^3 - kx^2 + 3kx - k$.

Q24) If $x + y = 12$ and $xy = 27$, find the value of $x^3 + y^3$.

Q25) Factorise each of the following expressions:

   (i) $x^2 + 3\sqrt{3}x + 6$ (ii) $x^2 + 3\sqrt{3}x - 30$ (iii) $27a^3 + 125b^3$ (iv) $x^{12} - y^{12}$

Q26) Show that (x+1) and (2x-3) are factors of $2x^3 - 9x^2 + x + 12$.

Q27) using factor theorem, factorise the polynomial $x^3 - 6x^2 + 11x - 6$.

Q28) If $x^2 - 1$ is a factor of $ax^4 + bx^3 + cx^2 + dx + e$, show that $a + c + e = b + d = 0$.

Case Based Question

Q29) The students of a school went to a tree plantation programme. Under the tree plantation programme students of class 9th planted a total of $(3x^2 - 4x - 4)$ trees. If the total number of students of class 9th are $(x-2)$ then answer the following questions:


(i) Write the degree of the polynomial represents the total number of students of class 9th in the school.

(ii) The total number of planted trees can also be written as?

(iii) Find the total number of trees planted, if x = 5.

OR

If each student planted the same number of trees, as then write the polynomial r(x) which represents the number of trees planted by each student?

Q30) Mr Goyal who is a teacher of class IX, thought to design a chessboard game where each student will move the specific position given by him in terms of x and y coordinates. Consider the position of students are marked as A, B, C, D, E and F.

Based on the given graph, answer the following questions:
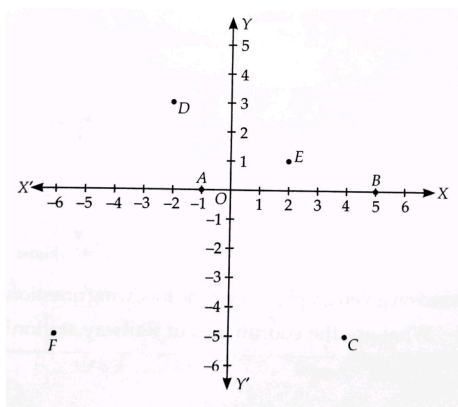
(i) What is the distance between C and F?

(ii) What is the coordinates of a point which is reflection of point B on X-axis?

(iii) What is the sum of ordinates of points D and E?

OR

What is the sum of abscissa of points A and B ?

Subject : Artificial Intelligence

Holidays Homework Worksheet Class - 9

Topic: Communication Skills - I

1. Define communication in one sentence.

2. Match the elements of communication with their descriptions:

Element	Description
a. Sender	1. The message received
b. Message	2. Person who conveys the message
c. Medium	3. Way the message is sent
d. Receiver	4. Content of communication

3. Which of these affects how people perceive communication?

a. Experience   b. Feelings   c. Culture   d. All of the above

4. The person who decodes the message is called the _____.

5. The _____ is the method or channel through which the message is sent.

6. State True/False for the following:

a.Verbal communication includes only spoken words.

b.Non-verbal communication includes facial expressions.

c.Visual communication involves using videos or images.

7. Fill in the 3 missing C's of effective communication:

Clear, _____, _____, Courteous, _____, Concise, Concrete

8. Write a short dialogue where you greet a new student and introduce yourself.

9. Write two examples each of(using at your home):

a. Verbal Communication   b. Non-verbal Communication

10. The 3 P's of public speaking stand for:

a. Practice, Pause, Plan

b. Prepare, Practice, Perform

c. Present, Plan, Posture

11. Rewrite with proper capitalization and punctuation marks:

"my brother went to the market he bought apples oranges and bananas"

12. Identify the Phrase or Sentence : "After the meeting, we went to a nearby cafe."

13. Write a short paragraph (4–5 lines) on : 'The Superpower I Wish I Had' **using correct punctuation, capitalization, sentence structure and grammar.**

14. Match the following Parts of Speech:

Word	Part of Speech
a. Quickly	1. Verb
b. Oh!	2. Conjunction
c. Run	3. Adverb
d. And	4. Interjection

15. Fill in the blanks using the correct article (a, an, the):

I saw ____ elephant in ____ zoo eating ____ banana.

16. Identify the type of sentence:

- What a wonderful performance that was!
- Please hand me the notebook
- He enjoys playing football in the evening

17. Change into passive voice:

- She is writing a letter
- They played football in the park
- The chef was preparing dinner

18. Identify the Object (Direct/Indirect):

- She gave her friend a gift
- He sent me a postcard from Italy
- We offered the guests some tea

19. Phonetics Fun - Circle the word that has a different beginning sound: Cat, Kite, Cup, City

20. Write two closed-ended and two open-ended questions about your 'favorite movie'.

Topic: Self Management Skills - I

1. Define self-management in your own words.

2. Which of the following is a benefit of self-management?
a. Increased stress   b. Improved productivity   c. Poor time control   d. Low confidence

3. Match the skill to its description:

Skill	Description
a. Self-awareness	1. Ability to handle challenges wisely
b. Confidence	2. Understanding your own feelings and actions
c. Motivation	3. Believing in your abilities
d. Time management	4. Organizing time efficiently
e. Problem-solving	5. Having a reason to achieve goals

4. Fill in the blanks:
a. _____ is the ability to manage your hours wisely.
b. _____ helps you recognize your strengths and weaknesses.

5. List two strengths and two weaknesses you have noticed in yourself.

6. What are the qualities of a Confident Person?
a.Makes eye contact   b.Speaks unclearly   c.Avoids challenges   d.Accepts mistakes

7. Name two factors that can increase and two that can decrease self-confidence.

8 .Write any three tips to Build Confidence (one line each).

9. Why is positive thinking important?
a. It creates more stress   b. It builds a hopeful attitude
c. It reduces confidence   d. It wastes time

10. List any 3 Ways to Practice Positive Thinking

11. List 5 tasks you do in a day. Now rank them from most important to least important. Did you spend more time on important tasks or less? Why?

12. State True/False for the following sentences:

- Brushing twice a day is part of good hygiene
- Grooming only matters for special events
- Wearing clean clothes is part of grooming

13. Choose a famous person (e.g., A.P.J. Abdul Kalam, M.S. Dhoni, etc.) and write how they show self-management skills (4–5 lines).

14 . Write one academic goal and one personal goal. What steps will you take to achieve each? Set a time frame for both.

15. Think of a time when you didn't feel like doing something but still did it. What motivated you? How did you feel afterward?

Worksheet

1) **What do you mean by Sovereign?**
   a) People have the supreme right to make decisions
   b) Head of the state is an elected person
   c) People should live like brothers and sisters
   d) The government will not favour any religion

2) **When was the national flag of the Republic of South Africa unfurled?**
   a) 1994
   b) 1996
   c) 1993
   d) 1995

3) **After the emergence of the new democratic South Africa, black leaders appealed to fellow blacks?**
   a) Forgive the whites for the atrocities they had committed
   b) To take revenge on the whites
   c) That the whites must leave the country
   d) None

4) **The Constituent Assembly that wrote the Indian constitution had _____ members.**
   a) 268
   b) 244
   c) 299
   d) 276

5) **Every document presented and every word spoken in the Constituent Assembly has been recorded and preserved. These are called _____.**
   a) Constituent Assembly Debates
   b) Constituent Assembly Minutes
   c) Constituent Assembly Agenda
   d) Constituent Assembly Daily

6) **Which of the following is a part of the Himalayan Mountain system?**
   a) Western Ghats
   b) Aravalli Hills
   c) Purvanchal Hills
   d) Satpura Range

7) **The Northern Plains have been formed by the interplay of which three major river systems?**
   a) Ganga, Yamuna, and Narmada
   b) Ganga, Brahmaputra, and Indus
   c) Godavari, Krishna, and Kaveri
   d) Indus, Narmada, and Tapi

8) **Which river marks the division between the Central Highlands and the Deccan Plateau?**
   a) Narmada
   b) Ganga
   c) Godavari
   d) Yamuna

9) **The Indian Desert lies towards the _____ edge of the plateau.**
   a) Northern
   b) Western
   c) Eastern
   d) Southern

10) **Which of the following is not a feature of the Peninsular Plateau?**
    a) Old crystalline rocks
    b) Rounded hills
    c) Fold mountains
    d) Black soil regions

11) **Which of the following is an example of disguised unemployment?**
    a) A software engineer looking for work
    b) A farmer family of 6 working on land where only 3 are needed

c) A person temporarily out of work

d) A teacher working in a school

12) Which age group is considered productive in the human resource concept?

a) 0–14 years

c) 60–75 years

b) 15–59 years

d) 75+ years

13) What is the main aim of Sarva Shiksha Abhiyan (SSA)?

a) Eradicate poverty

c) Provide mid-day meals

b) Universalize elementary education

d) Promote higher education

14) Which one of the following is a part of the tertiary sector?

a) Fishing

c) Manufacturing

b) Mining

d) Banking

15) Which one of the following is not a part of human capital formation?

a) Education

c) Health

b) Training

d) Land ownership

16) Who believed that property should be socially controlled?

a) Liberals

c) Conservatives

b) Radicals

d) Socialists

17) Who was the founder of the idea of Communism?

a) Lenin

c) Karl Marx

b) Stalin

d) Trotsky

18) What was the name of the Parliament set up after the 1905 Revolution in Russia?

a) Politburo

c) Soviet

b) Duma

d) National Assembly

19) Which slogan is associated with the Bolshevik Revolution?

a) Long Live the King

c) Land, Peace, Bread

b) Liberty, Equality, Fraternity

d) Freedom is our Birthright

20) What was Lenin's main contribution to the Russian Revolution?

a) Supporting monarchy

c) Forming the Mensheviks

b) Leading the Bolsheviks to power

d) Opposing workers' rights