

Holiday Homework: Class 11 Informatics Practices

Part 1: Data Types and Variables (20 Marks)

Fill in the blanks:

- In Python, a variable is a _____ that holds a value.
- The data type of a variable determines the kind of _____ it can hold.
- In Python, the data types for text, integers, and floating-point numbers are _____, _____, and _____, respectively.

Write Python code for the following:

- Create a variable named age that holds your age as an integer.
- Create a variable named name that holds your name as a string.
- Create a variable pi that holds the value of pi (3.14159) as a float.

Identify the data types:

For each of the following, identify the Python data type.

- "Hello, World!"
- 4.56
- True
- 12345
- None

Short Answer:

- What is the difference between int and float?
- Can a string be added to an integer? If not, how would you handle it?

Part 2: Operators

Match the operator with its purpose:

Operator	Purpose
+	a. Division (result is float)
==	b. Addition or Concatenation
//	c. Logical comparison
%	d. Modulo (remainder)
>	e. Comparison greater than

Write Python code:

- Write a Python program to add two numbers using the + operator.
- Write a Python program that checks if a number is divisible by 5 using the modulo operator (%).

c. Write a Python program that compares two numbers and prints if the first number is greater than the second using >.

d. Create a program that uses == to check if two input strings are equal.

Short Answer:

a. What does the // operator do in Python?

b. What will be the output of 5 + "hello" in Python?

Part 3: Loops

Complete the following code snippets:

a. Write a Python program using a for loop to print all even numbers between 1 and 20.

b. Write a Python program using a while loop to print the numbers 1 to 10.

Theory:

a. What is the difference between a for loop and a while loop in Python?

b. What is an "infinite loop"? Write an example where a while loop might become infinite.

Holiday Homework: Class 11 Computer Science

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- a. "Hello, World!"
- b. 4.56
- c. True
- d. 12345
- e. None

Short Answer:

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Short Answer:

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a. What is the difference between a for loop and a while loop in Python?

b. What is an "infinite loop"? Write an example where a while loop might become infinite.

Class 12 CS – Holiday Homework

Section A: File Handling (Python)

1. Write a Python program to create a text file "students.txt" and store the names and marks of 10 students (entered by the user).
2. Write a program to read the file "students.txt" and display only the names of students who scored more than 75.
3. A file "story.txt" contains some text. Write a Python program to count and display:
 - Total number of words
 - Total number of lines
 - Total number of vowels
4. Write a program to copy the contents of one file "data.txt" into another file "copy.txt".

Section B: Computer Networks (Theory)

Answer the following questions:

1. What is the difference between circuit switching and packet switching? Give examples.
2. Define the following terms:
 - IP Address
 - DNS
 - MAC Address
 - URL
3. Differentiate between:
 - Hub and Switch
 - HTTP and HTTPS
 - IPv4 and IPv6
4. Explain the following topologies with neat diagrams:
 - Bus
 - Star
 - Mesh

Section C: Functions (Python)

1. Write a user-defined function `isPrime(n)` that returns `True` if `n` is prime, otherwise `False`. Use it to display all prime numbers between 50 and 100.
2. Write a function `reverse_words(sentence)` that takes a sentence and returns it with words in reverse order. Example:
 - Input: "I love Python"
 - Output: "Python love I"
3. Write a function `factorial(n)` using recursion and display the factorial of numbers from 1 to 10.
4. Create a menu-driven program using functions to:
 - Add two numbers
 - Subtract two numbers
 - Multiply two numbers
 - Divide two numbers

Subject: Informatics Practices

Section A: Computer Networks (Theory)

Answer the following questions:

1. Define the following terms with suitable examples:
 - PAN
 - LAN
 - MAN
 - WAN
2. Differentiate between:

Subject: Informatics Practices

Section A: Computer Networks (Theory)

Answer the following questions:

1. Define the following terms with suitable examples:

- PAN
- LAN
- MAN
- WAN

2. Differentiate between:

- Router and Switch
- Internet and Intranet
- URL and IP Address

3. Explain the following:

- Bandwidth
- Modem
- Cloud Computing
- Packet Switching

4. Draw and explain **Star Topology** and **Bus Topology**. Mention one advantage and one disadvantage of each.

Section B: SQL (Practical)

Consider the following table **STUDENT**:

RollNo	Name	Class	Section	Marks	DOB
1	Ankit	12	A	85	2006-01-15
2	Priya	12	B	92	2006-03-10
3	Rohan	12	A	76	2006-05-20
4	Sneha	12	C	88	2006-07-11
5	Aman	12	B	64	2006-09-25

Write SQL queries for the following:

1. Display the names and marks of students who scored more than 80.
2. Display all students of section "A".
3. List names of students in ascending order of Marks.
4. Show the average marks of each Section.
5. Count the number of students in Class 12.
6. Display the details of students born after '2006-05-01'.
7. Update the marks of Aman to 70.
8. Delete the record of Sneha.
9. Add a new student: RollNo=6, Name=Rahul, Class=12, Section=C, Marks=90, DOB='2006-12-12'.
10. Display the highest marks scored in Class 12.

५ वाक्षा - दसुवी ५

५ शरदकालीन गृहकार्य ५

- ★ पोर्ट फोलियो तैयार करें।
- ★ मासिक परीक्षा का दोहरा करें।
- ★ ~~पंचांग~~ 5 औपचारिक 5 अनौपचारिक पत्र लिखें।
- ★ अलंकार के पाँच-पाँच उदाहरण लिखें।
उपमा, रूपक, उत्प्रेक्षा, मानवीकरण, आतिशयोक्ति

वाक्षा - नौवी
शरदकालीन गृहकार्य

- ★ पोर्ट फोलियो तैयार करें।
- ★ समास अलंकार उपसर्ग, प्रत्यय तथा वाक्यों के भेद आदि व्याकरण का दोहराएं।
- ★ 3 औपचारिक पत्र 3 अनौपचारिक पत्र लिखें।
- ★ भारतीय त्योहार एवं संरचना पर प्रोजेक्ट बनाएं।

७ कक्षा आवृत्ति ५

~~संस्कृत~~ शास्त्रकालीन अवधारणा

- ★ अनुच्छेद लेखन - दशहरा, ~~सं~~ दुर्गा पूजा
- ★ भारतीय संस्कृति एवं त्योहारों पर प्रभावित
व्यंग्य ।
- ★ संस्कृति, संवर्धन, विविधता, शिक्षा, व्यंग्य का
दोहराव और व्यंग्य में लिखें ।

शरदकालीन अवकाश गृहकार्य

कक्षा - 6 (हिन्दी)

❶ सभी प्रश्न करने अनिवार्य हैं।

* दिए गए प्रत्येक कार्य को

प्रश्न-1. 'मैया मैं नहीं माखन खायो', पाठ के आधार पर बताइये - श्री कृष्ण कौन थे ? उन्होंने ग्वालियों व गोपियों संग कैसे लीला की है -
नित संहित जानकारी प्राप्त करके लिखिए।

प्रश्न-2. महाराजा प्रताप कौन थे ? उनके बारे में इंटरनेट या पुस्तकों से जानकारी प्राप्त करके लिखिए।

प्रश्न-3. विश्व के मानचित्र पर निम्न लिखित देशों को चिह्नित करके रंग भरें -
भारत, केन्या, हिन्द महासागर, मॉरीशस, श्री लंका

प्रश्न-4. भूमध्य रेखा और देशान्तर रेखाएँ कौन होती हैं ? पृथ्वी का चित्र बनाकर प्रकटन करो और लिखो कि इन दोनों में क्या अन्तर है ?

प्रश्न-5. संवाद लेखन किसे कहते हैं ? ऊपर अपने घास-पास अपनी माता, बहन या डॉक्टर से संवाद करके उसे अपनी कॉपी में लिखिए।

शारदकालीन अवकाश गृहकार्य

कक्षा - 7 (टिप्पणी)

- * सही प्रश्न करने अनिवार्य है।
- * दिए गए कार्य को

प्रश्न-1. 'गिरिवर कविराय' की कुंडलिया - कविता में दी गई दोनों कुंडलियों को गाकर अभ्यास करें तथा कॉपी में लिखकर भावार्थ लिखिए।

प्रश्न-2. 'वर्षा कटार' कविता को पढ़कर लिखना है तथा उसका अर्थ लिखना है। वर्षा का प्राकृतिक दृश्यों के साथ चित्र बनाकर ^{समर्थन} ~~सम~~ दिखाना है।

प्रश्न-3. अपने माता - पिता या दादा - दादी से पूछें कि आपके क्षेत्र में कौन से लोकगीत गाए जाते हैं।

प्रश्न-4. संवाद लेखन किसे कहते हैं? अपने भास - पास के लोगों में माता - पिता ^{पिता} ~~पिता~~ (2) शिक्षक - छात्र (3) डॉक्टर - मरीज विषय पर संवाद लेखन कीजिए।

प्रश्न-5. किसी ~~छोटे~~ विषय पर अनुच्छेद लेखन कीजिए।

Holiday Homework

CLASS → VI (A & B)

- Q1) Write 10 sentences using different types of "Nouns" —
- (i) PROPER NOUN
 - (ii) COMMON NOUN
 - (iii) COLLECTIVE NOUN
 - (iv) ABSTRACT NOUN
- Q2) Pick 10 new/difficult words from your textbook — (Poem → "The Raven and The Fox")
Write their meaning and use each to frame a sentence.
- Q3) Write a short story (120-150) words on — "The Day I Met a Talking Animal".
- Q4) Write a letter to your friend telling about how you plan to spend your holidays.

Holiday Homework
CLASS - VII (A & B)

- Q1) Write a letter to your cousin/friend describing how you spend your holiday.
- Q2) Write a paragraph on "A Place I visited During Holiday".
- Q3) Find and write two examples of each -
(i) Metaphor
(ii) Simile
- Q4) Write 10 sentence on "Present Tense".
- Q5) How many types of sentence are there?
Write 5 sentences from each of the types?

Holiday Homework

Classes VIII (A & B)

- Q1) Write a diary entry on the day "you helped someone in need."
- Q2) Write a letter to your Principal requesting permission to organize a "Book Fair" in your school.
- Q3) Write a Notice for your class about a "Holiday Reading Challenge".
- Q4) Write 10 sentences in "Present Tense".
(Simple / Continuous / Perfect / Perfect Continuous)
- Q5) Write down 20 new words with "meaning" and "make sentences" from the word.
(From your textbook Poornima)

HOLIDAY HOMEWORK

Classes IX (A+B)

1. Writing Skills and Journaling — Complete both the tasks given below —

a) Descriptive Paragraph — Write a descriptive paragraph (about 100-120 words) on "My Happiest Day of Autumn Break". Focus on using vivid adjectives, adverbs and sensory details to make your experience come alive for the reader.

b) Diary Entry — Write a diary entry about a time when you had to choose a gift for your mother and the thought process behind your decision. The entry should reflect your feelings and the significance of the moment.

2. Grammar and Vocabulary —

a) Read the passage below and identify the errors —

"The school principal has announce the summer vacation dates. The students is very excited. They has been waiting for this moment for months. The students will get a chance to relax and enjoy with there family and friends."

Your task — (i) identify the errors

In the passage given above.

(ii) Correct the errors and re-write the passage.

b) Vocabulary Log - Maintain a vocabulary log throughout your Autumn Holidays. Each day, find and list at least two new words from a newspaper, book, or online article. For each word, write down:

- The word itself
- Its meaning
- A sentence using the word
- A synonym.

HOLIDAY HOMEWORK

Classes X (A+B)

Previous Year Questions

(Section A)

Q) Answer the following questions in 30-40 words (2 marks each).

1. How did the young seagull's parents try to teach him to fly in "His First Flight"?
2. What is the theme of the poem "Fire and Ice"? How does the poet use these elements symbolically?
3. Why did Kisa Gotami go from house to house after her son's death? What lesson did she learn?
4. What ~~are~~^{was} the "secrets" that Amanda's mother was trying to protect her from?
5. How did the people of Coorg live? What are they known for?
6. Why was the baker an important figure in the Goan village?

(SECTION-B)

Q) Answer the following questions in 100-120 words. (5 marks each).

1. "A single moment of courage can change a life forever." Justify this statement in the context of Nelson Mandela's "Long Walk to Freedom."

2. Imagine you are Valli. Write a diary entry describing your first bus journey and the lessons you learned from it.

3. How does the story "A Triumph of Surgery" highlight the theme of excessive pampering? What role does Mrs. Pumphrey play in this?

शारदकालीन अवकाश गृहकार्य

कक्षा - 11 (हिन्दी)

प्रश्न - 1. रोजगार संबंधी आवेदन पत्र किस प्रकार लिखा जाता है -
कार्यालय को व विद्यालय के लिए हिन्दी शिक्षा दे लु आवेदन
पत्र लिखिए।

प्रश्न 2. क्लामक कविता - मेरे हो गिरधर गोपाल, का भावार्थ लिखिए।

प्रश्न 3. घर की याद या चंपा काले - काले असर नहीं चिन्तनी है, में कवि
के मनोभावों को संक्षेप में लिखिए।

प्रश्न 4. 'आप्पू' के साथ दस साल, पाठ का सारांश अपने शब्दों में लिखिए।

प्रश्न 5. 'लेता मंगेशकर' पाठ पात्र परिचय व मुख्य चरित्र संक्षेप में लिखिए।

प्रश्न 6. 'काले मेघा पानी दे' पाठ के मुख्य विचार लिखिए।

प्रश्न 7. किसी सामाजिक या पर्यावरणीय विषय पर 100-120 शब्दों में निबंध
लिखिए) जैसे - पर्यावरण प्रदूषण, विद्यालय का वातावरण

बीरदकालीन अवकाश गृहकार्य

कक्षा-12

(हिन्दी)

- प्रश्न-1. कैमरे में बंद अपाहिज कविता का सारांश लिखिए।
- प्रश्न-2. 'सिल्वर वैरिंग' के मुख्य पात्रों और कथानक का 8-10 वाक्यों में संक्षिप्त परिचय दीजिए।
- प्रश्न-3. 'पहलवान की दोलक' कहानी पढ़कर उसमें नृत्य एवं परम्परा के महत्त्व पर वाक्य लिखिए।
- प्रश्न-4. एक औपचारिक पत्र लिखिए जिसमें विद्यालय में पर्यावरण संरक्षण के लिए सुझाव लिखा हो।
- प्रश्न-5. हिन्दी उद्योजना कार्य करना।

Holiday Homework English

(Class - XI)

26/9/25
m m

- Create a story on your own putting your thoughts and ideologies and give moral ~~to~~ to the story. Add quotes, characters, facts with a proper plot. You can also put your interpretation portraying day to day events.
- Write a biography of your grandparents with reference to the chapter "The Portrait of the Lady". You can draw pictures or paste, relate with the facts and concerns of the chapter.
- Write a notice on your school organizing a football match on this October. You are the school captain. Inform the concerned team with their duties and responsibilities.

Holiday Homework English

(Class - XII)

- Draft advertisement of the following topic:-
 - ① Sale and Purchase
 - ② Lost and Found
 - ③ Situation Vacant.

• Do you have any enemy? How to get rid of enemy? Mention your safety measures to be taken in order to live a peaceful life.

• What are the common issues faced by the aged in the current times. Write in reference to the ~~poem~~ poem 'My Mother At Sixty Six'. Add your ideologies, facts, concerns etc. You can draw or paste picture, dialogue make it creative?

Class 10 – Social Science Holiday Homework

Session: 2025–26

Subjects Included: History, Geography, Political Science, and Economics

HISTORY

Chapters Covered:

1. Nationalism in India
2. The Rise of Nationalism in Europe

Assignments:

1. Prepare a timeline chart showing the major events of the Indian National Movement from 1915–1947.
2. Write a short essay (200 words) on 'The Role of Mahatma Gandhi in India's Struggle for Independence.'
3. Collect pictures of 5 Indian freedom fighters and write one contribution of each.
4. Create a comparison table between the French Revolution and the Unification of Germany.

GEOGRAPHY

Chapters Covered:

1. Resources and Development
2. Agriculture
3. Water Resources
5. Prepare a map work showing major soil types of India and crops grown in each region.
6. Write a short note on 'Conservation of Water Resources in India.'
7. Visit your nearby agricultural area or speak to a farmer and write a report (150 words) on 'Major crops and methods of irrigation used.'
8. Make a poster on the theme 'Save Water, Save Life.'

POLITICAL SCIENCE (CIVICS)

Chapters Covered:

1. Power Sharing
2. Federalism
3. Gender, Religion, and Caste
9. Prepare a chart showing the distribution of power in the Indian federal system (Union, State, and Local Governments).
10. Write a paragraph on 'How power sharing helps in maintaining unity in diversity.'
11. Interview 3 people (parents/teachers/neighbors) and collect their opinions about gender equality in society—write your observations in 150 words.

ECONOMICS

Chapters Covered:

1. Development
2. Sectors of the Indian Economy
12. Make a table showing differences between developed and developing countries with examples.
13. Write a short report (100–150 words) on 'Contribution of agriculture, industry, and service sector to India's GDP.'
14. Prepare a creative chart on 'Sustainable Development Goals (SDGs)'—mention any 5 goals and explain briefly.

GENERAL INSTRUCTIONS

- The work should be done neatly in separate subject notebooks or charts.
- Use maps, pictures, and colored pens for better presentation.
- Submit your homework by [insert submission date].
- Best creative and well-presented work will be displayed on the class bulletin board.

Class 9 – Social Science Holiday Homework (Autumn break)

Session: 2025–6

Subjects Included: History, Geography, Political Science, and Economics

HISTORY

Chapters Covered:

1. The French Revolution
2. Socialism in Europe and the Russian Revolution

1. Prepare a timeline chart showing important events of the French Revolution (1789–1799).
2. Write a paragraph on 'The impact of the French Revolution on the modern world.'
3. Collect and paste pictures of important leaders of the Russian Revolution and write two lines about each.
4. Compare Capitalism and Socialism in a table format (minimum 4 points).

GEOGRAPHY

Chapters Covered:

1. India – Size and Location
2. Physical Features of India
3. Drainage

5. Prepare a map of India showing the major physical divisions and important rivers.
6. Write a short note on 'The importance of the Himalayas for India.'
7. Make a model or chart on 'The Physical Divisions of India.'
8. Collect information and write a short paragraph on any one river system of India (e.g., Ganga or Brahmaputra).

POLITICAL SCIENCE (CIVICS)

Chapters Covered:

1. What is Democracy? Why Democracy?
2. Constitutional Design

9. Prepare a poster showing the main features of democracy.
10. Write a short note on 'Nelson Mandela and the struggle against apartheid.'
11. Prepare a mind map of the features of the Indian Constitution.
12. Conduct a survey of 5 people (family or neighbors) and ask what democracy means to them. Record their answers and write a short reflection (100 words).

ECONOMICS

Chapters Covered:

1. The Story of Village Palampur

2. People as Resource

13. Write a summary of economic activities of the people of Palampur village.
14. Make a chart showing the difference between physical and human capital with examples.
15. Interview any 2 working people (farmer, teacher, shopkeeper, etc.) and write how they contribute to the economy.
16. Write a short essay on 'Education and health as human resources.'

GENERAL INSTRUCTIONS

- All work should be done neatly in your Social Science notebook or on A4-size colored sheets.
- Use maps, pictures, and charts to make your work attractive.
- Submit your work by [insert submission date].
- Creativity and presentation will carry additional marks.

QHE

PM SHRI KENDRIYA VIDYALAYA, LOKRA

HOLIDAY HOMEWORK FOR CHEMISTRY -XI

1. In a reaction



Identify the limiting reagent in the following reaction mixtures.

(i) 300 atoms of A + 200 molecules of B

(ii) 2 mol of A + 3 mol of B

(iii) 100 atoms of A + 100 molecules of B

(iv) 5 mol of A + 2.5 mol of B

(v) 2.5 mol of A + 5 mol of B

1. (vi) 3 gm of A + 5 gm of B

2. Read the passage given below and answer the following questions:

Hybridisation helps us to understand the geometry of molecules. This is because hybridized orbitals are directed in space in some preferred direction to have a stable arrangement, which determines the geometry. The presence of lone pairs in addition to bond pairs distorts the geometry due to repulsion.

a) What is the hybridization of Sulphur in SF_4 ?

b) Give an example of a molecule having trigonal planar geometry.

c. Give the shape of the molecule having four bond pairs and one lone pair.

Distinguish between coaxial and collateral overlapping with an example.

3. a. The bromine atom possesses 35 electrons that contain 6 electrons in 2p orbital, 6 electrons in 3p orbital and 5 electrons in 4p orbital. Which of these electrons experiences the lowest effective nuclear charge?

b. The arrangement of the orbitals is based upon the energy based on the $(n+l)$ value. The lower the value of the $(n+l)$, the lower the energy found. For orbitals with equal values of $(n+l)$, the orbital with the lower value of n will have the lower energy.

1. Based upon the above-given information, arrange the following orbitals in the increasing order of their energy

(a) 1s, 2s, 3s, 2p

(b) 4s, 3s, 3p, 4d

(c) 5p, 4d, 5d, 4f, 6s

(d) 5f, 6d, 7s, 7p

c. Wavelengths of the following different radiations are given below :

$$\lambda(A) = 300 \text{ nm}$$

$$\lambda(B) = 300 \mu\text{m}$$

$$\lambda(C) = 3 \text{ nm}$$

$$\lambda(D) = 30 \text{ \AA}$$

Arrange the following radiations in the increasing order of their energies.

d. The Balmer series in the hydrogen spectrum corresponds to the transition from $n_1 = 2$ to $n_2 = 3, 4, \dots$. This series lies in the visible region. Calculate the wave number of lines associated by the transition in the Balmer series if the electron moves to $n = 4$ orbit. ($R_H = 109677 \text{ cm}^{-1}$)

4. Read the passage given below and answer the following questions:
In the periodic table electronegativity increases from left to right in a period and decreases from top to bottom in a group. The non-metallic character of an element is directly related to the electronegativity while the metallic character is inversely related to it.

- a. The element with maximum electronegativity belongs to
- (a) Period-1, Group-18
 - (b) Period-2, Group-17
 - (c) Period-3, Group-17
 - (d) Period-2, Group-1.
- b. Which of the following groups contains metals, non-metals as well as metalloids?
- (a) Group-1
 - (b) Group-17
 - (c) Group-14
 - (d) Group-2.

SS

Autumn break holiday homework (2025- 26)

Subject- science
class- 8

1) Prepare a model or chart (A4 size paper) showing the interrelation between Force, Pressure, and Motion in daily life (example: how an airplane flies, how a rocket launches, or how a horse pulls a cart). Add pictures, diagrams, and short explanations.

2) Make a table of some common communicable diseases that affect humans which spread through the air contaminated water and food.

(Take reference from your textbooks page number 33 and 34)

3. Activity:

- Find and write about **any one Indian scientist** and their contribution

4) Frame five questions from topic: **Pressure, winds, storms and cyclones** in which includes **Why, When, How long, Where** and **Why**.

Also write answers.

5) answer the questions.

- How are vaccines helpful in preventing diseases?
- Mention two uses of microorganisms in daily life.
- Fill in the blanks:**
 - _____ is the disease caused by deficiency of iodine.
 - A disease that can spread from one person to another is called _____.
 - Vitamin C helps in _____ healing.
- Answer briefly:**
 - What is a balanced diet?
 - List two habits that help maintain good hygiene.
 - Make a weekly **diet chart** that includes all nutrients.
 - Why do doctors advise exercise and sleep for good health ?
 - What is an electromagnet? Name one use.
 - Why does a bulb get hot after glowing for a while?
 -

(Do all the work in A4 size paper / punch paper and tie with thread, maintain the cover page also.)

Autumn Break Homework – Science (Class 10)

Section A – MCQs (10 × 1 = 10 marks)

- Which of the following is a combination reaction?
a) $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$ b) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$ c) $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ d) $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$
- Acids turn blue litmus:
a) Red b) Blue c) Green d) No change
- Which metal reacts with cold water to give H_2 ?
a) Copper b) Sodium c) Zinc d) Gold
- The atomic number of an element is 17. Its group in periodic table is:
a) 17 b) 1 c) 2 d) 18
- Which tissue carries food in plants?
a) Xylem b) Phloem c) Parenchyma d) Collenchyma
- Which part of human brain controls voluntary actions?
a) Cerebrum b) Cerebellum c) Medulla d) Hypothalamus
- Sexual reproduction produces:
a) Genetically identical offspring b) Genetically different offspring c) Clone d) None
- The focal length of a concave mirror is 10 cm. Its radius of curvature is:
a) 5 cm b) 10 cm c) 20 cm d) 40 cm
- Resistance of a wire depends on:
a) Length and area of cross-section b) Material c) Temperature d) All of these
- Electric current is measured in:
a) Volts b) Ohms c) Amperes d) Watts

Section B – Short Answer Questions (10 × 2 = 20 marks)

- Write a balanced chemical equation for the reaction between zinc and hydrochloric acid. What type of reaction is it?
- Explain the difference between metals and non-metals in terms of physical properties.
- Why do acids and bases conduct electricity? Give one example of each.
- Explain the process of photosynthesis in plants with equation.
- Name the parts of human brain and their functions.
- Draw a labeled diagram of male and female reproductive organs in humans.
- Explain Mendel's law of segregation with an example.
- Define power of a lens. A convex lens forms an image at 30 cm for an object placed at 60 cm. Calculate its focal length.
- Two resistors of 4 Ω and 6 Ω are connected in series with a 12 V battery. Calculate total resistance and current.
- Explain the function of retina in the human eye and how it helps in forming images.

Section C – Case-Based Question (3–4 marks)

Case:

A student observes that a plant kept in sunlight shows bubbles on its leaves when water is supplied, and a human patient suffering from diabetes has high sugar levels in blood.

- (a) Identify the process taking place in the plant and explain its significance.
- (b) Name the human organ affected in diabetes and mention one symptom.
- (c) Explain how knowledge of life processes is useful in daily life.

Section D – Long Answer Questions (3 × 5 = 15 marks)

- Explain the steps of sexual reproduction in plants. Draw a labeled diagram of the process.
- A 12 V battery is connected to three resistors of 2 Ω , 3 Ω , and 6 Ω connected in series.
 - (a) Calculate total resistance.
 - (b) Find current through the circuit.
 - (c) Calculate voltage drop across each resistor.
- (a) State the law of reflection of light.
(b) Draw ray diagram to show image formation by a concave mirror when object is beyond center of curvature.
(c) Explain how concave mirror is used in torch or headlight.

Autumn Break Homework – Science (Class 9)

Section A – MCQs (10 × 1 = 10 marks)

- Which of the following is a physical change?
a) Rusting of iron b) Melting of ice c) Burning of paper d) Cooking food
- A homogeneous mixture has:
a) Visible particles b) Uniform composition c) Settling particles d) None of these
- Who discovered the cell?
a) Robert Hooke b) Anton van Leeuwenhoek c) Rudolf Virchow d) Mendel
- Xylem is responsible for:
a) Transport of food b) Transport of water c) Photosynthesis d) Respiration
- The SI unit of speed is:
a) m/s^2 b) m/s c) N d) kg
- Which of the following is a heterogeneous mixture?
a) Sugar + Water b) Sand + Water c) Salt + Water d) Alcohol + Water
- Newton's Third Law is also called:
a) Law of Inertia b) Action-Reaction Law c) $F = ma$ d) Law of Conservation of Momentum
- The distance-time graph of uniform motion is:
a) Curve b) Straight line c) Parabola d) None
- Weight of a body depends on:
a) Mass and Gravity b) Mass only c) Gravity only d) None
- Acceleration due to gravity on Earth is approximately:
a) 9.8 m/s^2 b) 10 m/s^2 c) 9 m/s^2 d) 8 m/s^2

Section B – Short Answer Questions (10 × 2 = 20 marks)

- Explain why diffusion occurs faster in gases than in liquids.
- A student wants to separate a mixture of sand, salt, and water. Suggest a suitable procedure and explain the principle of each step.
- Compare plant and animal cells based on cell wall, vacuole, and shape. Draw a small labeled diagram.
- A plant stem has xylem and phloem. Explain their functions with an example of transport in plants.
- A car travels 60 km in 2 hours and then 90 km in 3 hours. Calculate the average speed of the car.
- A body of mass 5 kg is acted upon by a force of 20 N. Calculate the acceleration produced.
- An object is thrown vertically upward. Explain the motion in terms of velocity and acceleration at the topmost point.
- State Newton's Second Law of Motion. A 10 kg body is accelerated at 2 m/s^2 . Calculate the force applied.
- Two bodies of mass 10 kg and 15 kg are 2 m apart. Calculate the gravitational force between them.
- Define weight. A person has mass 60 kg on Earth. Calculate their weight. ($g = 9.8 \text{ m/s}^2$)

Section C – Case-Based Question (3–4 marks)

Case:

A student observes a mixture of sand and salt in the lab. He adds water and stirs. Some particles settle while salt dissolves completely.

- (a) Identify the type of mixture.
- (b) Suggest the method to separate sand from salt solution.
- (c) Explain the principle behind this separation method.

Section D – Long Answer Questions (3 × 5 = 15 marks)

- State and explain Newton's Three Laws of Motion. Give one real-life example for each law.
- A car starts from rest and moves with uniform acceleration of 2 m/s^2 for 5 s.
 - Calculate the final velocity.
 - Calculate the distance travelled.
 - Draw a velocity-time graph for the motion.
- Derive the formula for gravitational force between two bodies. Explain how the force varies with mass and distance. Solve a numerical example with two bodies of 10 kg and 15 kg separated by 2 m.

PM SHRI KENDRIYA VIDYALAYA LOKRA
AUTUMN BREAK HOMEWORK (2025-2026)

Class:IX

Subject: Mathematics
Worksheet

1. Expand each of the following using suitable identities:

(i) $(x+2y+4z)^2$ (ii) $(2x-y+z)^2$

2. Factorise: x^3-3x^2-9x-5

3. Find five rational numbers between $4/11$ and $7/11$.

4. ABCD is a quadrilateral in which $AD = BC$ and $\angle DAB = \angle CBA$ (see Fig. 7.17).

Prove that

(i) $\triangle ABD \cong \triangle BAC$

(ii) $BD = AC$

(iii) $\angle ABD = \angle BAC$.

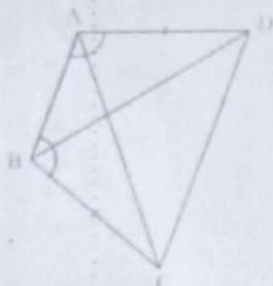


Fig. 7.17

5. In Fig. 7.21, $AC = AE$, $AB = AD$ and $\angle BAD = \angle EAC$. Show that $BC = DE$.

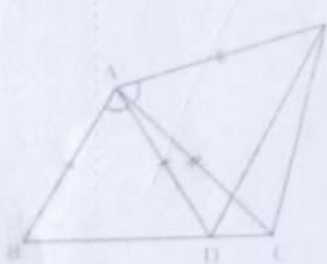


Fig. 7.21

6. In right triangle ABC, right angled at C, M is the mid-point of hypotenuse AB. C is joined to M and produced to a point D such that $DM = CM$. Point D is joined to point B (see Fig. 7.23). Show that:

- (i) $\triangle AMC \cong \triangle BMD$
- (ii) $\angle DBC$ is a right angle.
- (iii) $\triangle DBC \cong \triangle ACB$
- (iv) $CM = \frac{1}{2} AB$

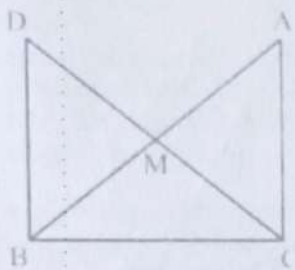


Fig. 7.23

7. Expand each of the following using suitable identities:

- (i) $(x+2y+4z)^2$
- (ii) $(2x-y+z)^2$
- (iii) $(-2x+3y+2z)^2$

8. SOLVE PT 2 QUESTION PAPER IN CLASS WORK COPY.

PM SHRI KENDRIYA VIDYALAYA LOKRA
AUTUMN BREAK HOMEWORK (2025-2026)

Class:x

Subject: Mathematics

Worksheet

1. The coach of a cricket team buys 7 bats and 6 balls for Rs.3800. Later, she buys 3 bats and 5 balls for Rs.1750. Find the cost of each bat and each ball.
2. Name the type of triangle formed by the points A $(-5, 6)$, B $(-4, -2)$ and C $(7, 5)$.
3. The sum of the third and the seventh terms of an AP is 6 and their product is 8. Find the sum of the first sixteen terms of the AP.
4. Solve the following pair of linear equations
 $8x + 5y = 9$
 $3x + 2y = 4$
5. Solve the quadratic equation $2x^2 - 7x + 3 = 0$.
6. In triangle ABC, $DE \parallel AC$ and $DF \parallel AE$. Prove that $BF/FE = BE/EC$.
7. Find the ratio in which the line segment joining the points $P(-3, 10)$ and $Q(6, -8)$ is divided by $O(-1, 6)$.
8. India is competitive manufacturing location due to the low cost of manpower and strong technical and engineering capabilities contributing to higher quality production runs. The production of TV sets in a factory increases uniformly by a fixed number every year. It produced 16000 sets in 6th year and 22600 in 9th year.

Based on the above information, answer the following questions:

1. Find the production during first year.
2. Find the production during 8th year.
3. Find the production during first 3 years.
4. In which year, the production is Rs 29,200.
5. Find the difference of the production during 7th year and 4th year.
9. If α, β are zero of quadratic polynomial $2y^2 + 7y + 5$, write the values of $\alpha + \beta + \alpha\beta$.
10. SOLVE MT 4 PAPER IN CLASS WORK COPY.

Holy Day Home Work, Date - 26/9/25

12B, Political Science,

- ① Provide sample paper (2025-26) to solve
- ⑤ Provide last year Pre-board I & II question paper to solve,
- ② Make note for 6 Marks from the

Chapters -

- Challenges of Nation building
- India's international relation
- The end of Bipolarity
- Contemporary Centres of Power
- Contemporary South Africa
- International Organization.

Ans. Ben
26/9/25

For Class - 6 B.

Social Science.

Holiday Homework.

① For improve writing skill write down the Chapter "India's Cultural Roots"

② For MDP -

Topic - "Many in One"

③ Complete exercise mention in textbook of all completed chapter.

For Class 11 B.

Political Science

① Complete the exercise of chapter

- Election and Representation

- Executive

- Legislature

② Explain the topic Parliamentary Executive in ques.

③ How parliament make laws.

④ "An Introduction - Political Theory"

Chapter - 1, Chapter - 2, Chapter - 3

Chapter - 4 - All Exercise.

Holiday work - class 11

Sasanku Saikia

- 1) A survey shows that 28 students like mathematics, 30 like physics, 18 like chemistry, 12 like mathematics and physics, 9 like physics and chemistry, 7 like mathematics and chemistry and 5 like all three. Find the number of students who like i) only mathematics ii) only chemistry iii) only physics.
- 2) Find the domain and range of the function $\frac{1}{\sqrt{9-x^2}}$.
- 3) If the real part of $\frac{z+2}{z-1}$ is 4, then show that the locus of the point representing z in the complex plane is a circle.
- 4) Solve the equation $|z| = z + 1 + 2i$
- 5) Find the total number of words formed by 2 vowels and 2 consonants taken from 4 vowels and 5 consonants.
- 6) Find the largest coefficient in the expansion of $(1+x)^{20}$.
- 7) If the third term of GP is 4, the product of the first five terms is ____.
- 8) Find the value of $\alpha + \beta$ if $\tan \alpha = \frac{n}{m+1}$, $\tan \beta = \frac{1}{2m+1}$.

Class VII (A + B) Social Science

5
Q1. Write the features of an Empire?

Q2. Write about the factors that influence climate.

10
Q3. Make a record chart of Maximum and Minimum Temperature of the day from 27.09.25 to 4.10.25. Calculate :-
(i) the Range of Temperature
(ii) Mean Daily Temperature.

15
Q4. Page No 66 (Q5)

Q5. Page No 66 (Q7).

20
Q6. Write a note, "About the contribution of Mauryan Art and Architecture".
Paste 5 picture of it.

Class XI 'B'

History Holiday Homework

- Q1. From Ch-1 (Writing and City Life) frame 5 long type questions and answer and 20 short type Q & A.
- Q2. From Ch-2 (An empire across three continents) frame 5 long type and 20 short type Q & A
- Q3. From Ch-3 (Nomadic Empire) frame 20 short type and 5 long type. Q & A.

Class XII B

History Project File.

VIII - Sci

- Q1 Prepare a short report on, history of antibiotic, types of antibiotic, and which organism are used to prepare vaccine.
- Q2 Tabulate the various micro organism that are foes and friend of human health.
- Q3 Write 10 (ten) points on "How we can keep a good health"
write points related to Personal hygiene, Social, Balance diet etc
- Q4 Write 10 points on how we can reduce pollution.
- Q5 Roll no 1 to 15 / Table 3-5 on Full chart
Roll no 16 to 30 (Table 3-5 part II upto Pg 35)
Roll no 31 to 38 Pg 40
- Q6 Draw Coloured diagram of various micro organism.
(You may take help from Net)



Post Card

X

— Shalini Mami ^{संस्कृत}

शरद प्रवृत्त अवकाश ग्रहकार्य - पा

प्र०-1 पशुनां नामानि-संस्कृत में दस पशुओं के नाम लिखें व चित्र भी बनाएँ ?

प्र०-2 संस्कृत वर्णमाला को चित्र के साथ प्रस्तुत करें.

अ से अनार



दाडिमम्

आ से आम



आम्रम्

इ से इमली



अम्लफलः

प्र०-3 पाँच श्लोक अर्थ सहित लिखें ?

प्र०-4 'बालक' के शब्दरूपाणि और पठ के धातु रूप लिखें ?

(लट्, लृट्, लङ्, लोट्,)

प्र०-5 'मेरे विद्यालय' पर 10 वाक्य संस्कृत में लिखें ?

संस्कृत
शरद ऋतु अवकाश ग्रहकार्य - ५॥

- प्र०=१ पुष्पम नामानि- संस्कृत में दस फूलों के नाम लिखें और चित्र बनाओं ?
- प्र०=२ पाँच श्लोक अर्थ सहित लिखें ?
- प्र०=३ शब्द रूपाणि 'अस्मद', 'युष्मद' के लिखें ?
- प्र०=४ गम् के खाद के धातु रूपाणि लट्, लृट्, लङ्, लिखें ?
- प्र०=५ दुर्गा पूजा पर संस्कृत में 10 वाक्य लिखें और चित्र बनाओं ?
- प्र०=६ संस्कृत में कारक कितने होते हैं लिखें ?
- प्र०=७ विलोम शब्द और 10 पर्यायवाची संस्कृत में लिखें ?

संस्कृत

- शरद ऋतु अवकाश गृहकार्य - VIII
X X

प्र०=१- संस्कृत में स्वपरिचय लिखें ?

प्र०=२ संस्कृत में 10 पर्यायवाची लिखें ?

प्रश्न=३ संस्कृत में 10 वाक्य पुस्तकालय पर लिखें और पुस्तकालय का चित्र बनाओं ?

प्र०=४ पाँच श्लोक संस्कृत में अर्थ सहित लिखें ?

प्र०=५ दुर्गा पूजा पर संस्कृत में 100 शब्दों में अनुच्छेद लिखें ?
और चित्र बनाओं ?

प्र०=६ संस्कृत में दस वाद्ययंत्रों के नाम लिखें और चित्र लगाओं ?

संस्कृत

18 शारद प्रहृत अवकाश महकार्य

१. संस्कृत में स्वपरिचय लिखें ?
२. पाँच श्लोक अर्थ सहित पुस्तक से लिखें ?
३. क्त्वा प्रत्यय, तुमुन्, ल्यप् प्रत्यय के 10, 10 उदाहरण लिखें ?
४. शब्दरूपाणि नदी, लता के लिखें ?
५. कारक संस्कृत में लिखें ?
६. पाठ्य पुस्तक से संबंधित किसी पाठ्य का सारांश लिखें ?
७. दुर्गा पूजा पर 150 शब्दों में रचनात्मक लेख लिखें और चित्र लगायें ?

Autumn Holiday Homework - (Geograph / Social Science)

Roll no - 14010 - Timeline of some main events

VI-A - since 300,000 BCE.

11 to 20 - Different names of similar festivals across India

20 - 30 - Three organs of government

30 - 40 - classification of economic activities into economic sector.

VIII-B Geography
chapter - 1 Natural Resources and their Use
10 question - 5 short question
5 long question

History
chapter - 2 Reshaping India's Political Map
10 question - 5 short question
5 long question

Map work from the book

Political
chapter - 3 Universal Franchise and India's
10 question - 5 short question
5 long question

XI-B - Physical Environment

India - Location

short question - 5

long question - 5

Structure and Physiography

10 question - 5 long and 5 short question

Drainage system

10 question - 5 long and 5 short question

Fundamental of Physical Geography

1) The origin and evolution of the earth.

10 question - 5 long and 5 short question

2) Interior of the earth

10 question - 5 long and 5 short question

3) Distribution of oceans and continents

10 question - 5 long and 5 short question.

Class XII - B Indian People and Economy

Prepare 10 question (5 long and 5 short)

- Land Resource and Agriculture
- Water Resource

- Mineral and Energy Resource (Map work included)

Fundamental of Human Geography

- Primary Activities
- Secondary Activities
- Tertiary and quaternary Activities

Arora Man

Class XII A (Physics)

PAGE NO.:	KROUM
DATE:	/ /

Holiday Homework Physics

- Q1 Solve NCERT questions (both intext & exercise) from chapter - 5, 6 & 7 on a separate copy.
- Q2 Write a short report or make a presentation on anyone of the following:
- How MRI or CT scan work
 - Physics of Mobile phones
 - Physics of solar panel
- Q3 Write a short note on last 3 years nobel - winning discoveries.
- Q4 Report on ~~the~~ Indian contribution in Physics (Any ^{two} of the following):
- * C V Raman
 - * Satyendra Nath Bose
 - * Meghnad Saha

Arora
25/09/25

Teacher's Signature _____

Class XI (A)

Holiday Homework (Physics)

- Q1. Make a separate notebook and solve NCERT textbook questions and answers (both exercise and In-text) from Chapter 1 to 6.
- Q2. Physics in daily life :- write a short report on make presentation on any one :-
- * Physics of cooling.
 - * Physics in sports.
 - * Physics behind musical instruments.
 - * Work on common household devices (fan, refrigeration, cooker pressure).
- Q3. Great physicist contribution (anyone) :-
- * Galileo.
 - * Newton.
 - * Einstein.
 - * Satyendra Nath Bose
- and write how their discoveries shaped modern science.
- Q4. Research about any one of recent discovery in Physics and make a note on it.

[Signature]
25/07/23

Holiday Homework Science

DOMS

Page No.

Date

Class VI (A & B)

Q1. Look around your home and find two examples where science makes life easier (example. fan, refrigerator, mobile). Explain in 2-3 lines.

Qus2 Draw pictures of three different pictures plants or animals you see nearby. Write one differences among them.

Qus3. Take a small magnet. Test it on five household items and make a table:

House hold item	Attracted / Not attracted.
1.	
2.	
3.	
4.	
5.	

Qus4 Measure the length of your study table/bed using a scale. Then measure using your hand span.

Write which method is more accurate and why.

1. Write the formula of the following coordination complex: I. diaquasilver(I) dichloridoargentate(I)
II. dihydroxidobis(triphenylphosphine)nickel(II)
2. What will be the vapour pressure of a 1 molal aqueous solution of MgCl_2 , assuming dissociation of MgCl_2 to be 70 mole percent? (Vapor pressure of pure water at 25 °C is 23.8 mmHg)
3. Explain the following: I. Toluene on treatment with Cl_2 in sunlight gives benzyl chloride whereas when treated with Cl_2 in dark gives o-chlorobenzene and p-chlorobenzene. II. Finkelstein reaction is carried out in the presence of dry acetone. III. neo pentylchloride has lower boiling point than isopentylchloride
4. Which of the following elements will: I. exhibit similar magnetic behaviour and why? Magnesium (Atomic No. 12), Chromium (Atomic No. 24), Iron (Atomic No. 26) and Molybdenum (Atomic No. 42). II. form white salts and why? Zinc (Atomic No. 30), Scandium (Atomic No. 21), Nickel (Atomic No. 28) and Vanadium (Atomic No. 23)
5. Arrange the products obtained in the following cases in the increasing order of their pK_a values:
A. Oxidation of ethanol in presence of acidified potassium dichromate
B. Reaction of propanoic acid with Br_2 in the presence of red Phosphorus
C. Reaction of isopropyl magnesium bromide with carbon dioxide, followed by hydrolysis.
D. Reaction of propanoic acid with Cl_2 in the presence of red Phosphorous.
6. I. Why is Fe(III)-EDTA complex stable as compared to Ferrous sulphate? OR What happens when hard water is titrated against Na_2EDTA ? II. You are a doctor, working in Somalia. Will you recommend iron fortified food to your patients? Support your answer with references from the passage. III. (a) What is the denticity of the ligand in the Fe(III) EDTA complex. Name the atom(s) through which it can bind to the central metal ion. (b) EDTA is an electron acceptor or an electron donor?
7. Answer the following questions: I. Write the structure of expected product of Wolf-Kishner reduction of 2-methylbutanal. II. How would the presence of $-\text{SO}_3\text{H}$ group effect the acidic strength of benzoic acid III. Prepare acetic acid from ethanamine. IV. Convert Aniline to benzoic acid. V. Give a chemical test to distinguish between: propanal and ethanal.

8

I. Consider the following first order thermal decomposition of SO_2Cl_2 at a constant volume $\text{SO}_2\text{Cl}_2(\text{g}) \rightarrow \text{SO}_2(\text{g}) + \text{Cl}_2(\text{g})$ If the total pressure of the gases is found to be 200 torr after 10 seconds and 300 torr upon the complete decomposition of SO_2Cl_2 . Calculate the rate constant. (Given $\log 3 = 0.4771$, $\log 2 = 0.3010$) II. For a bimolecular elementary reaction $\text{A} + \text{B} \rightarrow \text{Products}$. Write the expression for the rate of reaction relating temperature and activation energy for the reaction and also mention what each term represents in the equation.

Vocational Education

Holiday Homework for Autumn Break

Class 6: Kitchen Garden & Maker Skill

Choose any one :

1. The Mini Recycled Kitchen Garden Project :

- **Task:** Set up a mini kitchen garden using **3-5 recycled containers** (e.g., plastic bottles, old tires, tetra packs, tin cans). Plant easy-to-grow kitchen herbs or vegetables (e.g., coriander, fenugreek, mint, spinach seeds, or small tomato saplings).
- **Maker Element:** Design and create a unique **labeling system** for your plants using waste materials like popsicle sticks, small stones, or bottle caps.
- **Documentation:** Maintain a **Garden Journal** for 10-15 days, recording:
 - Date of planting.
 - Daily observations (watering, sunlight, germination, growth).
 - One paragraph on "What I learned about recycling and growing food."
 - Include photos or sketches of your garden and labels.

2. DIY Composter/Worm Bin Model

- **Task:** Research how **compost** (natural manure) or a **vermicompost** (worm) bin works.
- **Maker Element:** Create a **small-scale model** or a **3D diagram** of a composter or vermicompost bin using materials like cardboard, clay, or clear plastic to show its layers and contents.
- **Documentation:** Prepare a **Poster Presentation** explaining:
 - What is compost/vermicompost and why it's important for a garden.
 - The steps/layers in your model.
 - List of 5 kitchen wastes that can be used.

3. Kitchen Garden Tool Inventor

- **Task:** Identify a problem faced in a small kitchen garden (e.g., weeds, uneven watering, lack of space).
- **Maker Element:** Design and build a **prototype** of a new garden tool or an efficient space-saving structure (like a mini vertical garden) using simple craft or waste materials (cardboard, sticks, wire, old plastic).
- **Documentation:** Write a **"Patent Application"** for your invention.
 - Name of the invention.
 - The problem it solves.
 - Materials used to build the prototype.

- A labelled sketch/diagram of your tool/structure.

Class 7: Plant Nursery & AI Assistant 🌱🤖

Choose any one :

1. Plant Propagation Nursery Log and Guide

Task: Set up a small "Plant Propagation Station" at home. Select **three different methods** of plant propagation (e.g., growing a plant from a stem cutting like money plant/rose, from a seed like beans/mustard, and from a tuber/bulb like onion/potato).

- **Nursery Element:** Successfully propagate the three plants.
- **Documentation:** Create a "**Plant Propagation Guidebook**" including:
 - A page for each plant detailing the method used, the optimal conditions (light, water, soil type).
 - A **weekly photo log** of the growth for the three plants.
 - A research page on "The Business of a Local Plant Nursery" (what do they sell, where do they get their stock, who are their customers?).

2. AI Plant Doctor Research Project:

- **Task:** Research how Artificial Intelligence (specifically, image recognition) is being used to help farmers and nursery owners.
- **AI Element: Design a concept for an "AI Plant Doctor App."** The app should be able to identify 3 common plant diseases or pests.
- **Documentation:** Prepare a **Digital Presentation** (e.g., 5-7 slides/pages) that includes:
 - How the AI would work (taking a photo, comparing it to a database).
 - The 3 diseases/pests it identifies (include pictures of the disease).
 - The recommended cure/action provided by the AI for each.
 - A mock-up of the app's home screen.

3. The Nursery Chatbot Design :

- **Task:** Design an **AI Chatbot** to help new gardeners who visit a plant nursery.
- **AI Element:** Create a **script** for the chatbot focusing on at least **5 common questions** a beginner gardener might ask (e.g., "How often should I water a rose plant?" "What is the best fertilizer for my money plant?").
- **Documentation:** Present the following:
 - The chatbot's name and its primary function.

PM SHRI KV LOKRA CLASS-II A

Sub - Biology

⇒ Autumn Break Homework

1. Draw each and every diagram of chapter 1 to 10.
2. Solve the Sample Papers sent on whatsapp.
3. Complete your classwork upto chapter 10.

Class VII A,B

Sub - Science

1. Complete MDP "Healthy food habits".
2. Complete learner's diary.
3. Write exercise question answers of chapter "Heat transfer in Nature".

Class - XII A

Sub - Biology

1. Solve the sample papers sent on whatsapp.

- The 5 questions and the specific, helpful answers (ensure the answers are scientifically accurate).
- A short explanation of how a real chatbot uses **Natural Language Processing (NLP)** to understand questions.

Class 8: Hydroponics & Home Automation

Choose any one :

1. Simple Hydroponics System Setup

- **Task:** Research and set up a **simple, non-automated hydroponics system** at home. The easiest system is the Deep Water Culture (DWC) method using a small, dark container, a net pot, and a basic nutrient solution (or simply water for a short-term observational study). Grow a small plant or a few seeds (e.g., lettuce, spinach) for observation.
- **Hydroponics Element:** Successfully sustain the plant growth for the duration of the break.
- **Documentation:** Create a **Project Report** detailing:
 - Materials used (with cost estimate).
 - Step-by-step construction of the system (include diagrams/photos).
 - A comparison (in a table) of the **advantages and disadvantages** of hydroponics versus traditional soil gardening.

2. Home Automation Design Challenge

Task: Choose one room in your house (or the entire house) and design a **Home Automation blueprint** to make it "smart."

- **Home Automation Element:** Focus on **three specific automation features** (e.g., automated lights, temperature control, security system, or smart watering for a balcony garden).
- **Documentation:** Prepare a **Detailed Design Plan** which includes:
 - A **floor plan diagram** of the room/house, showing where the smart devices would be placed.
 - A **table** listing the three features, the required sensors/devices (e.g., temperature sensor, smart plug, motion sensor), and the benefit of each feature (e.g., energy saving, security, convenience).
 - A research paragraph on a key technology that powers home automation, like **IoT (Internet of Things)**.

3. Automated Hydroponics Concept & Sketch

- **Task:** Design a concept for a **fully automated hydroponics system** that controls water level, pH, and nutrient delivery.
- **Technical Element:** Research the components needed to automate a hydroponic system (e.g., water pump, pH sensor, microcontroller like Arduino/Raspberry Pi).
- **Documentation:** Present a **Technical Sketch/Diagram** of your automated system.
 - Clearly label the main parts (reservoir, pump, plants, sensors, microcontroller).
 - Write a short **"Code Logic"** paragraph explaining what the microcontroller should do (e.g., "If the pH sensor reads below 5.5, the microcontroller activates the pH-Up solution pump for 5 seconds").
 - Discuss the biggest **challenge** in building a real-life version of your automated system.

Holiday Homework – ATL Lab

PM SHRI KV Lokra

Classes: IX – XII

Topic: Sensors & Breadboard

Part A: Research & Write-up

1. Sensors

- Define what a sensor is.
- Write about 5 commonly used sensors in ATL Lab (e.g., IR Sensor, Ultrasonic Sensor, Temperature Sensor, PIR Sensor, Soil Moisture Sensor).
- Explain their working principle and real-life applications in not more than 100 words each.

2. Breadboard

- Explain the layout and structure of a breadboard.
- Draw a neat labeled diagram showing power rails and terminal strips.
- Write in your own words how a breadboard helps in prototyping projects without soldering.

Part B: Practical Activity

- Prepare a small circuit connection on breadboard (example: LED with a resistor & power supply).
- Take clear pictures of the breadboard connections.
- Label the components used.

Part C: Project Work

- Think of one project idea using any sensor and breadboard (for example: Automatic Street Light, Smart Dustbin, Obstacle Detector, Fire Alarm, Soil Moisture based Irrigation System).
- Write the project details in the following format:

1. Project Title
2. Aim / Objective
3. Components Required
4. Circuit Diagram (draw neatly or digitally)
5. Working Principle
6. Expected Outcome / Benefits

Part D: Paper Presentation

- Prepare a paper presentation (2–3 pages) on your project idea.
- Format should include:
 - Cover Page (Name, Class, Roll No., Project Title)
 - Introduction
 - Explanation of Project with Diagram
 - Conclusion / Application in Real Life

Submission Guidelines

- Work to be submitted in a hard copy file after vacation.
- Pictures of practical activity can be printed & pasted.
- Creativity, neatness, and originality will be given extra marks.

ASSERTION- REASONS QUESTIONS

Read the following statements-

Assertion (A) and Reason (R), and select the correct alternative in each case: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A)

(c) Assertion (A) is true but Reason(R) is false.

(d) Assertion (A) is false but Reason(R) is true.

1. Assertion (A): The RBI decides a certain percentage of deposits which every bank must keep as reserves.

Reason (R): This is done to ensure that no bank is 'over lending'. 2. Assertion (A): With introduction of money as a common unit of value, the market for sale and purchase of assets has considerably expanded.

Reason (R): Common unit of value (in terms of money) has facilitated comparison of market value of different assets.

3. Assertion (A): Money supply is a flow variable. Reason (R): Money supply is the total stock of money in circulation among the public at a point of time.

4. Assertion (A): To increase the money supply in the economy, Central Bank reduces the margin requirement.

Reason (R): Decrease in margin requirements enhances the borrowing capacity of public, which raises the money supply in the economy

5. Assertion (A): Demand deposits are not legal tenders. Reason (R): Demand deposits are the deposits which can be easily withdrawable on demand, by cheque or otherwise by the depositor from his bank account.

6. Assertion (A): The Reserve Bank of India acts as a lender of last resort.

Reason (R): It provides funds to commercial banks when they are unable to meet their financial requirements.

7. Assertion (A): Central bank provides loans to the commercial banks in the situation of financial distress. Reason (R): Central bank can order the government to help the bank facing the financial

8. Assertion (A): Fiscal deficit is an indicator of the total borrowing requirements of the government. Reason (R): Fiscal deficit represents the difference between total expenditure and total revenue, excluding borrowings.

10. Assertion (A): Capital expenditure is undertaken to create long-term assets in the economy. Reason (R): Expenditure on salaries of government employees is an example of capital expenditure

11. Assertion (A): A government budget helps in reducing income inequalities. Reason (R): The government uses progressive taxation and provides subsidies to bridge the gap between the rich and the poor.

12. Assertion (A): Revenue deficit indicates the inability of the government to manage its routine expenses from its current income. Reason (R): Revenue receipts include both tax and non-tax revenues.

13. Assertion (A): The government imposes indirect taxes to increase revenue. Reason (R): Indirect taxes are regressive in nature as their burden is shared equally by all income groups.

14. Assertion (A): Disinvestment of public sector undertakings (PSUs) is a source of revenue for the government. Reason (R): Disinvestment involves the sale of a government's stake in PSUs to private entities.
15. Assertion (A): Fiscal policy helps in achieving economic stability. Reason (R): The government uses tools like taxation, expenditure, and borrowing to manage economic fluctuations.
16. Assertion (A): Primary deficit is always equal to fiscal deficit. Reason (R): Primary deficit is calculated by subtracting interest payments from the fiscal deficit. A gr: (c) A is false, but R is true.

CASE BASED QUESTIONS:

Read the following passage and answer the questions given below: The process of deposit and loan (credit) creation by banks is explained below. In order to understand this process, let us discuss a story. Once there was a goldsmith named Lala in a village. In this village, people used gold and other precious metals in order to buy goods and services. In other words, these metals were acting as money. People in the village

Banks started keeping their gold with Lala for safe-keeping. In return for keeping their gold, Lala issued paper receipts to people of the village and charged a small fee from them. Slowly, over time, the paper receipts issued by Lala began to circulate as money. This means that instead of giving gold for purchasing wheat, someone would pay for wheat or shoes or any other good by giving the paper receipts issued by Lala. Thus, the paper receipts started acting as money since everyone in the village accepted these as a medium of exchange. Now, let us suppose that Lala had 100 Kgs of gold, deposited by different people and he had issued receipts corresponding to 100 kgs of gold. At this time Ramu comes to Lala and asks for a loan of 25 kgs of gold. Can Lala give the loan? The 100 kgs of gold with him already has claimants. However, Lala could decide that everyone with gold deposits will not come to withdraw their deposits at the same time and so he may as well give the loan to Ramu and charge him for it. If Lala gives the loan of 25 kgs of gold, Ramu could also pay Ali with these 25 kgs of gold and Ali could keep the 25 kgs of gold with Lala in return for a paper receipt. In effect, the paper receipts, acting as money, would have risen to 125 kgs now. It seems that Lala has created money out of thin air! The modern banking system works precisely the way Lala behaves in this example.

1. Define money multiplier.
2. Explain in brief the process of credit creation by Commercial

XIth AUTUMN BREAK H.W.

Economics.

Q1. Calculate the median for the following data

Class Intervals	More than 0	More than 5	More than 10	More than 15	More than 20
frequency	50	40	25	15	10

Q2. Calculate Mode for the following data.

Marks.	10	12	14	16	18	20
No. of students.	2	6	8	8	2	1

Q3. Calculate the Mode and Median for the following data.

C.I	10-20	20-40	40-60	60-100	100-120
Frequency	10	15	20	25	10

Q4. The following table given the profits earned by various companies. By step deviation method, calculate the average profit earned.

Profit	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60	Less than 70
No. of companies	5	22	45	60	83	100

85. Make histogram and frequency polygon for the following data

Mid value	10	20	30	40	50	60
Frequency	2	4	5	3	2	4

86. Based on the data below, prepare less than and more than ogive in the same diagram.

Profit	100-200	200-400	400-600	600-800
No. of firms	10	20	15	30

87. Use the circular diagram to present the following data.

Component	Food	Clothing	Miscellaneous
Monthly Exp.	1800	1200	600

Social Science.

CLASS - 8

- Q. Prepare a chart seg on chart paper.
1. Draw a map of India and show the all state of India on the map.
2. Write all functions of Election Commission of India.
3. Write about the model code of conduct.
4. Describe about the Mansabdari system in Mughal period.
5. What was the religious policy of Akbar? Describe it.
83. Discuss about conventional and Non-conventional source of energy.

PM SHRI KENDRIYA VIDYALAYA LOKRA

AUTUMN BREAK HOMEWORK (2025-2026)

Class:VI

Subject: Mathematics

Worksheet

1. Find any three numbers that are multiples of 25 but not multiples of 50.
2. What is the sum of first 15 odd numbers?
3. What happens when you multiply the triangular numbers by 6 and add 1? Which sequence do you get?
4. Find the smallest number that is a multiple of all the numbers from 1-10 except 7.
5. What is the sum of the largest and smallest 5-digit palindrome? What is their difference?
6. Priya and Smita collected data on how many students were present in each class:

Class:	I	II	III	IV	V
No. of students:	30	20	25	15	35

Draw a pictograph by taking 1 Δ = 5 students
7. Find the prime factorization of 64 and 104.
8. Write one 5-digit number and two 3-digit numbers such that their sum is 18670.

Activity

Draw the Ashoka Chakra. The Ashoka Chakra has how many spokes? What is the degree measure of the angles between two spokes next to each other? What is the largest acute angle formed between two spokes?

Task

Learn tables till 20.

PM SHRI KENDRIYA VIDYALAYA LOKRA
AUTUMN BREAK HOMEWORK (2025-2026)

Class: VII

Subject: Mathematics
Worksheet

Q.1. Write the number names in both the Indian and American systems: 58421723

Q.2. Write 5 nearest neighbors for the number - 4,67,69,975

Q.3. Write in numbers

- (i) Two lakh three thousand four hundred
- (ii) One million one thousand twenty
- (iii) Thirty seven crore twenty eight

Q.4. Multiply quickly

(a) 25×16

(b) 125×48

Q.5. Write the decimal form of the fraction $6/10$ and $17/100$.

Q.6. Observe the multiplication statement below and fill in the blanks

1-digit $\times$ 1-digit = 1-digit or 2-digit

2 digit $\times$ 1-digit = 2-digit or 3-digit

2 digit $\times$ 2-digit = ____ digit or ____ digit

2 digit $\times$ 3-digit = ____ digit or ____ digit

4 digit $\times$ 2-digit = ____ digit or ____ digit

3 digit $\times$ 3-digit = ____ digit or ____ digit

8 digit $\times$ 3-digit = ____ digit or ____ digit

Q.7. Arrange the following decimal numbers in ascending order: 0.8, 0.35, 0.65, 0.04

Q.8. In the Land of Tens, there are special calculators with special buttons. The Thoughtful Thousands only has a +1000 button. How many times should it be pressed to show:

(a) Fifty three thousand? _____ (b) 90,000? _____

(c) One Lakh? _____ (d) _____ ? 153 times

(e) Seventy two thousand? _____

Q.9. Fill in the blanks below: (cm into m) and (m into cm)

a) $46\text{cm} = \text{_____ m}$

b) $70\text{cm} = \text{_____ m}$

c) _____ $\text{cm} = 0.8\text{m}$

d) $6\text{cm} = \text{_____ m}$

e) _____ $\text{cm} = 1\text{m}$

Task

Learn tables till 20.