



FLORENCE INTERNATIONAL SCHOOL
(Senior Secondary Affiliated With CBSE | ISO 21001:2018 Certified)
SUMMER HOLIDAY HOMEWORK (2025-26)
GRADE – IX

Dear Students, Holidays are an integral part of a student's life.

It is a time for fun, a time to explore are given a meaningful direction, it results in a productive and enjoyable time. Let's use these holidays to pursue some hobbies and apply our minds creatively to learn new thing and to bring a change in the environment, in our own individual way.

General Instructions for Students:

- *Follow the instruction given carefully with each activity.*
- *You can take help of the internet, newspapers magazines, encyclopaedia to Collect information and pictures.*
- *Make you activity sheets presentable and attractive.*

A few suggestions for parents:

- *Spend quality time with your children and have fun time together*
- *Help the children to become independent by giving them responsibilities. Involve them in small household activities.*
- *Inculcate in them good manners, healthy habits and respect for elders.*
- *Converse with your children in English.*
- *Encourage your children to read books to enhance their language skills. Reading will also boost their interpretative skills and provide them valuable literary experience.*
- *Cultivate sportsmanship by encouraging your children to play various Indoor games.*
- *Remember that Summer Vacation is the time to relax and enjoy.*
- *So, spend these holidays creating a nurturing and stimulating environment filled with fun, frolic, learning and education.*
- *Have a family dinner every day.*
- *Play board games with your parents and sibling and show them who is the*

smartest.

- *Spend some quality time with an elderly person in the family and ask them to share their childhood days.*

Instructions for Doing the Holiday Homework

1. Use a separate school notebook for completing all Holiday Homework.
2. Write the answers to all worksheet questions in the notebook, subject-wise.
3. For all project works (except SST/EVS), use A4 size chart sheets or chart paper only.

Do NOT use any scrapbook for projects.

4. SST AND EVS

Models /Projects to be made according to the topics (any one)

5. Ensure neatness and clarity: All work, whether in notebooks or on project sheets, should be done neatly with clear and legible handwriting.
6. Marks will be awarded for the holiday homework, so complete it with care and effort.

"Tell me and I forget, teach me and I may remember, involve me and I learn "
- Benjamin Franklin

Greetings !

Dear Parent,

We wish you and your child a very happy summer holidays . It's time to enjoy and create a bond with family, friends and relatives. To utilize this time in the most constructive way we have prepared Holiday Homework for the students on the principle of 'learning by doing' for their holistic development.

Let's Start...

ENGLISH

PROJECT WORK FOR INTERNAL ASSESSMENT

Instructions:

- There are 5 topics and you need do the project on **any one** topic
- You have to submit the project in your own handwriting.
- Word limit: 1000 words max.

The Project-Portfolio should include the following:

1. Cover page with the title of the project, school details/details of students

2. Statement of purpose / objectives / goals
3. Acknowledgement
4. Certificate of Completion under the guidance of the teacher.
5. Index/Table of Contents
6. Body (1000 words - Introduction, Description/Report/Explanation, Conclusion)
7. If possible, photographs that capture the positive learning experiences of the student(s).
8. List of resources/ Bibliography

1. TOPICS:

1. While technology may change education, human interaction, and learning together in a classroom make education enjoyable and meaningful. (With reference to 'The Fun They Had' by Issac Asimov)
2. A child's primary need is the love and security of their parents as opposed to material possessions. (With reference to "The Lost Child" by Mulk Raj Anand.)
3. Choose a famous Indian classical instrument musician and write about his life. (With reference to 'The Sound of Music')
4. Write a research paper on Albert Einstein focusing on his life and achievements. (With reference to 'A Truly Beautiful Mind')
5. True happiness comes from selflessness and helping others, rather than material wealth or superficial beauty. (With reference to 'A Happy Prince' by Oscar Wilde)

ENGLISH WORKSHEET SECTION A (READING)

Read the passage given below:

Throughout history, certain inventions have revolutionized the way humans live and interact with the world. Among the most influential is the internet. Developed in the late 20th century, the internet has connected people across the globe, making communication, learning, and business faster and more efficient.

Another life-changing invention is the electric bulb by Thomas Edison. Before its invention, people relied on candles and oil lamps. The electric bulb brought light into homes, streets, and industries, making human life more productive and safe after dark.

The telephone, invented by Alexander Graham Bell, changed how people communicated. It allowed instant voice contact over long distances, paving the way for modern mobile phones and global connectivity.

These inventions reflect how human creativity can transform society. They remind us that innovation, when used wisely, can bring tremendous benefits to humanity.

Q1. Answer the following questions based on the passage:

1. MCQ

Which of the following was invented by Thomas Edison?

- a) The telephone
- b) The electric bulb
- c) The internet

d) The radio

2. Assertion and Reason

Assertion (A): The internet made global communication faster.

Reason (R): It allows people to send letters through the post office.

- 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.

3. Fill in the blank

The _____, invented by Alexander Graham Bell, allowed voice contact over long distances.

4. Short Question

How did the invention of the electric bulb affect human life?

5. Extract-Based MCQ

“These inventions reflect how human creativity can transform society.”

What does the word “transform” mean in this context?

- a) Destroy
- b) Improve
- c) Change completely
- d) Reject

6. Vocabulary

Find the antonym of the word “efficient” from the options below:

- a) Quick
- b) Creative
- c) Wasteful
- d) Reliable

7. Complete the sentence

If inventions are used wisely, _____.

SECTION B (GRAMMAR AND WRITING)

Q2. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correct word both. The first one has been done as an example.

A study performed about the University of New York revealed that about ... by
(example)

mobile-phone conversations was more annoying than those that occurred

(a).....

face-to-face, even after the volume was the same. The problem (b).....

seems to be that conversations on mobile phones are most noticeable than

(c).....

face-to-face conversations. Which seems odd, since two people talking (d).....

together project twice the amount of audio as one person talks on the phone

(e).....

The problem seemed to be that people pay more attention when they hear

(f).....

only half a conversation.

Q3. Look at the words and phrases below. Rearrange them to form meaningful sentences as in the example and write them:

Example : saw/ a rabid dog / being bitten/ a man /after/ in acute pain/ Louis Pasteur/ by
Louis Pasteur saw a man in acute pain after being bitten by a rabid dog.

1. then /there /no treatment /was

2. the/ red hot iron/ burnt / with /wound /to be/ had

3. this/ alternative solutions/ he saw/ decided /and /to find/ to /it

Q4. Descriptive Paragraph:

You spent an entire day without electricity. Describe the experience in 100-120 words.

SECTION C (LITERATURE)

Q5. Read the following extract and answer the questions that follow:

‘Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;’

1. Why does the poet feel sorry?

- A) The two roads had diverged.
- B) He could not travel on both the roads.
- C) He felt lonely.
- D) He had to stand there for too long.

2. Why could he not travel both the roads?

- A) He was afraid of doing such a thing.
- B) The two roads were diverging and he could choose only one.
- C) Being one traveler, he could not do so.
- D) He wanted to enjoy the scene.

3. What is the mood of the poet in these lines?

- A) Happy
- B) Serious and pensive
- C) Indifferent
- D) Angry

4. What choice does the narrator have to make?

- A) The narrator has to choose between the two roads.

- B) He has to choose between going farther or going back.
C) He has to choose between standing and getting going.
D) None of the above.

Q6 Answer the following questions:

1. Where had Tommy found the book? How was it different from the books Margie and Tommy were used to?
2. Parents were in a hurry to reach the fair but the child was delaying them. How?
3. Why was Grandfather pleased even though Toto had escaped from the closet? What does this tell us about his character?
4. What significance did the Ganga have in Bismillah Khan's life?
5. "Everything suddenly looked black". Why does Evelyn say so?

Complete the following worksheets in English Grammer Book (Bravia)

Worksheet No. 1,2,32,34,35,40,63,64,84,86,88,105,116.

SOCIAL STUDIES

PROJECT WORK FOR INTERNAL ASSESSMENT

DISASTER MANAGEMENT

As per CBSE guidelines, every student of Class IX has to submit a Project on any one of the related topics:

- Earthquake-Causes and Mitigation.
- Flood – Causes and Mitigation.
- Global Warming-Causes and Mitigation.

Students are requested to utilize their summer vacation to complete this project which will be followed by viva voce.

TOPIC OF THE PROJECT: Natural Disaster or Man-made Disaster



Disaster Management



20:1

Students need to follow the below mentioned guidelines to make this project:

- Students can use newspaper clippings, maps, diagrams, and material from the web.
- Each illustration should be supported with a write up/relevant to the topic.
- The first page should be written in bold letters with the topic, name, and roll number.
- The project should be handwritten and done on A4 size sheets.

Follow the sequence as given below:

- Cover Page
- Acknowledgement
- List of content
- Content
- Conclusion
- Bibliography

2. Ek Bharat Shreshtha Bharat

India has a long history of cultural evolution and a freedom struggle centered on the principles of non-violence and justice have held this diverse nation together to form a composite national identity. Mission of “Ek Bharat Shreshtha Bharat” is to celebrate the Unity in Diversity of our Nation and to promote the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States.



Make an album on the information about the Culture, Dresses, Tradition and Monuments of Meghalaya and Uttar Pradesh.

The main aim of this activity is to create awareness among students about the different Culture, Dresses, Traditions and Monuments of Meghalaya and Uttar Pradesh.

SOCIAL STUDIES WORKSHEET

Multiple Choice Questions

1. Louis XVI was sentenced to death on the charges of ____

- a) misuse of powers b) cruelty
- c) Treason d) in capability

2. Who wrote an influential pamphlet what is the third estate

- a) Mirabeau b) Abbe Sieyes
- c) Jean Paul marat d) Olympe de Gouges

3. Which of the following theories was proposed by montesquive

- a) social contract theory b) theory of division of powers
- c) theory of popular Sovereignty d) theory of democracy

4. Which of the following states share and international boundary

- a) Haryana b) Jharkhand c) Madhya Pradesh d) Uttarakhand

5. Anaro channel of see which separates two land masses is known as

- a) mound b) pass c) strait d) Valley

6. Which of the following countries is not a democracy?

- a) Great Britain b) Canada c) Myanmar d) India

7. Who passed the legal Framework order

- a) Zanu b) Robert Mugabe
- c) General Musharraf d) None of these

8. Finance raised to operate a business is called

- a) Labour b) Enterprise c) Land land d) Capital

Short Answer Type Questions

6. What is the impact of electricity on irrigation?

7. What is human capital?

8. How does democracy allow us to correct our mistakes?

9. Which proposal of the third estate was refused by King Louis XVI?

Long Answer Type Questions

10. Describe the role of citizens in democracy.

11. Write the size and extent of India.

12. Justify the naming of the Indian Ocean after India.

HINDI

किसी एक प्रमुख लेखक/कवि पर प्रोजेक्ट तैयार करें (फोल्डर में): (निम्न में से किसी एक विषय पर)

उदाहरण:

- प्रेमचंद (रोल न. 1 से 3)
- महादेवी वर्मा (रोल न. 4 से 7)
- सूरदास (रोल न. 7 से 10)

- हरिवंशरायबच्चन (रोल न. 11 से 13)

शामिल करें:

जीवन परिचय

साहित्यिक योगदान

प्रमुख रचनाएँ

भाषा और शैली

सामाजिक विषय पर परियोजना:

किसी एक सामाजिक मुद्दे पर प्रोजेक्ट बनाएं: (निम्न विषय में से एक किसी भी विषय पर)

विषय:

- बालश्रम (रोल न. 14 से 17)
- नारी सशक्तिकरण (रोल न. 18 से 20)
- पर्यावरण संरक्षण (रोल न. 21 से 23)
- डिजिटल युग और हिंदी (रोल न. 24 से 26)

शामिल करें:

विषय का परिचय

समस्या और समाधान

चित्र/पोस्टर

नारे और स्लोगन

वर्कशीट:

उपसर्ग, प्रत्यय और वाक्य भेद (अर्थ के आधार पर)

प्रश्न 1: नीचे दिए गए शब्दों में उपसर्ग पहचानिए और उसका अर्थ लिखिए:

1. उपकार
2. अनुशासन
3. परलोक
4. निराशा
5. पुनर्जन्म

प्रश्न 2: निम्नलिखित शब्दों में प्रयुक्त उपसर्ग पृथक कर लिखिए

1. दुरुपयोग
2. संपादक
3. प्रत्येक
4. अपवित्र
5. अनुभव

6. आचरण
7. अनियमित
8. अनुकूल
9. बेजोड़
10. संक्षिप्त
11. आकर्षण
12. संपन्न
13. अनवरत
14. निर्मल
15. अनुवाद

प्रत्यय

प्रश्न 3: नीचे दिए गए शब्दों में प्रत्यय पहचानिए और उसका अर्थ मूल शब्द लिखिए:

1. औद्योगिक
2. क्रोधित
3. वास्तविक
4. पढ़ाकू
5. अंकित
6. चिकनाहट
7. मिलान
8. लिखावट
9. आर्थिक
10. प्रसन्नता
11. समर्पित
12. पहाड़ी
13. प्रतिष्ठित
14. सपेरा
15. कालिमा
16. कृपालु
17. आनंदित
18. सौदागर
19. नैतिक
20. बहाव

वाक्य भेद (अर्थ के आधार पर)

प्रश्न 4: निम्नलिखित वाक्यों को पढ़कर उनका भेद बताइए:

1. क्या तुमने खाना खा लिया? _____
2. कृपया मुझे पानी दे दीजिए। _____
3. काश! वह अभी जीवित होता। _____
4. वह एक अच्छा चित्रकार है। _____
5. ओह! तुमने मुझे डरा दिया। _____
6. तुमने समय पर उत्तर दिया। _____
7. क्या यही वह पुस्तक है? _____
8. शोर मत करो! _____
9. वाह! कितना सुंदर दृश्य है! _____
10. हम सभी परीक्षा में सफल हुए। _____
11. राम स्कूल गया। _____
12. क्या तुमने खाना खा लिया? _____
13. कृपया दरवाज़ा बंद कर दो। _____
14. ओह! मैं तो गिर गया। _____

प्रश्न 5: अनौपचारिक पत्र का प्रारूप तैयार करेंगे और किन्हीं दो विषयों पर पत्र लिखेंगे।

SCIENCE

Investigatory Project for Internal Assessment

Instructions:

- There are 4 topics and you need do the project on any one topic
- You have to submit the project in your own handwriting.
- Word limit: 1000 words max.

The Project-Portfolio should include the following:

- Cover page with the title of the project, school details/details of students
- Statement of purpose/objectives/goals
- Acknowledgement
- Certificate of Completion under the guidance of the teacher.
- Index/Table of Contents
- Body (1000 words - Introduction, Description/Report/Explanation, Conclusion)
- If possible, photographs that capture the positive learning experiences of the student(s).
- List of resources/ Bibliography.

TOPICS:

1. Crop Production and Management- Irrigation, Cropping Patterns, Crop Protection and Storage.

2. Animal Husbandry- Cattle Farming, Poultry farming, Fisheries and Apiculture.
3. Pulse Polio Program.
4. Animal Tissue and Plant Tissue.

SCIENCE WORKSHEET 1 (Biology)

Cell - Basic Unit of life

Read the text carefully and answer the questions:

Plant cells, in addition to the plasma membrane, have another rigid outer covering called the cell wall. The cell wall lies outside the plasma membrane. The plant cell wall is mainly composed of cellulose. The nucleus has a double-layered covering called a nuclear membrane. The nuclear membrane has pores that allow the transfer of material from inside the nucleus to its outside, that is, to the cytoplasm. The nucleus contains chromosomes, which are visible as rod-shaped structures only when the cell is about to divide.

Chromosomes contain information for the inheritance of characters from parents to the next generation in the form of DNA. The nucleus plays a central role in cellular reproduction, the process by which a single cell divides and forms two new cells.

i. Cellulose is a complex substance which provides:

- a) both mechanical support and structural strength to plants
- b) mechanical support
- c) structural strength to plants
- d) None of these

ii. Chromosomes are made up of:

- a) Protein
- b) RNA
- c) DNA
- d) DNA and protein

iii. Plasmolysis in a plant cell is defined as:

breakdown (lysis) of the plasma membrane in hypotonic medium

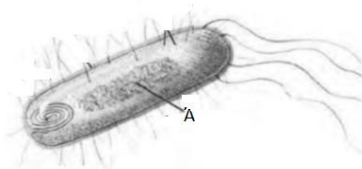
shrinkage of cytoplasm in hypertonic medium

shrinkage of nucleoplasm

swelling of cytoplasm

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

iv. Identify (A) in the given diagram



- a) nucleic acid
- b) nucleus
- c) nucleolus
- d) nucleoid

v. Select the odd one out.

- a) Membranes are made of organic molecules like proteins and lipids.
- b) Molecules soluble in organic solvents can easily pass through the membrane.
- c) Plasma membranes contain chitin sugar in plants.
- d) The movement of water across a semi permeable membrane is affected by the number of substances dissolved in it.

2. Following are a few definitions of osmosis. Read carefully and select the correct definition.

- a) Movement of solvent molecules from its higher concentration to lower concentration
- b) Movement of solvent molecules from higher concentration to lower concentration of solution through a permeable membrane
- c) Movement of solute molecules from lower concentration to higher concentration of solution through a semi permeable membrane
- d) Movement of water molecules from a region of higher concentration to a region of lower concentration through a semi permeable membrane

3. Which out of the following is living?

- a. Plasma membrane
- b. Cell-wall
- c. Protoplasm
- d. Nucleus

- a) (a), (c) and (d) are correct
- b) (b) and (c) are correct
- c) All of these
- d) (a) and (b) are correct

4. What is the full form of ATP?

- a) Adeno triphosphorous
- b) Adenosine triphosphate
- c) Adenosine tetraphosphate
- d) Adeno triphosphate

5. What is the structural and fundamental unit of life? Who discovered it?

- a) Tissue, Anton Von Leewenhoek
- b) Cell, Robert Hooke
- c) Plant cell, Benda
- d) Animal cell, Camilo Golgi

6. The cell organelles (other than the nucleus) which contain DNA are:

- a) Plastids and lysosomes

- b) Golgi apparatus and lysosomes
- c) Plastids and mitochondria
- d) Mitochondria and Golgi apparatus

7. Assertion (A): A cell membrane shows fluid behaviour.

Reason (R): A membrane is a mosaic of lipids and proteins.

- 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.

8. Which structure is called little nucleus?

9. Which organelles other than nucleus contain DNA?

10. What is the function of nuclear membrane?

11. What is the role of ribosomes and Golgi body?

12. What is nucleoid? How it is different from the nucleus of eukaryotic cell?

13. How are the following related to each other?

- i. Chromatin network and chromosomes
- ii. Chloroplast and chlorophyll
- iii. Genes and DNA

14. i. State what will happen when human red blood cells are placed in a hypotonic salt/sugar solution.

ii. Why plant cells shrink when kept in a hypertonic solution.

15. Differentiate between Mitosis and Meiosis.

SCIENCE WORKSHEET 2 (Physics)

Motion

Q-1 Tick the correct option.

(i) Motion represented in the following graph is:



- | | |
|--------------|-------------------|
| A) Uniform | (B) Accelerated |
| (C) Retarded | (D) None of these |

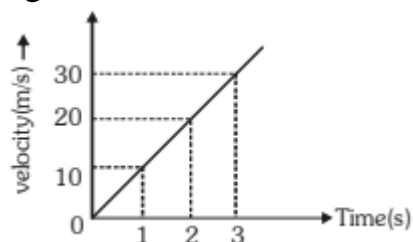
(ii) Which of the following statement is not true?

- A. The motion along circular path is accelerated
- B. A force is needed to produce a circular motion

C. The direction of velocity along circular motion remains unchanged

D. A body moving along circular path may have uniform speed

(iii) Velocity-time graph of a body moving with uniform acceleration is shown in the diagram. The distance travelled by the body in 3 seconds is



A) 90 m

(B) 45 m

(C) zero

(D) 10 m

(iv) The average velocity of a body is equal to the mean of its initial and final velocities. The acceleration of the body is:

A. Uniform

B. Variable

C. Uniformly variable

D. Zero

Q-2 Answer the following questions.

A. An object is sliding down on an inclined plane. The velocity changes at a constant rate from 10 cm/s to 15 cm/s in 2 seconds. What is its acceleration?

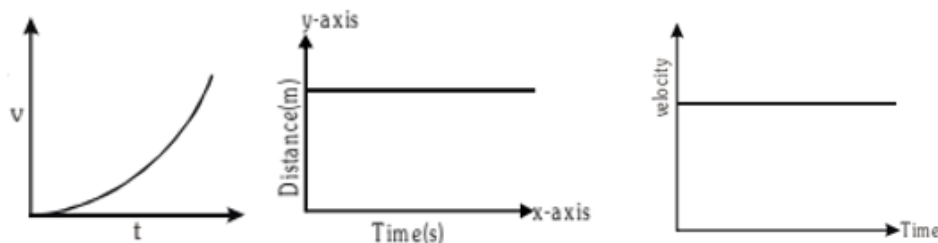
Or

Comparison between Speed and Velocity. (2-2 each).

B. Joseph jogs from one end A to the other end B of a straight 300 m road in 2 minutes 30 seconds and then turns around and jogs 100 m back to point C in another 1 minute. What are Joseph's average speeds and velocities in jogging (a) from A to B and (b) from A to C?

Q-3 Answer the following questions. (Any three questions) (Each 3 marks)

A. Identify the state of an object by looking at the following graphs.



B. Usha swims in a 90 m long pool. She covers 180 m in one minute by swimming from one end to the other and back along the same straight path. Find the average speed and average velocity of Usha.

C. A train starting from rest attains a velocity of 72 km/h in 5 minutes. Assuming that the acceleration is uniform, find

- i. The acceleration and,
- ii. The distance travelled by the train for attaining this velocity.

D. A ball is gently dropped from a height of 20 m. If its velocity increases uniformly at the rate of 10 m s^{-2} , with what velocity will it strike the ground? After what time will it strike the ground?

Q4. Following questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (3 Marks)

- (a) Both Assertion and Reason are correct, and reason is the correct explanation for Assertion.
- (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) Both Assertion and Reason are false.

i. **ASSERTION-** Displacement of an object may be zero even if the distance covered by it is not zero.

REASON- Displacement is the shortest distance between the initial and final position.

ii. **ASSERTION-** The speedometer of a car measures the instantaneous speed of the car.

REASON- Average speed is equal to the total distance covered by an object divided by the total time taken.

iii. **ASSERTION-** The accelerated motion of an object may be due to change in magnitude of velocity or direction or both of them.

REASON- Acceleration can be produced only by change in magnitude of the velocity. It does not depend the direction.

SCIENCE WORKSHEET 3 (Chemistry)

Chapter 1: Matter in Our Surroundings

Worksheet

Section A – Multiple Choice Questions (1 mark each)

(Attempt all questions)

1. Which of the following has the highest kinetic energy?
a) Ice b) Water c) Steam d) Salt
2. The rate of evaporation increases with:
a) Decrease in temperature b) Increase in humidity
c) Increase in surface area d) Decrease in wind speed
3. Which of the following statements is true?
a) Solids have fixed shape and volume
b) Liquids have fixed shape and volume
c) Gases have fixed volume but no shape
d) Solids can be compressed easily

4. The process of conversion of gas into liquid is called:

- a) Sublimation b) Condensation c) Evaporation d) Fusion

Section B – Assertion and Reason Questions (2 marks each)

(Attempt both questions. Choose from:

- 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)

5. Assertion (A): Gases can be compressed easily.

Reason (R): The particles of gases are tightly packed.

6. Assertion (A): Water at 100°C can exist in both liquid and vapour state.

Reason (R): At boiling point, both the states coexist.

Section C – Very Short Answer Type Questions (2 marks each)

(Answer in 2–3 lines)

7. Why does evaporation cause cooling?

8. Define latent heat of vaporization.

Section D – Short Answer Type Questions (3 marks each)

(Answer in 4–5 lines)

9. State the differences between evaporation and boiling (any three points).

10. Explain how pressure and temperature affect the state of matter.

Section E – Long Answer Type Question (5 marks)

11. Compare the three states of matter – solid, liquid, and gas – on the basis of the following properties:

- Shape and volume
- Inter-particle space
- Inter-particle force of attraction
- Compressibility
- Flow (fluidity)

Section F – Case Study Based Question (4 marks)

Read the passage carefully and answer the following questions:

Riya was boiling water in a kettle. After a few minutes, she noticed that droplets of water appeared on the lid of the kettle. Her brother observed steam coming out and asked her what caused it. Riya explained that heat was changing the state of water from liquid to gas and then again into tiny droplets.

12. a) What process caused the steam to form? (1 mark)

b) Why did droplets form on the lid of the kettle? (1 mark)

c) Name the two changes of state observed in the activity. (1 marks)

d) Explain how this activity proves that change of state is a physical change. (1 mark)

MATHEMATICS

PROJECT WORK

Instructions: -

Select **any one** topic from the list

Project file should contain- Index, Acknowledgement, Certificate, Introduction, Real life application, Concepts , Historical note, Bibliography.

TOPICS -

1. Real numbers
2. Polynomial
3. Coordinate geometry
4. Heron's formula
5. Lines and angles

WORKSHEET

(CH-1) NUMBER SYSTEM

1. Every rational number is also
(a) a natural number (b) a whole number (c) an irrational number (d) a real number
2. The decimal form of **56/1000**
(a) 0.56 (b) 560 (c) 0.056 (d) 5.6
3. π is a
(a) whole number (b) irrational number (c) integer (d) rational number
4. The decimal form of **3/11** is
(a) $0.27\overline{}$ (b) $0.27\overline{}$ (c) 0.27 (d) $0.272\overline{}$
5. The product of two irrational numbers is
(a) always a rational number
(b) always an irrational number
(c) always an integer
(d) sometimes rational & sometimes irrational
6. Write 5 rational numbers between 5 & 6
7. Write 4 irrational numbers between $\sqrt{3}$ & $\sqrt{5}$
8. Show that $1.377\overline{}$ can be in the form p/q (rational number)
9. Is $\sqrt{441}$ an irrational number. Give reason.
10. Find the decimal representation of $8/3$
11. Simplify:
(i) $(3 + \sqrt{3})(2 + \sqrt{2})$ (ii) $(\sqrt{11} - \sqrt{7})(\sqrt{11} + \sqrt{7})$ (iii) $(\sqrt{5} + \sqrt{2})^2$
(iv) $(2\sqrt{2} - 3\sqrt{3} + \sqrt{11}) + (5\sqrt{3} - 2\sqrt{2} + 6\sqrt{11})$ (v) $16\sqrt{15} \div 4\sqrt{3}$ (vi) $2\sqrt{5} \times 6\sqrt{5}$
12. Rationalise the denominator :
(i) $5/(\sqrt{3} - \sqrt{5})$
(ii) $(7-3\sqrt{2})/(7+3\sqrt{2})$

(iii) $(5 + \sqrt{2}) / 3\sqrt{2}$

(iv) $1 / (2 - \sqrt{3})$

(v) $\sqrt{2} / (\sqrt{2} + \sqrt{3})$

13. Find a and b if

(i) $a - b\sqrt{3} = (2 - \sqrt{3}) / (2 + \sqrt{3})$

(ii) $(\sqrt{11} - \sqrt{7}) / (\sqrt{11} + \sqrt{7}) = a - b\sqrt{77}$

(iii) $(\sqrt{5} + \sqrt{3}) / (\sqrt{5} - \sqrt{3}) = a + b\sqrt{15}$

(iv) $(\sqrt{2} + \sqrt{3}) / (3\sqrt{2} - 2\sqrt{3}) = a - b\sqrt{6}$

14. Find the value of $x^2 + \frac{1}{x^2}$ if : (i) $x = 2 + \sqrt{3}$ (ii) $x = 4 + \sqrt{15}$ 15. If $x = (\sqrt{7} - \sqrt{6}) / (\sqrt{7} + \sqrt{6})$ and $y = (\sqrt{7} + \sqrt{6}) / (\sqrt{7} - \sqrt{6})$, find the value of $x^2 + y^2$

16. Solve :

(i) $\left(16^{-\frac{1}{5}}\right)^{\frac{5}{2}}$

(ii) $(32^{-3})^{\frac{1}{5}}$

(iii)

$\sqrt[3]{(343)^{-2}}$

(iv) $(0.001)^{\frac{1}{3}}$

(v) $\frac{(25)^{\frac{3}{2}} \times (243)^{\frac{3}{5}}}{(16)^{\frac{5}{4}} \times (8)^{\frac{4}{3}}}$

(vi)

$\left(\frac{\sqrt{2}}{5}\right)^8 \div \left(\frac{\sqrt{2}}{5}\right)^{13}$

CHAPTER – POLYNOMIALS1. Find the value of $p(2)$ if $p(x) = x^3 - 2x^2 + x + 1$.2. Factorize: $x^2 + 5x + 6$.3. Find the zeros of the polynomial $p(x) = x^2 - 4x + 3$.4. Simplify: $(2x + 3)(x - 2)$.5. Find the remainder when $p(x) = x^3 + 2x^2 - x + 1$ is divided by $x - 1$.6. Factorize: $6x^2 + 11x + 3$.7. Find the value of k if $x + 2$ is a factor of $p(x) = x^2 + kx + 4$.8. Simplify: $(x + 2)(x - 3)(x + 1)$ 9. Find the zeros of the polynomial $p(x) = x^2 + 2x - 3$ 10. Factorize: $x^3 + 8$ 11. Find the value of $p(-1)$ if $p(x) = 2x^3 - x^2 + 3x + 1$.12. Simplify: $(3x - 2)(2x + 5)$ 13. Factorize: $x^2 - 7x + 12$ 14. Find the remainder when $p(x) = x^4 - 2x^3 + x^2 + 1$ is divided by $x + 1$.15. Find the zeros of the polynomial $p(x) = x^2 - 2x - 8$ 16. Factorize: $9x^2 - 16$ 17. Simplify: $(2x + 1)(x^2 - 3x + 2)$ 18. Find the value of k if $x - 1$ is a factor of $p(x) = x^2 - kx + 2$ 19. Factorize: $x^3 - 27$

20. Find the zeros of the polynomial $p(x) = x^2 + x - 6$.

COMPUTER

Assignment Title:

"Exploring Effective Communication in Daily Life"

Objective:

To help students understand the importance of communication skills and demonstrate their use through real-life examples and creative presentations.

1. Which of the following is not a method of communication?

- a) Verbal
- b) Non-verbal
- c) Logical
- d) Visual

2. Which skill helps in understanding others' feelings and responding accordingly?

- a) Writing Skill
- b) Listening Skill
- c) Empathy
- d) Speaking Skill

3. IT stands for:

- a) International Trade
- b) Information Technology
- c) Internal Technology
- d) Indian Telecom

4. Emails are an example of which type of communication?

- a) Verbal

b) Written

c) Non-verbal

d) Visual

5. Which of the following is a career in the IT industry?

a) Carpenter

b) Doctor

c) Web Developer

d) Teacher

(Written Work)

Answer the following questions in your notebook.

1. Define Communication.

2. List and explain the 7 Cs of effective communication.

3. Differentiate between Verbal and Non-verbal communication with examples.

4. Write a short paragraph (100-150 words) on: “Why good communication skills are important in school and future career.”

5. Prepare a chart or mind map showing types of communication.

IT Project (Holiday Homework)

ELEMENTS OF COMMUNICATION

Material required:- chart paper ,colours and pencil

Procedure:-Make a chart showing the elements of communication in the communication process cycle.