

Learn | Grow | Excel

Autumn Break / Holiday Home Work 2026 - 27

Small
Steps Make
Big Dreams

Happy
Holidays!



ENGLISH

- Read any one story from the reading list and write a brief summary (150 words).
- Learn 10 new words daily and make sentences.
- Prepare a short poem/recitation and write it in a notebook.



HINDI

- किसी एक प्रेरक कहानी का पठन कीजिए और उस पर 100 शब्दों में सार लिखिए।
- प्रतिदिन 10 नए हिंदी शब्द लिखें और वाक्य बनाइए।
- प्रसंदि कवि की कविता याद करके लिखिए।



MATHEMATICS

- Daily practice of 10 sums (from exercise/worksheet).
- Learn and write tables 2 to 20.
- Prepare a chart on "Real Life Applications of Mathematics" with examples.



SCIENCE

- Observe and write about any 5 plants or animals around you (collect pictures if possible).
- Make a list of 10 good habits for a healthy life.
- Prepare a poster on 'Save Nature, Save Future'.



SOCIAL SCIENCE

- Read a newspaper daily and note 5 important news items.
- Prepare a short note on 'My Dream India' (100 words).
- Draw/paste pictures of any 5 freedom fighters and write 2 lines about each.



COMPUTER / AI

- Revise the chapters done so far.
- Solve 5 practical questions (on Python/AI as per your class).
- Explore any one AI tool and write its uses in daily life.



PHYSICS

- Write short notes on: Motion, Force and Laws of Motion.
- Solve 5 numerical questions from the given chapter.
- Prepare a chart on 'Applications of Physics in Daily Life'.



CHEMISTRY

- Make a model/diagram of 'Atom' or 'Molecule'.
- Learn the symbols of first 20 elements and their valency.
- Write 5 uses of acids and bases in daily life.



BIOLOGY

- Make a herbarium sheet of any 5 leaves/flowers.
- Draw a labelled diagram of a plant or animal cell.
- Write 5 ways to keep yourself healthy and fit.



SANSKRIT

- संस्कृत में 10 श्लोक/सुभाषित केठस्थ करें और अर्थ लिखें।
- प्रतिदिन 10 नए शब्द लिखें और उनका वाक्य बनाइए।
- संस्कृत की एक छोटी कहानी पढ़कर सार लिखें।



CS (COMPUTER SCIENCE)

- Create a simple Python program (e.g. calculator / number game).
- Revise file handling concepts and try a small file operation program.
- Prepare a chart on 'Applications of AI in Different Fields'.



PHYSICAL ACTIVITY TRAINER

- Do at least 30 minutes of physical activity daily (walking, jogging, yoga, cycling etc.).
- Maintain a fitness diary (date, activity, duration).
- Learn and practice simple yoga asanas and breathing exercise.



Stay Active
Stay Healthy
Be Happy!



Important Instructions

- Use neat and clean handwriting.
- Maintain decorated notebooks / project files.
- Submit the work after the holiday as per the teacher's instructions.
- Parents are requested to motivate and guide their children.

Have a safe, happy
and productive holiday!

Together We Build
a Better Tomorrow



HOLIDAY HOMEWORK

Class 6 • Chapters 7 & 8

Instruction: Complete on the last 8–10 pages

SCIENCE CURIOSITY • 5 QUESTIONS

Answer the following 5 questions in your notebook:

- Q1.** What is the difference between a clinical and a laboratory thermometer? Draw both.
- Q2.** Measure your body temperature and room temperature and write them in a table.
- Q3.** What are the three states of water? Give one example from your home for each.
- Q4.** Draw a water cycle diagram and explain it in your own words.
- Q5.** Why do we wear cotton clothes in summer? Observe an ice-melting activity.

• Neat & clean work • Use pencil for diagrams • Date: _____ / _____ / 2025

PM SHRI KENDRIYA VIDYALAYA NO. 2, CHHINDWARA
AUTUMN BREAK HOLIDAY HOMEWORK

Subject: Mathematics

Class: VII

Topic: Operations with Integers

Q1. Solve the following multiplication questions:

1. $(-8) \times 7$
2. $12 \times (-9)$
3. $(-11) \times (-6)$
4. $(-15) \times 4$
5. $(-16) \times (-14)$

Q2. Solve the following division questions:

1. $(-56) \div 7$
2. $81 \div (-9)$
3. $(-96) \div (-12)$
4. $144 \div (-12)$
5. $(-225) \div 15$

Q3. Solve using the correct order of operations:

1. $(-5) \times 6 + 20$
2. $48 \div (-8) \times 3$
3. $(-12) \times (-4) - 30$
4. $100 \div (-10) + 15$
5. $25 + (-6) \times 4$

Q4. Solve the following word problems:

1. The temperature decreases by 3°C every hour. Find the total change in temperature after 5 hours.
2. A shopkeeper loses ₹150 per day for 4 days. Find the total loss.
3. A submarine descends 120 metres in 6 equal intervals. Find the change in depth during each interval.
4. A person loses ₹2,400 equally over 8 days. Find the loss per day.
5. The temperature is -5°C . It falls by 4°C . What is the new temperature?

Q5. Solve the following challenge questions:

1. Find the integer which, when multiplied by (-12) , gives 144.
2. Find the integer which, when divided by (-8) , gives 15.
3. Fill in the blank: $(-16) \times \underline{\hspace{1cm}} = -192$.
4. Fill in the blank: $\underline{\hspace{1cm}} \div (-15) = 12$.
5. Without calculating fully, state whether the answer is positive or negative: $(-8) \times (-3) \times (-2)$.

General Instructions:

1. Complete all questions neatly in your mathematics notebook.
2. Show all calculations step by step.
3. Revise the rules of multiplication and division of integers.

AUTUMN BREAK HOLIDAY HOMEWORK

Class – 6
ENGLISH

1. Found Notice

Imagine you have found a wallet containing money and an identity card near the school gate. Write a notice for your school notice board in about 50–60 words, asking the owner to collect it.

2. Moral Story Writing

Write a short moral story in about 120–150 words with a suitable title. The story should have a clear message or moral at the end.

3. Uses of Spices

Write the various uses of any 5 spices used in your home. (You may choose any 5 spices.) Give at least 3–4 uses of each spice.

4. Verb Forms

Write 30 words in the given format (you can make a table or a list):

Format: Base Form | Past Form | Past Participle

(e.g., go – went – gone)

5. Homophones

Write 15 pairs of homophones (words that sound the same but have different meanings and spellings).

(e.g., their – there – they're)

6. Rhyming Words

Write 15 pairs (or sets) of rhyming words.

(e.g., cat – hat, blue – true)

7. Message Writing

Write a message in about 50 words on the following topic:

"Your friend is unable to attend your birthday party. Write a message to invite him/her and tell them the details."

Enjoy your holidays and keep learning

PMS KV 2 Chhindwara

Autumn Break Homework

Class VI – Social Science
[Solve any 5 questions in your notebook]

हिंदी

1. दुनिया के नक्शे या ग्लोब को देखें। किन्हीं 3 महाद्वीपों और 2 महासागरों के नाम ढूँढ़कर अपनी कॉपी में सुंदर अक्षरों में लिखें।

1. Look at a world map or globe. Find the names of any 3 continents and 2 oceans and write them neatly in your notebook.

2. अपने आस-पास देखें और किन्हीं 5 प्राकृतिक चीजों की सूची बनाएं (जैसे- पेड़, मिट्टी, नदी, पहाड़, आदि) जो इंसानों के जीने के लिए बहुत जरूरी हैं।

2. Look around you and make a list of any 5 natural things (such as trees, soil, rivers, mountains, etc.) that are very important for human life.

3. अपने घर के बड़ों (दादा-दादी या माता-पिता) से बात करें और उनके समय की कोई एक पुरानी चीज ढूँढ़ें (जैसे- पुराना सिक्का, पुराना बर्तन, पुरानी फोटो या कोई पत्र)। उस वस्तु का नाम लिखें और वह कितनी पुरानी है, यह पूछकर नोट करें।

3. Talk to the elders in your family (grandparents or parents) and find one old item from their time (such as an old coin, utensil, photograph, or letter). Write the name of the item and note how old it is by asking them.

4. अपने परिवार के तीन सबसे बड़े सदस्यों की जन्मतिथि या जन्म का साल पूछें और उन्हें सबसे बड़े से सबसे छोटे के क्रम (Timeline) में सजाकर लिखें।

4. Ask the dates of birth or birth years of the three eldest members of your family and arrange them in a timeline from the eldest to the youngest.

5. समाज में रहने के क्या फायदे हैं? अपने माता-पिता की मदद से कोई 2 ऐसी बातें लिखिए जो हम अकेले नहीं कर सकते, लेकिन समाज/पड़ोस के साथ मिलकर आसानी से कर लेते हैं।

5. What are the benefits of living in society? With the help of your parents, write any 2 things that we cannot do alone but can easily do together with society or neighbours.

6. अपने घर में बनने वाले किन्हीं दो अलग-अलग राज्यों के पकवानों (जैसे- डोसा और लिट्टी चोखा) या त्योहारों के नाम लिखिए जो आपके परिवार में मनाए या पसंद किए जाते हैं।

6. Write the names of any two dishes from different states (such as Dosa and Litti Chokha) or festivals that are celebrated or liked in your family.

English

**PM SHRI KENDRIYA VIDYALAYA NO. 2
CHHINDWARA**

HOLIDAY HOMEWORK — CLASS 7 • CHAPTERS 7 & 8

CLASS 7 SCIENCE CURIOSITY

Instruction: Complete the work on the last 8–10 pages of your notebook.

Answer the following 5 questions neatly in your homework notebook:

- Q1.** What are the three ways of heat transfer? Give one example for each from daily life.
- Q2.** Draw sea breeze and land breeze diagrams and explain them in your own words.
- Q3.** What is a simple pendulum? How can you measure its time period?
- Q4.** What is speed? Calculate speed if distance = 100 m and time = 20 s.
- Q5.** Why do dark clothes feel hotter in summer? Make a sundial and observe the shadow.

★ Keep your work neat • Use diagrams where required • Write answers in your own words ★

PM SHRI KENDRIYA VIDYALAYA NO. 2, CHHINDWARA
AUTUMN BREAK HOLIDAY HOMEWORK

Subject: Mathematics

Class: VII

Topic: Operations with Integers

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2. $81 \div (-9)$
3. $(-96) \div (-12)$
4. $144 \div (-12)$
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Q3. Solve using the correct order of operations:

1. $(-5) \times 6 + 20$
2. $48 \div (-8) \times 3$
3. $(-12) \times (-4) - 30$
4. $100 \div (-10) + 15$
5. $25 + (-6) \times 4$

Q4. Solve the following word problems:

1. The temperature decreases by 3°C every hour. Find the total change in temperature after 5 hours.
2. A shopkeeper loses ₹150 per day for 4 days. Find the total loss.
3. A submarine descends 120 metres in 6 equal intervals. Find the change in depth during each interval.
4. A person loses ₹2,400 equally over 8 days. Find the loss per day.
5. The temperature is -5°C . It falls by 4°C . What is the new temperature?

Q5. Solve the following challenge questions:

1. Find the integer which, when multiplied by (-12) , gives 144.
2. Find the integer which, when divided by (-8) , gives 15.
3. Fill in the blank: $(-16) \times \underline{\hspace{1cm}} = -192$.
4. Fill in the blank: $\underline{\hspace{1cm}} \div (-15) = 12$.
5. Without calculating fully, state whether the answer is positive or negative: $(-8) \times (-3) \times (-2)$.

General Instructions:

1. Complete all questions neatly in your mathematics notebook.
2. Show all calculations step by step.
3. Revise the rules of multiplication and division of integers.

AUTUMN BREAK HOLIDAY HOMEWORK

Class - 7 | Subject: English

1. RANGOLI MAKING COMPETITION

Imagine your school is organising a Rangoli Making Competition on the occasion of a festival (e.g., Diwali).

Write a colourful poster announcing the competition.

Include details like date, time, venue, theme (if any) and the rules.

Use attractive slogans and drawings.

2. MORAL STORY WRITING

Write a short moral story in about 120–150 words with a suitable title.

The story should have a clear message or moral at the end.

3. DIARY ENTRY

Write a diary entry in about 100–120 words on any one of the following topics:

- A memorable day of your holiday.
- When I helped someone.
- My dream for the future.

4. VERB FORMS

Write 30 words in the given format (you can make a table or a list):

Format: Base Form | Past Form | Past Participle (e.g., go – went – gone)

5. SYNONYMS AND ANTONYMS

Write 10 pairs of synonyms and 10 pairs of antonyms.

Format:

- Synonyms: 1. ... 2. ... 3. ... (10 pairs)
- Antonyms: 1. ... 2. ... 3. ... (10 pairs)

6. TOURIST PLACES / BEAUTIFUL PLACES OF INDIA

Write 5 sentences each about any 3 tourist places/beautiful places of India.

You can choose from places like: Taj Mahal, Goa, Kashmir, Kerala, Jaipur, Leh-Ladakh, or any other place of your choice.

7. DESCRIPTIVE PARAGRAPH – RED FORT

Write a descriptive paragraph in about 100–120 words on Red Fort. Use the given clues:

- Location (Delhi)
- Built by (Mughal Emperor Shah Jahan)
- Famous for (its red sandstone walls)
- Important features (Lahore Gate, Diwan-i-Aam, Diwan-i-Khas)
- Historical significance
- Your personal impression

PMS KV 2 Chhindwara
Autumn Break Homework

Class VII – Social Science (NCERT)
10-Day Autumn Break Assignment
(Easy and Creative)

हिंदी

1. दिल्ली सल्तनत या मुगल काल के अपने पसंदीदा किसी एक शासक (जैसे- अकबर, रज़िया सुल्ताना या शाहजहाँ) का नाम लिखिए। उनके द्वारा बनाई गई किसी एक प्रसिद्ध इमारत का चित्र चिपकाइए या बनाइए और उसका नाम लिखिए।

1.

2. इतिहास में समय के साथ जगहों के नाम बदले हैं। पता लगाइए और अपनी नोटबुक में लिखिए कि आपके शहर/राज्य का कोई पुराना नाम था या नहीं? यदि हाँ, तो वह क्या था?

2.

3. पानी को बर्बाद होने से बचाने के लिए कोई 3 आसान उपाय लिखिए जो आप अपने घर में रोज़ कर सकते हैं।

3.

4. आज के दिन (कोई एक दिन) का मौसम कैसा है? (धूप, बादल, ठंडी हवा या बारिश)। अखबार या मोबाइल से देखकर आज का अधिकतम और न्यूनतम तापमान (Temperature) अपनी कॉपी में नोट कीजिए।

4.

5. भारतीय संविधान में सभी को समान माना गया है। अपने घर के बड़ों से पूछकर लिखिए कि 'Universal Adult Suffrage' (सार्वभौमिक वयस्क मताधिकार) का क्या मतलब होता है और वोट देने की सही उम्र क्या है?

5.

6. अपने घर के पास स्थित किसी एक सरकारी अस्पताल/क्लीनिक और एक प्राइवेट अस्पताल/क्लीनिक का नाम अपनी कॉपी में लिखिए।

6.

7. टीवी या अखबार में आने वाले अपने पसंदीदा किसी एक विज्ञापन (Advertisement) की टैगलाइन (जैसे- "डर के आगे जीत है" आदि) लिखिए और वह प्रोडक्ट आपको क्यों पसंद है, एक लाइन में बताइए।

7.

8. आज के मुख्य समाचार जानने के लिए घर के किसी बड़े के साथ 10 मिनट समाचार (News) देखिए या अखबार पढ़िए। अपनी पसंद की किसी एक मुख्य खबर (Headline) को अपनी कॉपी में साफ अक्षरों में लिखिए।

8.

9. अपने घर में इस्तेमाल होने वाली किन्हीं 3 चीज़ों (जैसे- नमक, तेल, साबुन) के पैकेट को देखिए। उन पर लिखा हुआ एमआरपी (MRP – अधिकतम खुदरा मूल्य) और एक्सपायरी डेट (Expiry Date) अपनी कॉपी में नोट कीजिए।

9.

10. भारतीय राजनैतिक नक्शे पर भारत की प्रमुख 10 नदियाँ बनाकर/चिन्हित करें।

10.

English

1. Write the name of your favourite ruler from the Delhi Sultanate or Mughal period (such as Akbar, Razia Sultan, or Shah Jahan). Paste or draw a picture of one famous building built by them and write its name.

1.

2. Place names have changed over time in history. Find out and write in your notebook whether your city/state had an old name. If yes, what was it?

2.

3. Write any 3 easy ways to prevent wastage of water that you can follow daily at home.

3.

4. What is the weather like today (choose any one day)? (Sunny, cloudy, cold wind, or rainy). Check the newspaper or mobile phone and note today's maximum and minimum temperature in your notebook.

4.

5. The Indian Constitution treats everyone equally. Ask the elders in your family and write what 'Universal Adult Suffrage' means and what is the correct age for voting?

5.

6. Write the name of one government hospital/clinic and one private hospital/clinic located near your home in your notebook.

6.

7. Write the tagline of your favourite advertisement shown on TV or in a newspaper (such as "Dar Ke Aage Jeet Hai"), and explain in one line why you like that product.

7.

8. To know today's main news, watch the news for 10 minutes with an elder at home or read a newspaper. Write one main headline of your choice neatly in your notebook.

8.

9. Look at the packets of any 3 items used at home (such as salt, oil, or soap). Note their MRP (Maximum Retail Price) and Expiry Date in your notebook.

9.

10. On a political map of India, draw and locate the 10 major rivers of India.

10.

PM SHRI KENDRIYA VIDYALAYA NO. 2

CHHINDWARA

HOLIDAY HOMEWORK

Class 8 • Chapters 7 & 8

Science – Curiosity

Instruction: Complete the homework in the last 8–10 pages of your notebook.

CURIOSITY QUESTIONS

Q1. What is the particulate nature of matter? Give a daily-life example to show that matter has spaces between its particles.

Q2. What is the difference between an element, a compound and a mixture? Give two kitchen examples for each.

Q3. How will you separate a mixture of sand and salt? Write the steps you would follow at home.

Q4. Make a chart of metals, non-metals, compounds and mixtures, using real pictures.

Q5. Why does the smell of hot food reach us faster than that of cold food? What did you learn from these chapters?

Syllabus: Science Curiosity – Chapter 7: Matter in Our Surroundings | Chapter 8: Materials: Metals and Non-Metals

KENDRIYA VIDYALYA NO.2 CHHINDWARA

AUTUMN BREAK HOMEWORK

CLASS- VIII A& B

SUBJECT – SOCIAL SCIENCE

Q.1. Make a Power Point Presentation on the “World Geography”.

Q.2. Cased based questions.

Make minimum two case based Questions with answer from the “World Geography”.

Q.3. Map based Questions.

Locate all the continents, all the Oceans, Equator, Prime Meridian, Tropic of Cancer, Tropic of Capricorn in the World Map.

Q.4. Write a note on any one Festival celebrated in your area with some pictures.

Sub. Teacher- Dhaniraj Indorker, TGT Sosts.

PM SHRI KENDRIYA VIDYALAYA NO. 2 CHHINDWARA

AUTUMN BREAK HOLIDAY HOMEWORK

Class: VIII

Subject: Mathematics

Topic: Fractions disguise– Profit and Loss

A. Solve the Following Questions

1. A shopkeeper buys an article for ₹800 and sells it for ₹1,000. Find the profit and profit percentage.
2. A school bag is purchased for ₹1,200 and sold for ₹1,080. Find the loss and loss percentage.
3. A chair is purchased for ₹1,500 and sold at a loss of 12%. Find its selling price.
4. A watch is sold for ₹1,840 at a profit of 15%. Find its cost price.
5. A shopkeeper buys a table for ₹2,500 and sells it at a loss of 8%. Find the selling price.
6. An article is sold for ₹720 at a loss of 10%. Find its cost price.

B. Activity-Based Learning

Activity: Prepare a Shopkeeper's Bill

Prepare a bill for any five items using imaginary cost prices and selling prices. Calculate the profit or loss and the corresponding percentage for each item.

S. No.	Item	Cost Price	Selling Price	Profit/Loss %
1	Notebook	₹50	₹60	20% Profit
2	School Bag	₹500	₹450	10% Loss
3	Water Bottle	₹100	₹120	20% Profit
4	Lunch Box	₹200	₹180	10% Loss
5	Geometry	₹150	₹165	10% Profit

AUTUMN BREAK HOLIDAY HOMEWORK

Mathematics | Class 9

Kendriya Vidyalaya - Session 2026-27

Autumn Break: 15 October 2026 to 24 October 2026 (10 days)

Revision of chapters completed before the break (as per the Split-Up Syllabus)

Chapters Covered (for revision)

- Ch 1 - Orienting Yourself: The Use of Coordinates
- Ch 2 - Introduction to Linear Polynomials
- Ch 3 - The World of Numbers
- Ch 4 - Exploring Algebraic Identities
- Ch 5 - I'm Up and Down, and Round and Round (Circles)
- Ch 6 - Measuring Space: Perimeter and Area
- Ch 7 - The Mathematics of Maybe (Introduction to Probability)
- Ch 8 - Predicting What Comes Next (Sequences and Progressions)

Instructions for Students

1. Attempt one worksheet each day. Do all the work neatly in your Maths notebook.
2. Write the question number and then the complete solution, showing each step.
3. Draw diagrams and graphs with a pencil and ruler wherever needed.
4. Revise the chapter from the textbook before starting that day's worksheet.
5. This is revision work only, based on what has already been taught in class.

Day 1: Orienting Yourself: The Use of Coordinates

1. Plot the points (2, 3), (-2, 4), (-3, -2) and (4, -1) on a graph and name the quadrant of each.
2. Write the coordinates of one point on the x-axis and one point on the y-axis.
3. Find the distance between the points (2, 3) and (2, 8).
4. Find the distance between the origin and the point (3, 4).
5. In which quadrant does the point (-5, 6) lie?
6. Write the coordinates of the reflection of the point (3, -4) in the x-axis.
7. Find the distance between (-1, 2) and (2, -2).
8. The point (0, y) lies on which axis? Give one example.

Day 2: Introduction to Linear Polynomials

1. Identify the terms, coefficients and variables in $5x - 3y + 7$.
2. Find the degree of the polynomial $4x^3 - 2x + 1$.
3. Which of these are linear polynomials: $2x + 5$, $x^2 + 1$, $3x - 7$, 4?
4. Evaluate the polynomial $p(x) = 2x + 3$ at $x = 4$.
5. Find the n th term of the pattern 3, 7, 11, 15, ...
6. Complete the table for $y = 2x + 1$ for $x = 0, 1, 2$ and 3, and plot the graph.
7. Write the slope and the y-intercept of the line $y = 3x - 2$.
8. Two lines have slopes 2 and 2. Are they parallel?

Day 3: The World of Numbers

1. Classify each as natural, integer, rational or irrational: -3 , 0 , $2/5$, $\sqrt{7}$, 5 .
2. Prove that the square root of 2 is irrational.
3. Write the recurring decimal $0.333\dots$ as a fraction.
4. Find two rational numbers between $1/3$ and $1/2$.
5. Express 0.36 as a fraction in lowest terms.
6. State whether the square root of 16 is rational or irrational.
7. Describe how you would represent the square root of 2 on the number line.
8. State whether the decimal expansion of $7/8$ is terminating or non-terminating.

Day 4: Exploring Algebraic Identities

1. Expand $(x + 3)^2$ using an identity.
2. Expand $(2a - 5)^2$.
3. Evaluate 99^2 using an identity.
4. Factorise: $x^2 - 9$.
5. Expand $(x + 2)(x - 2)$.
6. Evaluate 103×97 using an identity.
7. Expand $(a + b)^3$.
8. Factorise: $x^2 + 6x + 9$.

Day 5: I'm Up and Down, and Round and Round (Circles)

1. The perpendicular drawn from the centre of a circle to a chord ____ the chord.
2. Find the length of a chord of a circle of radius 5 cm that is at a distance of 3 cm from the centre.
3. Complete: the angle subtended by an arc at the centre is ____ the angle it subtends at any point on the remaining part of the circle.
4. Find the measure of the angle in a semicircle.
5. In a cyclic quadrilateral, one angle is 70 degrees. Find its opposite angle.
6. Two chords of a circle are each at a distance of 4 cm from the centre. Are they equal in length?
7. The diameter of a circle is 14 cm. Find its radius and the length of the longest chord.
8. An arc subtends an angle of 100 degrees at the centre. Find the angle it subtends at a point on the remaining part of the circle.

Day 6: Measuring Space: Perimeter and Area

1. Find the perimeter of a rectangle of length 12 cm and breadth 8 cm.
2. Find the area of a triangle of base 10 cm and height 6 cm.
3. Find the area of an equilateral triangle of side 4 cm.
4. Find the area of a triangle with sides 3 cm, 4 cm and 5 cm using Heron's formula.
5. Find the circumference of a circle of radius 7 cm.
6. Find the area of a circle of radius 14 cm.
7. Find the area of a sector of angle 60 degrees in a circle of radius 21 cm.
8. The perimeter of a square is 36 cm. Find its area.

Day 7: The Mathematics of Maybe (Probability)

1. Write the sample space when a coin is tossed once.
2. Find the probability of getting a head when a fair coin is tossed once.
3. Find the probability of getting an even number when a fair die is rolled once.
4. Find the probability of getting a number greater than 4 on a die.
5. A bag has 3 red and 5 blue balls. Find the probability of drawing a red ball.
6. Classify each as certain, impossible or likely: (a) the sun rises in the east, (b) getting 7 on a die.
7. Find the probability of drawing an ace from a well-shuffled deck of 52 cards.
8. A die is thrown 100 times and 4 appears 20 times. Find the experimental probability of getting 4.

Day 8: Predicting What Comes Next (Arithmetic Progressions)

1. Find the 10th term of the AP 3, 7, 11, ...
2. Find the common difference of the AP 12, 8, 4, ...
3. Which term of the AP 2, 5, 8, ... is 32?
4. Find the sum of the first 10 terms of the AP 1, 3, 5, ...
5. Find the sum of the first 20 natural numbers.
6. Find the n th term of the sequence 5, 9, 13, 17, ...
7. Is 100 a term of the AP 4, 8, 12, ...? Give a reason.
8. Find the sum of the first 15 terms of the AP 7, 11, 15, ...

Day 9: Sequences and Progressions (Geometric Progressions)

1. Find the common ratio of the GP 3, 9, 27, ...
2. Find the 5th term of the GP 2, 4, 8, ...
3. Find the 6th term of the GP 1, 3, 9, ...
4. Check whether 2, 6, 18, 54 is a GP and find its common ratio.
5. Find the sum of the first 5 terms of the GP 1, 2, 4, ...
6. Find the sum: $1 + 2 + 3 + \dots + 50$.
7. Write the next two terms of the GP 80, 40, 20, ...
8. A pattern of dots grows as 1, 4, 9, 16, ... Find the 10th term.

Day 10: Mixed Revision

1. Find the distance between the points (1, 2) and (4, 6).
2. Find the degree of the polynomial $7x^4 - x + 2$.
3. State whether the square root of 5 is rational or irrational.
4. Evaluate 98^2 using an identity.
5. In a circle, an angle subtended at the centre is 120 degrees. Find the angle at the circumference.
6. Find the area of a triangle with sides 5 cm, 12 cm and 13 cm.
7. Find the probability of getting a prime number when a fair die is rolled once.
8. Find the 12th term of the AP 5, 9, 13, ...

PM SHRI KENDRIYA VIDYALAYA NO. 2, CHHINDWARA

ENGLISH AUTUMN BREAK HOLIDAY HOMEWORK

Class: IX A & IX B

Complete all the following tasks neatly and submit them after the autumn break.

1. Article Writing

Write an article on “**The Increasing Burden of Online Activities on Students**”. Explain how excessive online activities can confuse students about managing their academic responsibilities.

2. Poster Making

Prepare a poster motivating children to “**Use AI for Educational Purposes**”. Include a catchy slogan and an attractive, relevant illustration.

3. Letter to the Editor

Write a letter to the editor highlighting the issue of **increasing dependency on technology**. You are **Kriti**, of **H-16, Housing Board Colony, Chhindwara**.

4. Diary Entry

You are **Tom**. You enjoyed your 10-day holidays by visiting a historic place. Record your feelings and experiences in a diary entry.

5. Descriptive Paragraph

Write a descriptive paragraph on the topic “**Give Respect, Take Respect.**”

Note: Do all written work in your English notebook.

KENDRIYA VIDYALYA NO.2 CHHINDWARA

AUTUMN BREAK HOMEWORK

CLASS- IX- A & B

SUBJECT – SOCIAL SCIENCE

Q.1. Make a Power Point Presentation on the “Oceans and Life”.

Q.2. Cased based questions.

Make minimum two case based Questions with answer from the “Oceans and Life”.

Q.3. Map based Questions.

Locate all the continents, all the Oceans, Equator, Prime Meridian, Tropic of Cancer, Tropic of Capricorn in the World Map.

Q.4. Write a note on any one Festival celebrated in your area with some pictures.

Sub. Teacher- Dhaniraj Indorker, TGT Sosts.

AUTUMN BREAK HOLIDAY HOMEWORK

Mathematics | Class 10

Kendriya Vidyalaya - Session 2026-27

Autumn Break: 15 October 2026 to 24 October 2026 (10 days)

Revision of chapters completed before the break (as per the Split-Up Syllabus)

Chapters Covered (for revision)

- Ch 1 - Real Numbers
- Ch 2 - Polynomials
- Ch 3 - Pair of Linear Equations in Two Variables
- Ch 4 - Quadratic Equations
- Ch 5 - Arithmetic Progressions
- Ch 6 - Triangles
- Ch 7 - Coordinate Geometry
- Ch 8 - Introduction to Trigonometry
- Ch 9 - Applications of Trigonometry
- Ch 10 - Circles
- Ch 11 - Areas Related to Circles
- Ch 12 - Surface Areas and Volumes

Instructions for Students

1. Attempt one worksheet each day. Do all the work neatly in your Maths notebook.
2. Write the question number and then the complete solution, showing each step.
3. Draw diagrams and graphs with a pencil and ruler wherever needed.
4. Revise the chapter from the textbook before starting that day's worksheet.
5. This is revision work only, based on what has already been taught in class.

Day 1: Real Numbers and Polynomials

1. Find the HCF and the LCM of 26 and 91, and verify that $\text{HCF} \times \text{LCM} = \text{product of the numbers}$.
2. Prove that the square root of 5 is irrational.
3. Find the zeroes of $x^2 - 5x + 6$.
4. Find a quadratic polynomial whose zeroes are 3 and -2.
5. If the product of the zeroes of $x^2 - 7x + k$ is 12, find k.
6. Without dividing, state whether $13/125$ has a terminating or a non-terminating decimal expansion.
7. Find the HCF of 96 and 404 by prime factorisation.
8. Find the zeroes of $x^2 - 4$.

Day 2: Pair of Linear Equations in Two Variables

1. Solve: $x + y = 10$ and $x - y = 2$.
2. Solve by substitution: $2x + 3y = 12$, given $x = 3$.
3. For what value of k do $2x + 3y = 7$ and $4x + 6y = k$ have infinitely many solutions?
4. Solve: $3x + 2y = 12$ and $5x - 2y = 4$.
5. Check the consistency of: $x + 2y = 5$ and $3x + 6y = 15$.

6. The sum of two numbers is 35 and their difference is 13. Find the numbers.
7. Solve: $7x + 6y = 3800$ and $3x + 5y = 1750$.
8. Five years ago a father was three times as old as his son. Write a linear equation for this situation.

Day 3: Quadratic Equations

1. Solve by factorisation: $x^2 - 7x + 12 = 0$.
2. Solve using the quadratic formula: $x^2 - 5x + 6 = 0$.
3. Find the nature of the roots of $2x^2 - 4x + 3 = 0$.
4. Find k if $x^2 + kx + 9 = 0$ has equal roots.
5. Solve: $x^2 - 9 = 0$.
6. The product of two consecutive positive integers is 306. Find the integers.
7. Solve: $2x^2 + x - 6 = 0$.
8. Find the roots of $x^2 + 4x + 4 = 0$.

Day 4: Arithmetic Progressions

1. Find the 10th term of the AP 2, 7, 12, ...
2. Find the sum of the first 20 terms of the AP 3, 7, 11, ...
3. Which term of the AP 5, 8, 11, ... is 50?
4. Find the common difference of the AP $\frac{1}{2}$, 1, $\frac{3}{2}$, ...
5. Find the sum of the first 15 multiples of 8.
6. The 5th term of an AP is 19 and the 10th term is 39. Find the AP.
7. How many two-digit numbers are divisible by 3?
8. Find the 21st term of the AP -4, -1, 2, ...

Day 5: Triangles

1. State the Basic Proportionality Theorem (Thales theorem).
2. In triangle ABC, DE is parallel to BC, AD = 3 cm, DB = 5 cm and AE = 4.5 cm. Find EC.
3. Two triangles are similar and their corresponding sides are in the ratio 2 : 3. Find the ratio of their areas.
4. Check whether triangles with sides 3, 4, 5 and 6, 8, 10 are similar.
5. In two triangles ABC and DEF, angle A = angle D and angle B = angle E. Name the similarity criterion.
6. The areas of two similar triangles are 81 cm^2 and 49 cm^2 . Find the ratio of their corresponding sides.
7. State the Pythagoras theorem.
8. A vertical pole 6 m high casts a shadow 4 m long. Find the height of a tree that casts a shadow 10 m long at the same time.

Day 6: Coordinate Geometry

1. Find the distance between the points (2, 3) and (5, 7).
2. Find the midpoint of the line segment joining (4, -2) and (-2, 6).
3. Find the distance of the point (-3, 4) from the origin.
4. Find the coordinates of the midpoint of the segment joining (2, 3) and (6, 7).

5. Using the section formula, find the point dividing the segment joining (4, -3) and (8, 5) in the ratio 3 : 1.
6. Find the side lengths to show that (1, 7), (4, 2), (-1, -1) and (-4, 4) form a square.
7. Find the distance between (a, 0) and (0, b).
8. Find the point on the x-axis that is equidistant from (2, -5) and (-2, 9).

Day 7: Trigonometry and Its Applications

1. If $\sin(\theta) = \frac{3}{5}$, find $\cos(\theta)$ and $\tan(\theta)$.
2. Evaluate: $\sin 30^\circ + \cos 60^\circ$.
3. Evaluate: $2 \tan^2(45^\circ) + \cos^2(30^\circ) - \sin^2(60^\circ)$.
4. If $\tan(\theta) = 1$, find θ .
5. Prove: $\sin^2(\theta) + \cos^2(\theta) = 1$.
6. A tower casts a shadow 30 m long when the sun's elevation is 45 degrees. Find the height of the tower.
7. The angle of elevation of the top of a building from a point 20 m away is 60 degrees. Find the height of the building.
8. Evaluate: $\sin 45^\circ / \cos 45^\circ$.

Day 8: Circles and Areas Related to Circles

1. Complete: the tangent at any point of a circle is perpendicular to the ____.
2. The two tangents drawn from an external point to a circle are ____ in length.
3. Find the length of the tangent from a point 10 cm from the centre of a circle of radius 6 cm.
4. Find the area of a sector of angle 90 degrees in a circle of radius 14 cm.
5. Find the length of an arc of a circle of radius 21 cm subtending an angle of 60 degrees at the centre.
6. Find the area of a circle of radius 7 cm.
7. The circumference of a circle is 44 cm. Find its radius.
8. Find the area of a quadrant of a circle of radius 14 cm.

Day 9: Surface Areas and Volumes

1. Find the volume of a sphere of radius 7 cm.
2. Find the total surface area of a cube of side 5 cm.
3. A cylinder has radius 7 cm and height 10 cm. Find its volume.
4. Find the curved surface area of a cone of radius 7 cm and slant height 10 cm.
5. Find the volume of a hemisphere of radius 3.5 cm.
6. Find the volume of a cuboid of dimensions 10 cm x 5 cm x 4 cm.
7. The surface area of a sphere is 154 cm^2 . Find its radius.
8. A cone and a cylinder have the same radius and height. Find the ratio of their volumes.

Day 10: Mixed Revision

1. Find the HCF and the LCM of 12, 15 and 21.
2. Find the zeroes of $x^2 + 7x + 10$.
3. Solve: $2x + y = 8$ and $x - y = 1$.
4. Find the 15th term of the AP 7, 11, 15, ...

5. Find the distance between $(-5, 7)$ and $(-1, 3)$.
6. Evaluate: $\sin 60 \cos 30 + \cos 60 \sin 30$.
7. Find the area of a circle of diameter 28 cm.
8. Find the volume of a cube of edge 6 cm.

PM SHRI KENDRIYA VIDYALAYA No.2 CHHINDWARA

CLASS 10TH SOCIAL SCIENCE

Project Work: Practical / Case-Based Questions - English

SECTION A — CASE-BASED / PRACTICAL QUESTIONS

Answer the following questions in the space provided below.

1. If Ramesh needs a loan for farming, Bank vs Moneylender — which to choose and why?

2. Why is collateral asked for in a car loan?

3. What was the problem of double coincidence of wants before money?

4. How do Self-Help Groups (SHGs) help to break the debt trap?

5. If a bank commits fraud, which consumer rights are applicable?

PM SHRI KV No. 2, CHHINDWARA

CLASS X — ENGLISH

AUTUMN BREAK HOLIDAY HOMEWORK

Complete the work neatly in your English notebook.

Section A: Integrated Literature Questions

Q1. In *A Letter to God* (First Flight) and *The Thief's Story* (Footprints Without Feet), the main characters respond to situations that test their trust in others. Compare Lencho's faith and Hari Singh's changing understanding of trust. What do the two stories teach us about faith, honesty and human nature? (120–150 words)

Q2. Nelson Mandela in *Nelson Mandela: Long Walk to Freedom* (First Flight) and Bholi in *Bholi* (Footprints Without Feet) show courage in different circumstances. Explain how each character overcomes fear or oppression and takes a step towards freedom and dignity. (120–150 words)

Q3. In *His First Flight* (First Flight) and *The Necklace* (Footprints Without Feet), the characters learn important lessons through challenging experiences. Compare how fear, choices and experience influence the characters. What message do the two stories convey? (120–150 words)

Section B: Formal Letter Writing

Q4. Letter to the Editor: You are Aarav/Aarohi, a resident of Chhindwara. Write a letter to the Editor of a local newspaper expressing concern about the increasing use of plastic bags and littering in public places. Suggest practical measures that citizens and the municipal authorities can take. (100–120 words)

Q5. Situational Letter: You are Riya/Rohan, Cultural Secretary of your school. Write a letter to the Manager of a local bookshop placing an order for books and stationery required for an upcoming school literary event. Include the items, quantities, request for a discount and delivery deadline. (100–120 words)

Section C: Analytical Paragraph Writing

Q6. Study the data given below and write an analytical paragraph in 100–120 words comparing students' preferred ways of travelling to school. Mention the most and least preferred modes and draw a suitable conclusion.

Mode of transport	Percentage of students
School bus	40%
Walking	25%
Bicycle	20%
Private vehicle	15%

Q7. Write an analytical paragraph in 100–120 words on the importance of reading among teenagers using the following information: 45% read for enjoyment, 25% read to prepare for examinations, 20% read to learn new skills, and 10% rarely read. Compare the trends and suggest one way to encourage regular reading.

Instructions: Read each question carefully. Use relevant details from the prescribed texts, organise ideas logically, follow the word limit and check grammar, spelling and punctuation before submission.

KENDRIYA VIDYALYA NO.2 CHHINDWARA

AUTUMN BREAK HOMEWORK

CLASS- X - A

SUBJECT – SOCIAL SCIENCE

Q.1. Make a Power Point Presentation on the “Money and Credit”, Globalisation in Indian Economy , Age of Industrialization.(Any One)

Q.2. Case based questions.

Make minimum two case based Questions with answer from the ““Money and Credit”, Globalisation in Indian Economy , Age of Industrialization

Q.3. Map based Questions.

Locate the places where established the Multi National Companies in our country.

Q.4. Make minimum 20 questions. From the topic “Money and Credit”, Globalisation in Indian Economy , Age of Industrialization with answer.

Q.5. Write a note on any festival and impact in our economy.

Sub. Teacher- Dhaniraj Indorker, TGT Sosts.

P M SHRI KENDRIYA VIDYALAYA NO 2 CHHINDWARA

The 10-Day Physics Autumn Plan

Day 1 - 2	Dimensions & Error Analysis (Ch 1)
Day 3 - 4	1D & 2D Motion Derivations (Ch 2 & 3)
Day 5 - 6	Laws of Motion & Friction Blocks (Ch 4)
Day 7 - 8	Work, Energy, Power & Collisions (Ch 5)
Day 9-10	Gravitation & Orbital Formulae (Ch 7)

Write down these 6 fundamental derivations in your assignment notebook. These carry 3 to 5 marks each in your term exams and Solve these 3 highly expected exam-style problems with clear steps:

1. Projectile Motion: Derive the equation of the trajectory path (proving it is a parabola), followed by the formula for **Horizontal Range (R)**.

2. Banking of Roads: Derive the expression for the maximum safe speed $v_{\max}$ of a vehicle on a banked circular road with friction.

3. Work-Energy Theorem: Prove it for a **variable force** using calculus.

4. Elastic Collisions: Prove that in a 1D elastic collision, the relative velocity of approach equals the relative velocity of separation.

5. Variation in 'g': Derive how acceleration due to gravity changes with **altitude (h)** and **depth (d)**.

6. Escape Velocity: Derive the expression using gravitational potential energy integration.

7. Vectors: If $\mathbf{A} = 2\mathbf{i} + 3\mathbf{j} + 4\mathbf{k}$ and $\mathbf{B} = \mathbf{i} - \mathbf{j} + \mathbf{k}$, calculate their **cross product** and find a unit vector perpendicular to both.

8. Variable Work: A particle moves along the x-axis from $x = 0$ to $x = 5$ m under the influence of a force given by $F = (3x^2 + 2x)$ N. Find the total **work done** by this force.

9. Gravitation: At what distance from the center of the Earth will the gravitational intensity be zero on the line joining the Earth and the Moon? Assume Earth's mass is 81 times the Moon's mass, and the distance between their centers is D .

Subject teacher: S P Gupta

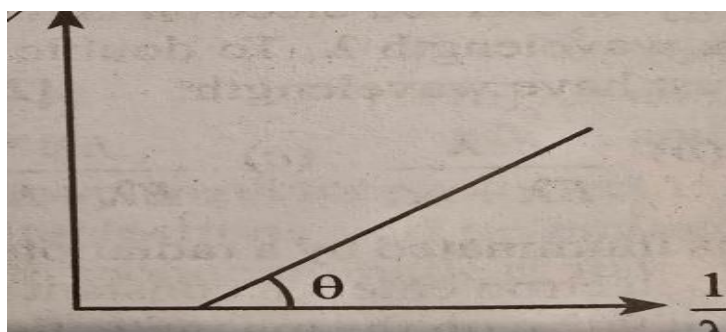
PGT PHYSICS

AUTUMN BREAK HOMEWORK FOR CLASS 12

PHYSICS

DUAL NATURE OF RADIATION AND MATTER

- 1) Which of the following statement is not true about stopping potential
 - a) It depends on the nature of emitter material.
 - b) It depends on frequency of the incident light.
 - c) It increases with increase in intensity of the incident light.
 - d) It is $1/e$ times the maximum kinetic energy of the emitted electrons.
- 2) The work function of aluminium and gold are 4.1eV and 5.1eV respectively. The ratio of the slope of the stopping potential versus frequency plot for gold to aluminium is
 - a) 1.24 b) 2 c) 1 d) 1.5
- 3) Light from a source of frequency $f > f_0$ (threshold frequency) is incident on a metal surface. If the intensity of incident radiations from the light source is increased keeping the frequency f of light constant, which of the following quantities associated with emitted photoelectrons DO NOT remain the same?
 - A. only photoelectric current B. only de Broglie wavelength
 - C. both momentum and maximum KE D. both de Broglie wavelength and the photo current
- 4) In photoelectric effect experiment, the graph of stopping potential V versus reciprocal of wavelength obtained is shown in the figure. As the intensity of incident radiation is increased:



- a) Slope of the straight line get more steep (b) Straight line shifts to left
 - (c) Straight line shifts to right (d) Graph does not change
- 5) The number of electrons flowing per second in the filament of a 110W bulb operating at 220V is:
 - a) 31.25×10^7 b) 6.25×10^{18} c) 6.25×10^{17} d) 1.25×10^{19}
 - 6) proton and electron will have same wavelength when the ratio of their momentum is ($m_p = 1849m_e$)
 - a) 1:43 b) 43:1 c) 1:1849 d) 1:1
 - 7) A proton, a neutron, an electron and an α -particle have same energy. Then their de Broglie wavelengths compare as
 - (a) $\lambda_p = \lambda_n > \lambda_e > \lambda_\alpha$ (b) $\lambda_\alpha < \lambda_p = \lambda_n > \lambda_e$
 - (c) $\lambda_e < \lambda_p = \lambda_n > \lambda_\alpha$ (d) $\lambda_e = \lambda_p = \lambda_n = \lambda_\alpha$

8) Given below are two statements: one is labelled as Assertion (A) and other is labelled as Reason (R).

Assertion (A): The photoelectric effect does not take place, if the energy of the incident radiation is less than the work function of a metal.

Reason (R): Kinetic energy of the photoelectrons is zero, if the energy of the incident radiation is equal to the work function of a metal. In the light of the above statements, choose the most appropriate answer from the options given below

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct but R is not the correct explanation of A
- (c) A is correct but R is not correct
- (d) A is not correct but R is correct

9. Assertion (A): an electron and a photon possessing same wave length will have the same momentum.

Reason(R): momentum of both particle is same by de-Broglie hypothesis In the light of the above statements, choose the most appropriate answer from the options given below

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct but R is not the correct explanation of A
- (c) A is correct but R is not correct
- (d) A is not correct but R is correct

10) assertion (A): on increasing intensity of light the photocurrent increases.

Reason (R) : the photocurrent increases with increase of frequency of light

In the light of the above statements, choose the most appropriate answer from the options given below

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct but R is not the correct explanation of A
- (c) A is correct but R is not correct
- (d) A is not correct but R is correct

AUTUMN BREAK HOLIDAY HOMEWORK CLASS 12

SUBJECT: ENGLISH CORE | SESSION: 2026-27

CBQS [LITERATURE]

1. **On the Face of It:** How does Mr. Lamb's optimistic philosophy of life transform Derry's perception of his own physical impairment and solitude?
2. **Aunt Jennifer's Tigers:** Contrast the freedom and confidence of the embroidered tigers with Aunt Jennifer's constrained reality under patriarchal oppression.
3. **Poets and Pancakes:** Analyze how Asokamitran uses subtle humor and irony to depict the hierarchy, office politics, and cultural misunderstandings at Gemini Studios.
4. **A Roadside Stand:** "The roadside stand represents the unfulfilled promises of economic progress for the rural poor." Discuss Robert Frost's critique of urban indifference.
5. **The Enemy:** How does Dr. Sadao resolve the conflict between his duty as a dedicated doctor and his obligation towards his nation as a patriotic citizen?

ADVANCE WRITING SKILLS

1. Your school is organizing a **Blood Donation Camp** in collaboration with the Red Cross Society. Draft a notice in not more than 50 words informing students of classes XI and XII about the drive and encouraging participation.
2. As the President of the Cultural Club, draft a formal notice inviting students to register for the upcoming **Annual Inter-School Debate Competition** on "Digital Media vs. Traditional Print".
3. Write a well-structured article in 120–150 words on the topic "**The Impact of Social Media on Youth Mental Health**", highlighting both the positive connectivity and the hazards of digital addiction.
4. Draft an insightful article titled "**Preserving Heritage Sites: Our Collective Responsibility**", reflecting on the importance of safeguarding local culture and architecture for future generations.

ART INTEGRATED PROJECT WORK

1. Project Title: "Aging Gracefully: Through the Eyes of a Daughter/Son"

◆ Collage Creation:

- Make a **collage** using magazine cutouts or drawings representing aging, childhood memories, and familial bonds.

2. Project Title: "Preserving Language, Preserving Identity"

◆ Comic Strip Creation:

- Create a **comic strip** or storyboard showing the events of the story—from Franz's reluctance to go to school to the emotional end of the lesson.
- Use speech bubbles, expressions, and symbols to convey the mood.

3. Project Title: "Escaping Reality: A Journey to the Third Level"

◆ Travel Brochure to 1894:

- Create a **vintage-style travel brochure** inviting people to visit 1894 via the third level. Include ticket prices, places to visit, attire suggestions, and illustrations.

AUTUMN BREAK HOLIDAY HOMEWORK

Class: XI | Subject: English Core (301)

SECTION A: POSTER MAKING (WORD LIMIT: 50 WORDS)

Q1. Poster Making - Community Awareness

The Student Council of your school is organizing a week-long "Clean & Green Neighbourhood Campaign" during the autumn break. Draft an eye-catching poster to create awareness among residents regarding waste segregation, plastic reduction, and community tree planting. Include a catchy slogan, event details, and issuing authority.

Q2. Poster Making - Cyber Safety

With the festive season approaching, instances of cyber fraud and online phishing scams tend to rise significantly. As the Convener of the Cyber Safety Club of your school, design an informative poster highlighting essential "Cyber Hygiene & Digital Safety Rules" for teenagers and senior citizens.

SECTION B: CLASSIFIED ADVERTISEMENTS (WORD LIMIT: 50 WORDS)

Q3. Classified Advertisement - Accommodation Wanted

You are Ramesh / Rashmi, a Senior Software Engineer recently transferred to your city's IT Hub. Draft a classified advertisement under the heading "ACCOMMODATION WANTED" to be published in a local daily. Specify your requirement for a fully furnished 2-BHK apartment, preferred locality, expected rent range, and contact details.

Q4. Classified Advertisement - Situations Vacant

You are the Principal of Zenith Public School. Draft a classified advertisement for the column "SITUATIONS VACANT" in a national newspaper inviting applications for the post of Post Graduate Teacher (PGT) in English. Mention minimum qualifications, required experience, key skills, and application submission details.

SECTION C: SPEECH WRITING (WORD LIMIT: 120 - 150 WORDS)

Q5. Speech Writing - Artificial Intelligence

At the upcoming Morning Assembly following the autumn vacation, you have been selected to deliver a speech on the topic: "The Growing Impact of Artificial Intelligence on Youth Creativity: A Boon or a Bane?" Draft the speech incorporating formal greetings, proper organization of arguments, impactful examples, and a strong conclusion.

SECTION D: DEBATE WRITING (WORD LIMIT: 120 - 150 WORDS)

Q6. Debate Writing - Mandatory Community Service

You are participating in an Inter-School Debate Competition. Draft a formal debate either FOR or AGAINST the motion: "Mandatory Community Service Should Be Included in the Senior Secondary School Curriculum." Express your views clearly using formal opening conventions, sound logical reasoning, and relevant examples.

Q7. Debate Writing - Coaching Institutes vs. Schooling

Prepare a well-structured debate either FOR or AGAINST the motion: "Coaching Institutes Have Rendered Conventional Schooling Secondary for Senior Secondary Students." Support your stance with strong arguments regarding conceptual clarity, social development, peer interaction, and academic stress.

शरदकालीन गृहकार्य

कक्षा - 8 (हिंदी)

प्रश्न 1. 'विपत्ति के समय सच्चे मित्र की पहचान होती है।' उपरोक्त कहावत के अर्थ को चरितार्थ करते हुए सच्चे मित्र का आपके जीवन में क्या महत्व है? इस पर 150 शब्दों में अपने विचार लिखें। सच्चे मित्र से संबंधित कुछ दोहे एवं साखियाँ चार्ट पर लिखें या पीपीटी बनाएं।

प्रश्न 2. निम्नलिखित विषय पर निबंध लिखिए :-

1. जीवन में त्योहारों का महत्व।

2. स्वच्छता का जीवन में महत्व

पत्र:-

1. प्रधानाचार्य जी को छात्रवृत्ति प्राप्त करने हेतु पत्र लिखें।

2. छोटे भाई को सदाचार के बारे में बताते हुए पत्र लिखें।

3. पाठ्य पुस्तक पर आधारित एक्सरसाइज करेंगे

4. हरिद्वार पाठ से लेखक और कल्लू जी के बीच हरिद्वार यात्रा पर एक काल्पनिक संवाद लिखिए

5. आपके घर में दैनिक भास्कर या अन्य कोई भी अखबार आता हो उसमें से वर्ग पहेली से संबंधित प्रश्न की कटिंग करके लेकर आए पूरे

(10 दिन की)

हम विद्यालय में सॉल्व करेंगे अभ्यास करेंगे

6. पाठ्य पुस्तक में प्रत्येक पाठ की एक्सरसाइज के अंतर्गत जो भी व्याकरण से संबंधित प्रश्न हैं उन्हें अच्छी तरह याद करें

शरदकालीन अवकाश गृहकार्य - 2026

कक्षा - ग्यारहवीं

प्रश्न 1. अर्धवार्षिक परीक्षा में आने वाले सभी पाठों को याद करना है।

प्रश्न 2. किसी घटना /स्थिति के आधार पर दृश्य लेखन लिखिए -

प्रश्न 3. जनसंचार के प्रमुख माध्यमों (विभिन्न माध्यमों के लिए लेखन पाठ पर आधारित) पर आधारित बीस बहुविकल्पीय प्रश्न तैयार करिए -

प्रश्न 4. "कोरोना एक महामारी" विषय पर फीचर लिखिए -

अथवा

"विधार्थी और ऑनलाइन कक्षाएँ" विषय पर आलेख लिखिए-

शरदकालीन अवकाश गृहकार्य

कक्षा - नौवीं

प्रश्न 1. निम्नलिखित प्रस्थान बिंदु के आधार पर 100 से 120 शब्दों में शीर्षक सहित एक लघु कथा लिखिए- एक बूढ़ा किसान था। उसके चारों पुत्र आपस में झगड़ा करते थे। किसान बहुत दुखी था। उसने एक दिन अपने चारों पुत्रों को बुलाया, दुखी मन से कहा, "आपस में झगड़ा करना नहीं करना चाहिए और तुम लोगों को मिल जुल कर रहना चाहिए।" पिताजी की बातें सुनकर चारों पुत्र वहाँ से चले गए। पर लड़ाई-झगड़े का सिलसिला जारी रहा, फिर एक दिन उस बूढ़े किसान ने एक उपाय सोचा.....

प्रश्न 2. निम्नलिखित विषयों पर 120 शब्दों का अनुच्छेद लिखिए।

1. एक भारत श्रेष्ठ भारत
2. नई शिक्षा नीति 2020

प्रश्न 3. "गीता पुस्तक पढ़ती है।" इस वाक्य को अर्थ के आधार पर वाक्य के आठों (8) भेदों में रूपांतरित कीजिए।

प्रश्न 4. अलंकार के सभी भेदों के दो - दो उदाहरण लिखकर कंठस्थ कीजिए।

प्रश्न 5. PT 1 प्रश्न पत्र हल करें ।

6 एकता में बल इस विषय पर अनुच्छेद लिखें

7 किसी एक पर्यटन स्थल के विषय में जानकारी एकत्रित करें

8 साइबर सुरक्षा के प्रति जागरूकता इस विषय पर 20 वाक्य लिखें

9 युवा और वृद्धि दो पीढ़ियों के अंतराल पर बात करते हुए संक्षिप्त संवाद लेखन करें

10 अब तक जितना पाठ्यक्रम हो चुका है प्रत्येक पाठ के अंतर्गत आने वाली एक्सरसाइज (अभ्यास कार्य)को अच्छी तरह प्रेक्टिस करके आए

कक्षा-बारहवीं(शरदकालीन अवकाश-गृहकार्य)

विषय- हिन्दी

लिखित भाग

प्रश्न 1-दीक्षा पोर्टल पर प्रदत्त समस्त पाठों के अभ्यास भाग (प्रैक्टिस आइटम्स) पर जाएँ और बहुविकल्पीय, अति-लघुउत्तरीय और दीर्घ- उत्तरीय प्रश्नों का अभ्यास करें ।

प्रश्न 2- एक गीत, कविता के बहाने, सहर्ष स्वीकारा है, कवितावली- इन कविताओं का काव्य-सौन्दर्य लिखिए ।

प्रश्न 3- सीबीएसई द्वारा प्रदत्त प्रतिदर्श प्रश्नपत्र को हल कीजिए ।

प्रश्न 4 – प्रदत्त परियोजना कार्य को पूर्ण करें ।

विशेष लेखन किसे कहते हैं

रेडियो लेखन की विशेषताएं बताएं

कहानी का नाट्य रूपांतरण कैसे किया जाता है

रेडियो नाटक और सिनेमा में क्या अंतर है

शब्दकोश की परिभाषा लिखिए

विकसित भारत 2047 सेवा और संकल्प यात्रा इस विषय पर आलेख लेखन करें

संपादकीय पत्र और स्ववृत्त का अभ्यास करें

छात्र आंदोलन में भाषा की मर्यादा इस विषय पर निबंध लेखन करें

अभ्यास भाग

प्रश्न 1- जनसंचार से सम्बंधित भाग का अभ्यास कीजिए ।

प्रश्न 2- वित्तान पुस्तक के समस्त पाठों का अभ्यास कीजिए ।

प्रश्न 3- आरोह के समस्त पाठों का अभ्यास कीजिए । एवं दक्षता आधारित प्रश्ननो का अभ्यास भी करें

PM SHRI KENDRIYA VIDYALAYA, NO 2 CHHINDWARA
AUTUMN BREAK HOLIDAYS HOMEWORK | SESSION 2026-27
Subject: Computer Science (Code 083) | Class XII

Name		Class / Section	XII -
Roll No.		Date of Submission	

Chapters covered: (1) Python Revision Tour (2) Functions (3) Exception Handling (4) File Handling (Text, Binary, CSV) (5) Stack (6) Computer Networks

Maximum Marks: 115

General Instructions:

1. Attempt all 50 questions in a neat CS Notebook. Write the question number clearly.
2. Section A has 20 MCQs and Section B has 5 Assertion-Reasoning questions (1 mark each).
3. Section C has 10 competency based questions (Q1-Q5 carry 2 marks, Q6-Q10 carry 3 marks).
4. Section D has 10 case based questions (4 marks each, with 3 sub-parts). Section E has 5 long answer questions (5 marks each).
5. Write all Python programs by hand with correct indentation, and test them on your computer. Copied answers will not be accepted.

Sec.	Type of Questions	Marks Each	Total Marks
A	Multiple Choice Questions (20)	1	20
B	Assertion and Reasoning (5)	1	5
C	Competency Based Questions (10)	2 / 3	25
D	Case Based Questions (10)	4	40
E	Long Answer Questions (5)	5	25
	Total		115

SECTION A: MULTIPLE CHOICE QUESTIONS [20 x 1 = 20 Marks]

Q1. Which of the following is an immutable data type in Python?

- (a) list
- (b) dictionary
- (c) tuple
- (d) set

Q2. What is the output of `print(2 + 3 * 2 ** 2)`?

- (a) 50
- (b) 14
- (c) 20
- (d) 64

Q3. If `D = {1: 'A', 2: 'B'}`, what will `print(D.get(3, 'NA'))` display?

- (a) None
- (b) NA
- (c) KeyError
- (d) 2

Q4. If S = "Computer", what will print(S[1:6:2]) display?

- (a) omu
- (b) opt
- (c) mpt
- (d) cmu

Q5. What does a Python function return if it has no return statement?

- (a) 0
- (b) None
- (c) An empty string
- (d) It raises an error

Q6. What will be the output of the following code?

```
def fun(x, y=5):  
    x = x + y  
    return x  
print(fun(2), fun(2, 3))
```

- (a) 7 5
- (b) 7 7
- (c) 5 5
- (d) Error

Q7. What will be the output of the following code?

```
x = 10  
def f():    global x  
    x = x + 5  
f()  
print(x)
```

- (a) 10
- (b) 15
- (c) 5
- (d) Error

Q8. For the function definition def show(a, b=1, c=2):, which of the following calls is invalid?

- (a) show(5)
- (b) show(5, c=3) (c)
- show(b=2)
- (d) show(1, 2, 3)

Q9. Which block of a try-except structure is executed whether an exception occurs or not?

- (a) try
- (b) except
- (c) else
- (d) finally

Q10. What will be the output of the following code?

```
try:    print(10 / 0)
except
ZeroDivisionError:
print("A") except:
    print("B")
finally:
print("C")
```

- (a) A
- (b) A and then C
- (c) B and then C
- (d) C

Q11. Which file mode opens an existing binary file for both reading and writing, with the file pointer at the beginning?

- (a) wb
- (b) rb+
- (c) ab (d) r+

Q12. Which function of the pickle module is used to write an object into a binary file?

- (a) dump()
- (b) load()
- (c) write()
- (d) store()

Q13. Which file method returns the current position of the file pointer?

- (a) seek()
- (b) tell()
- (c) read()
- (d) flush()

Q14. Which method of a csv writer object writes multiple rows to a CSV file at once?

- (a) writerow()
- (b) writerows()
- (c) write()
- (d) writelines()

Q15. Which principle does a stack follow?

- (a) First In First Out
- (b) Last In First Out
- (c) Random order
- (d) Priority order

Q16. If S = [10, 20, 30], what is S after S.append(40), S.pop(), S.pop()?

- (a) [10, 20, 30]
- (b) [10, 20]
- (c) [10]
- (d) [10, 20, 40]

Q17. What is the condition called when pop() is attempted on an empty stack?

- (a) Overflow
- (b) Underflow

- (c) Deadlock
- (d) Traversal

Q18. Which device connects two different networks and forwards data packets using IP addresses?

- (a) Hub
- (b) Repeater
- (c) Router
- (d) Modem

Q19. In which topology are all devices connected to a central switch or hub?

- (a) Bus
- (b) Ring
- (c) Star
- (d) Mesh

Q20. Which protocol is used for secure browsing of websites?

- (a) HTTP
- (b) HTTPS
- (c) FTP
- (d) SMTP

SECTION B: ASSERTION AND REASONING [5 x 1 = 5 Marks]

Directions: In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

- (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.

Q1. Assertion (A): A Python function can return multiple values.

Reason (R): Python packs multiple returned values into a tuple.

Q2. Assertion (A): An except block without any exception name can catch only the ZeroDivisionError.

Reason (R): ZeroDivisionError is raised when a number is divided by zero.

Q3. Assertion (A): Binary files store data in the form of bytes (0s and 1s).

Reason (R): The pickle module is used to read and write text files.

Q4. Assertion (A): A stack follows the LIFO (Last In First Out) principle.

Reason (R): In a Python list used as a stack, the append() method is used to push an element.

Q5. Assertion (A): A router is used to connect two different networks.

Reason (R): A router forwards data packets using their IP addresses.

SECTION C: COMPETENCY BASED QUESTIONS [5 x 2 + 5 x 3 = 25 Marks]

Q1. The following code has some errors. Rewrite the correct code and underline each correction.
[2]

```

Def calc(n):
s = 0
    for i in range(1,
n+1)        S += i
return s
print(calc(5))

```

Q2. Write the output of the following code and give a one-line reason. [2]

```

def change(L):
L.append(10)
L = [1, 2]
print(L)
A = [5]
change(A)
print(A)

```

Q3. Write the output of the following code when the user enters (i) 0 and (ii) 4. [2]

```

try:
    n =
int(input("Enter: "))
print(100 // n)
except
ValueError:
print("Invalid")
except
ZeroDivisionError:
print("Zero")
else:
print("Done")

```

Q4. Write the output of the following code. Also state which element is at the top of the stack at the end. [2]

```

S = ['A', 'B']
S.append('C')
S.append('D')
S.pop()
S.append('E')
print(S, len(S))

```

Q5. Explain with an example how DNS helps a user who types www.example.com in the browser. Also name the device that connects a school LAN to the Internet. [2]

Q6. Write a Python function countVowels(S) that accepts a string S and returns the number of vowels (both uppercase and lowercase) present in it. [3]

Q7. Write a Python function disp() that reads the text file "diary.txt" and displays all lines that start with the letter 'T' or 't', followed by the count of such lines. [3]

Q8. A binary file "student.dat" stores records as lists [rollno, name, marks] using pickle. Write a function count75() to count and display the number of students who have scored more than 75 marks. [3]

Q9. A CSV file "emp.csv" (without a header row) stores records in the form [empid, name, salary]. Write a Python program to read the file and display only the records of employees whose salary is more than 50000. [3]

Q10. Write Python functions push(stk, item), pop(stk) and display(stk) for a stack implemented as a list. The pop function should return "Underflow" if the stack is empty, and display should print the elements from top to bottom. [1 + 1 + 1]

SECTION D: CASE BASED QUESTIONS [10 x 4 = 40 Marks]

Q1. Case Study 1: Campus Network

A Kendriya Vidyalaya wants to connect its Admin, Science and Library buildings (all within a 300 m campus) in a network and also provide Internet access to all computers.

- (a) Name the type of network (LAN, MAN or WAN) the school will set up. [1]
- (b) Name the most suitable cable for connecting the buildings placed 300 m apart. [1]
- (c) Name the device to be placed in each building to connect its computers, and the device used to connect the school network to the Internet. [2]

Q2. Case Study 2: Web and Email

Aarti opens the website www.kvsangathan.nic.in in her browser and then sends an email to her teacher.

- (a) In the given URL, identify the domain name and the top-level domain. [1]
- (b) Name the protocol used to send an email from the sender's mail client to the mail server. [1]
- (c) Differentiate between a web browser and a web server. [2]

Q3. Case Study 3: Parameters and Global Variable

Study the following program.

```
def calc(a, b=10):  
    global total  
    total = a + b  
    return a * b total  
= 0 r = calc(5)  
print(r, total) r  
= calc(5, 2)  
print(r, total)
```

- (a) Write the output of the first print statement. [1]
- (b) Name the type of parameter b and state its use. [1]
- (c) Write the output of the second print statement. What would the second print display if the line 'global total' is removed from the function? [2]

Q4. Case Study 4: Passing a List to a Function

Rohan wrote the following function to process a list.

```
def modify(L, n):    for i
in range(len(L)):    if
L[i] % n == 0:
L[i] = L[i] // n
nums = [10, 15, 20, 7, 30]
modify(nums, 5)
print(nums)
```

- (a) Write the output of the program. [1]
- (b) What will `print(modify(nums, 5))` display and why? [1]
- (c) Rewrite the function `modify()` so that it returns a new list and keeps the original list unchanged. [2]

Q5. Case Study 5: Banking Program

A student wrote this program for withdrawing money from an account with a balance of Rs. 5000.

```
def withdraw(bal, amt):
    if amt > bal:
        raise ValueError("Insufficient
balance")
    return bal - amt
try:
    b = withdraw(5000, int(input("Amount:
")))
    print("Balance", b)
except ValueError
as e:
    print("Error:", e)
finally:
    print("Thank you")
```

- (a) Write the output when the user enters 2000. [1]
- (b) Write the output when the user enters 6000. [1]
- (c) What will be displayed when the user enters abc? Why is 'Thank you' printed in every case? [2]

Q6. Case Study 6: Reading a Text File

The text file "notes.txt" contains exactly three lines: *Python is easy / Files store data / Stack is LIFO*. Study the code.

```
f = open("notes.txt")
a = f.readline().strip()
b = f.read(5)
f.seek(0)
c = f.read(6)
f.seek(0)
d = len(f.readlines())
f.close()
print(a)
print(b)
print(c)
print(d)
```

- (a) Write the values displayed for a and b. [1]
- (b) Write the values displayed for c and d. [1]
- (c) Differentiate between `read()` and `readlines()`. What is the purpose of `seek(0)`? [2]

Q7. Case Study 7: Binary File of Items

A shop stores item records in a binary file using the pickle module.

```
import pickle
f = open("items.dat", "wb")
pickle.dump([101, "Pen", 10], f)
pickle.dump([102, "Book", 50], f)
f.close()
f = open("items.dat", "rb")
a = pickle.load(f)
b = pickle.load(f)
f.close()
print(a[1], b[2])
```

- (a) Write the output of the print statement. [1]
- (b) Which exception is raised if pickle.load(f) is called a third time? [1]
- (c) Write the file mode and the statements needed to add the record [103, "Eraser", 5] without deleting existing records. [2]

Q8. Case Study 8: Marks in a CSV File

A teacher creates a CSV file with the following code.

```
import csv
f = open("marks.csv", "w", newline="")
w = csv.writer(f)
w.writerow(["Name", "Marks"])
w.writerows([["Asha", 85], ["Ravi", 72]])
f.close()
```

- (a) How many lines (rows) will the file marks.csv contain? [1]
- (b) What is the purpose of newline="" in open()? [1]
- (c) Write Python statements to read marks.csv and display every row. [2]

Q9. Case Study 9: Undo Feature

A drawing game keeps its moves in a stack so that the player can undo them.

```
undo = []
def move(m):
    undo.append(m)
def undoMove():
    if undo == []:
        return "Nothing to undo"
    return undo.pop()
move("Up")
move("Left")
move("Down")
print(undoMove())
move("Right")
print(undo)
```

- (a) Write the output of the two print(undoMove()) statements. [1]
- (b) Write the output of print(undo). [1]
- (c) Name the stack operations performed by move() and undoMove(). Why is a stack the right data structure for an undo feature? [2]

Q10. Case Study 10: Reversing with a Stack *Meena uses a stack to reverse a string.*

```
def rev(s):
    st = []
    for ch in s:
        st.append(ch)
    r = ""
    while st:
        r += st.pop()
    return r
print(rev("KVS"))
print(rev("level") == "level")
```

- (a) Write the output of `print(rev("KVS"))`. [1]
- (b) Write the output of the second print statement and state what it checks. [1]
- (c) Name the property of the stack used in this program, and give two real-life applications of a stack. [2]

SECTION E: LONG ANSWER QUESTIONS [5 x 5 = 25 Marks]

Q1. A binary file STUDENT.DAT stores records as lists in the form [rollno, name, marks]. Write Python functions for the following: [2 + 3]

- (i) AddStudent() to accept the details of a student from the user and append the record to the file. [2]
- (ii) TopScorers() to display all the records of students who have scored more than 90 marks, and finally display their count. [3]

Q2. A CSV file PRODUCT.CSV stores the details of products (Pid, Pname, Price). Write Python functions for the following: [2 + 3]

- (i) Write() to create the file with the header row Pid, Pname, Price and then enter 3 product records accepted from the user. [2]
- (ii) Search() to accept a product id from the user and display its record. If the id is not found, display "Not found". [3]

Q3. A dictionary D stores the names of students as keys and their marks as values, for example D = {"Asha": 82, "Ravi": 65, "Neha": 91, "Karan": 58, "Meena": 76}. Write the following functions: [2 + 2 + 1]

- (i) PushHigh(St, D) to push the names of students who have scored more than 75 marks into the stack St. [2]
- (ii) PopAll(St) to pop and display all the names from the stack, and display "Stack is empty" at the end. [2]
- (iii) Write the output produced when both functions are called for the dictionary given above, starting with an empty stack. [1]

Q4. Brightstar Institute has four blocks: Admin, Engg, Arts and Hostel. The distances between the blocks and the number of computers in each block are given below. [1 x 5]

From	To	Distance
------	----	----------

Admin	Engg	55 m
Engg	Arts	130 m
Arts	Hostel	80 m

Admin	Hostel	90 m
-------	--------	------

Block	Computers
Admin	40
Engg	120
Arts	30
Hostel	50

- (i) Suggest the most suitable block to place the main server with a reason. [1]
- (ii) Suggest a cable layout among the four blocks that keeps the total cable length minimum. [1]
- (iii) Name the device to be placed in every block to connect its computers. [1]
- (iv) Is a repeater required in your layout? Justify (twisted pair cable works up to 100 m). [1]
- (v) The institute opens a branch in another city. Name the type of network that will connect the two campuses. [1]

Q5. Write a Python function Stats(L) that accepts a list of numbers and returns the smallest value, the largest value and the average as a tuple. If the list is empty, the function should handle the exception, display "List is empty" and return None. Then: **[3 + 1 + 1]**

- (i) Write the function Stats(L). [3]
- (ii) Call it with [12, 45, 7, 30], store the result in three variables and print them. State the output. [1]
- (iii) What is the data type of the value returned by Stats()? [1]

***** Happy Autumn Break! Practise, Code and Enjoy *****

PM SHRI KENDRIYA VIDYALAYA, NO 2 CHHINDWARA
AUTUMN BREAK HOLIDAYS HOMEWORK | SESSION 2026-27

Subject: Computer Science (Code 083) | Class XII

Name		Class / Section	XII -
Roll No.		Date of Submission	

Chapters covered: (1) Python Revision Tour (2) Functions (3) Exception Handling (4) File Handling (Text, Binary, CSV) (5) Stack (6) Computer Networks

Maximum Marks: 115

General Instructions:

1. Attempt all 50 questions in a neat CS Notebook. Write the question number clearly.
2. Section A has 20 MCQs and Section B has 5 Assertion-Reasoning questions (1 mark each).
3. Section C has 10 competency based questions (Q1-Q5 carry 2 marks, Q6-Q10 carry 3 marks).
4. Section D has 10 case based questions (4 marks each, with 3 sub-parts). Section E has 5 long answer questions (5 marks each).
5. Write all Python programs by hand with correct indentation, and test them on your computer. Copied answers will not be accepted.

Sec.	Type of Questions	Marks Each	Total Marks
A	Multiple Choice Questions (20)	1	20
B	Assertion and Reasoning (5)	1	5
C	Competency Based Questions (10)	2 / 3	25
D	Case Based Questions (10)	4	40
E	Long Answer Questions (5)	5	25
	Total		115

SECTION A: MULTIPLE CHOICE QUESTIONS [20 x 1 = 20 Marks]

Q1. Which of the following is an immutable data type in Python?

- (a) list
- (b) dictionary
- (c) tuple
- (d) set

Q2. What is the output of `print(2 + 3 * 2 ** 2)`?

- (a) 50
- (b) 14
- (c) 20
- (d) 64

Q3. If `D = {1: 'A', 2: 'B'}`, what will `print(D.get(3, 'NA'))` display?

- (a) None
- (b) NA
- (c) KeyError
- (d) 2

Q4. If S = "Computer", what will print(S[1:6:2]) display?

- (a) omu
- (b) opt
- (c) mpt
- (d) cmu

Q5. What does a Python function return if it has no return statement?

- (a) 0
- (b) None
- (c) An empty string
- (d) It raises an error

Q6. What will be the output of the following code?

```
def fun(x, y=5):  
    x = x + y  
    return x  
print(fun(2), fun(2, 3))
```

- (a) 7 5
- (b) 7 7
- (c) 5 5
- (d) Error

Q7. What will be the output of the following code?

```
x = 10  
def f():    global x  
    x = x + 5  
f()  
print(x)
```

- (a) 10
- (b) 15
- (c) 5
- (d) Error

Q8. For the function definition def show(a, b=1, c=2):, which of the following calls is invalid?

- (a) show(5)
- (b) show(5, c=3) (c)
- show(b=2)
- (d) show(1, 2, 3)

Q9. Which block of a try-except structure is executed whether an exception occurs or not?

- (a) try
- (b) except
- (c) else
- (d) finally

Q10. What will be the output of the following code?

```
try:    print(10 / 0)
except
ZeroDivisionError:
print("A") except:
    print("B")
finally:
print("C")
```

- (a) A
- (b) A and then C
- (c) B and then C
- (d) C

Q11. Which file mode opens an existing binary file for both reading and writing, with the file pointer at the beginning?

- (a) wb
- (b) rb+
- (c) ab (d) r+

Q12. Which function of the pickle module is used to write an object into a binary file?

- (a) dump()
- (b) load()
- (c) write()
- (d) store()

Q13. Which file method returns the current position of the file pointer?

- (a) seek()
- (b) tell()
- (c) read()
- (d) flush()

Q14. Which method of a csv writer object writes multiple rows to a CSV file at once?

- (a) writerow()
- (b) writerows()
- (c) write()
- (d) writelines()

Q15. Which principle does a stack follow?

- (a) First In First Out
- (b) Last In First Out
- (c) Random order
- (d) Priority order

Q16. If S = [10, 20, 30], what is S after S.append(40), S.pop(), S.pop()?

- (a) [10, 20, 30]
- (b) [10, 20]
- (c) [10]
- (d) [10, 20, 40]

Q17. What is the condition called when pop() is attempted on an empty stack?

- (a) Overflow
- (b) Underflow

- (c) Deadlock
- (d) Traversal

Q18. Which device connects two different networks and forwards data packets using IP addresses?

- (a) Hub
- (b) Repeater
- (c) Router
- (d) Modem

Q19. In which topology are all devices connected to a central switch or hub?

- (a) Bus
- (b) Ring
- (c) Star
- (d) Mesh

Q20. Which protocol is used for secure browsing of websites?

- (a) HTTP
- (b) HTTPS
- (c) FTP
- (d) SMTP

SECTION B: ASSERTION AND REASONING [5 x 1 = 5 Marks]

Directions: In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

- (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.

Q1. Assertion (A): A Python function can return multiple values.

Reason (R): Python packs multiple returned values into a tuple.

Q2. Assertion (A): An except block without any exception name can catch only the ZeroDivisionError.

Reason (R): ZeroDivisionError is raised when a number is divided by zero.

Q3. Assertion (A): Binary files store data in the form of bytes (0s and 1s).

Reason (R): The pickle module is used to read and write text files.

Q4. Assertion (A): A stack follows the LIFO (Last In First Out) principle.

Reason (R): In a Python list used as a stack, the append() method is used to push an element.

Q5. Assertion (A): A router is used to connect two different networks.

Reason (R): A router forwards data packets using their IP addresses.

SECTION C: COMPETENCY BASED QUESTIONS [5 x 2 + 5 x 3 = 25 Marks]

Q1. The following code has some errors. Rewrite the correct code and underline each correction.
[2]

```

Def calc(n):
s = 0
    for i in range(1,
n+1)        S += i
return s
print(calc(5))

```

Q2. Write the output of the following code and give a one-line reason. [2]

```

def change(L):
L.append(10)
L = [1, 2]
print(L)
A = [5]
change(A)
print(A)

```

Q3. Write the output of the following code when the user enters (i) 0 and (ii) 4. [2]

```

try:
    n =
int(input("Enter: "))
print(100 // n)
except
ValueError:
print("Invalid")
except
ZeroDivisionError:
print("Zero")
else:
print("Done")

```

Q4. Write the output of the following code. Also state which element is at the top of the stack at the end. [2]

```

S = ['A', 'B']
S.append('C')
S.append('D')
S.pop()
S.append('E')
print(S, len(S))

```

Q5. Explain with an example how DNS helps a user who types www.example.com in the browser. Also name the device that connects a school LAN to the Internet. [2]

Q6. Write a Python function countVowels(S) that accepts a string S and returns the number of vowels (both uppercase and lowercase) present in it. [3]

Q7. Write a Python function disp() that reads the text file "diary.txt" and displays all lines that start with the letter 'T' or 't', followed by the count of such lines. [3]

Q8. A binary file "student.dat" stores records as lists [rollno, name, marks] using pickle. Write a function count75() to count and display the number of students who have scored more than 75 marks. [3]

Q9. A CSV file "emp.csv" (without a header row) stores records in the form [empid, name, salary]. Write a Python program to read the file and display only the records of employees whose salary is more than 50000. [3]

Q10. Write Python functions push(stk, item), pop(stk) and display(stk) for a stack implemented as a list. The pop function should return "Underflow" if the stack is empty, and display should print the elements from top to bottom. [1 + 1 + 1]

SECTION D: CASE BASED QUESTIONS [10 x 4 = 40 Marks]

Q1. Case Study 1: Campus Network

A Kendriya Vidyalaya wants to connect its Admin, Science and Library buildings (all within a 300 m campus) in a network and also provide Internet access to all computers.

- (a) Name the type of network (LAN, MAN or WAN) the school will set up. [1]
- (b) Name the most suitable cable for connecting the buildings placed 300 m apart. [1]
- (c) Name the device to be placed in each building to connect its computers, and the device used to connect the school network to the Internet. [2]

Q2. Case Study 2: Web and Email

Aarti opens the website www.kvsangathan.nic.in in her browser and then sends an email to her teacher.

- (a) In the given URL, identify the domain name and the top-level domain. [1]
- (b) Name the protocol used to send an email from the sender's mail client to the mail server. [1]
- (c) Differentiate between a web browser and a web server. [2]

Q3. Case Study 3: Parameters and Global Variable

Study the following program.

```
def calc(a, b=10):  
    global total  
    total = a + b  
    return a * b total  
= 0 r = calc(5)  
print(r, total) r  
= calc(5, 2)  
print(r, total)
```

- (a) Write the output of the first print statement. [1]
- (b) Name the type of parameter b and state its use. [1]
- (c) Write the output of the second print statement. What would the second print display if the line 'global total' is removed from the function? [2]

Q4. Case Study 4: Passing a List to a Function

Rohan wrote the following function to process a list.

```
def modify(L, n):    for i
in range(len(L)):    if
L[i] % n == 0:
L[i] = L[i] // n
nums = [10, 15, 20, 7, 30]
modify(nums, 5)
print(nums)
```

- (a) Write the output of the program. [1]
- (b) What will `print(modify(nums, 5))` display and why? [1]
- (c) Rewrite the function `modify()` so that it returns a new list and keeps the original list unchanged. [2]

Q5. Case Study 5: Banking Program

A student wrote this program for withdrawing money from an account with a balance of Rs. 5000.

```
def withdraw(bal, amt):
    if amt > bal:
        raise ValueError("Insufficient
balance")
    return bal - amt
try:
    b = withdraw(5000, int(input("Amount:
")))
    print("Balance", b)
except ValueError
as e:
    print("Error:", e)
finally:
    print("Thank you")
```

- (a) Write the output when the user enters 2000. [1]
- (b) Write the output when the user enters 6000. [1]
- (c) What will be displayed when the user enters abc? Why is 'Thank you' printed in every case? [2]

Q6. Case Study 6: Reading a Text File

The text file "notes.txt" contains exactly three lines: *Python is easy / Files store data / Stack is LIFO*. Study the code.

```
f = open("notes.txt")
a = f.readline().strip()
b = f.read(5)
f.seek(0)
c = f.read(6)
f.seek(0)
d = len(f.readlines())
f.close()
print(a)
print(b)
print(c)
print(d)
```

- (a) Write the values displayed for a and b. [1]
- (b) Write the values displayed for c and d. [1]
- (c) Differentiate between `read()` and `readlines()`. What is the purpose of `seek(0)`? [2]

Q7. Case Study 7: Binary File of Items

A shop stores item records in a binary file using the pickle module.

```
import pickle
f = open("items.dat", "wb")
pickle.dump([101, "Pen", 10], f)
pickle.dump([102, "Book", 50], f)
f.close()
f = open("items.dat", "rb")
a = pickle.load(f)
b = pickle.load(f)
f.close()
print(a[1], b[2])
```

- (a) Write the output of the print statement. [1]
- (b) Which exception is raised if pickle.load(f) is called a third time? [1]
- (c) Write the file mode and the statements needed to add the record [103, "Eraser", 5] without deleting existing records. [2]

Q8. Case Study 8: Marks in a CSV File

A teacher creates a CSV file with the following code.

```
import csv
f = open("marks.csv", "w", newline="")
w = csv.writer(f)
w.writerow(["Name", "Marks"])
w.writerows([["Asha", 85], ["Ravi", 72]])
f.close()
```

- (a) How many lines (rows) will the file marks.csv contain? [1]
- (b) What is the purpose of newline="" in open()? [1]
- (c) Write Python statements to read marks.csv and display every row. [2]

Q9. Case Study 9: Undo Feature

A drawing game keeps its moves in a stack so that the player can undo them.

```
undo = []
def move(m):
    undo.append(m)
def undoMove():
    if undo == []:
        return "Nothing to undo"
    return undo.pop()
move("Up")
move("Left")
move("Down")
print(undoMove())
move("Right")
print(undo)
```

- (a) Write the output of the two print(undoMove()) statements. [1]
- (b) Write the output of print(undo). [1]
- (c) Name the stack operations performed by move() and undoMove(). Why is a stack the right data structure for an undo feature? [2]

Q10. Case Study 10: Reversing with a Stack *Meena uses a stack to reverse a string.*

```
def rev(s):
    st = []
    for ch in s:
        st.append(ch)
    r = ""
    while st:
        r += st.pop()
    return r
print(rev("KVS"))
print(rev("level") == "level")
```

- (a) Write the output of `print(rev("KVS"))`. [1]
- (b) Write the output of the second print statement and state what it checks. [1]
- (c) Name the property of the stack used in this program, and give two real-life applications of a stack. [2]

SECTION E: LONG ANSWER QUESTIONS [5 x 5 = 25 Marks]

Q1. A binary file STUDENT.DAT stores records as lists in the form [rollno, name, marks]. Write Python functions for the following: [2 + 3]

- (i) `AddStudent()` to accept the details of a student from the user and append the record to the file. [2]
- (ii) `TopScorers()` to display all the records of students who have scored more than 90 marks, and finally display their count. [3]

Q2. A CSV file PRODUCT.CSV stores the details of products (Pid, Pname, Price). Write Python functions for the following: [2 + 3]

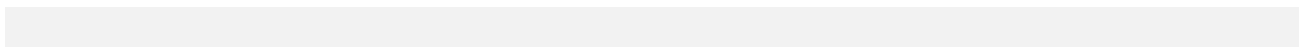
- (i) `Write()` to create the file with the header row Pid, Pname, Price and then enter 3 product records accepted from the user. [2]
- (ii) `Search()` to accept a product id from the user and display its record. If the id is not found, display "Not found". [3]

Q3. A dictionary D stores the names of students as keys and their marks as values, for example `D = {"Asha": 82, "Ravi": 65, "Neha": 91, "Karan": 58, "Meena": 76}`. Write the following functions: [2 + 2 + 1]

- (i) `PushHigh(St, D)` to push the names of students who have scored more than 75 marks into the stack St. [2]
- (ii) `PopAll(St)` to pop and display all the names from the stack, and display "Stack is empty" at the end. [2]
- (iii) Write the output produced when both functions are called for the dictionary given above, starting with an empty stack. [1]

Q4. Brightstar Institute has four blocks: Admin, Engg, Arts and Hostel. The distances between the blocks and the number of computers in each block are given below. [1 x 5]

From	To	Distance
------	----	----------



Admin	Engg	55 m
Engg	Arts	130 m
Arts	Hostel	80 m

Admin	Hostel	90 m
-------	--------	------

Block	Computers
Admin	40
Engg	120
Arts	30
Hostel	50

- (i) Suggest the most suitable block to place the main server with a reason. [1]
- (ii) Suggest a cable layout among the four blocks that keeps the total cable length minimum. [1]
- (iii) Name the device to be placed in every block to connect its computers. [1]
- (iv) Is a repeater required in your layout? Justify (twisted pair cable works up to 100 m). [1]
- (v) The institute opens a branch in another city. Name the type of network that will connect the two campuses. [1]

Q5. Write a Python function Stats(L) that accepts a list of numbers and returns the smallest value, the largest value and the average as a tuple. If the list is empty, the function should handle the exception, display "List is empty" and return None. Then: **[3 + 1 + 1]**

- (i) Write the function Stats(L). [3]
- (ii) Call it with [12, 45, 7, 30], store the result in three variables and print them. State the output. [1]
- (iii) What is the data type of the value returned by Stats()? [1]

***** Happy Autumn Break! Practise, Code and Enjoy *****

AUTUMN BREAK HOLIDAY HOMEWORK

2026

ARTIFICIAL INTELLIGENCE (AI) – CLASS X

Name: _____	Class/Section: _____
Roll No.: _____	Submission Date: _____

Chapters Covered: Communication Skills, Management Skills, ICT Skills, AI Project Cycle, Advanced Concepts of Modelling, and Evaluating Models.

General Instructions:

- Attempt all questions. Read each question carefully before answering.
- For MCQs, select only one correct option.
- For Assertion–Reasoning questions, choose the correct option from the given codes.
- Write answers neatly in your notebook or on A4 sheets. Use examples wherever relevant.
- For case-based questions, answer all sub-questions using information from the case.

Section A – Multiple-Choice Questions (5 × 1 = 5 marks)

1. Which of the following is an example of effective communication?
 - A. Interrupting the speaker repeatedly
 - B. Listening carefully and responding appropriately
 - C. Ignoring feedback
 - D. Using unclear language
2. Which practice best supports self-management during a school project?
 - A. Leaving every task until the last day
 - B. Setting goals and following a timetable
 - C. Avoiding difficult tasks
 - D. Depending entirely on others
3. Which of the following is an ICT tool used to create and edit documents?
 - A. Word processor
 - B. Calculator only
 - C. Speaker
 - D. Projector screen
4. In the AI Project Cycle, which stage involves understanding the problem, its goal, and its stakeholders?
 - A. Modelling
 - B. Evaluation
 - C. Problem Scoping
 - D. Data Exploration
5. A model performs very well on training data but poorly on unseen data. This is most likely a case of:
 - A. Underfitting
 - B. Overfitting
 - C. Perfect generalisation
 - D. Data cleaning

Section B – Assertion and Reasoning (5 × 1 = 5 marks)

Choose the correct option for each question:

- A. Both Assertion (A) and Reason (R) are true, and R correctly explains A.
 - B. Both A and R are true, but R does not correctly explain A.
 - C. A is true, but R is false.
 - D. A is false, but R is true.
1. Assertion (A): Active listening is an important communication skill.
Reason (R): It helps a listener understand the speaker's message and respond thoughtfully.
 2. Assertion (A): A to-do list can support effective self-management.
Reason (R): It helps organise tasks and track progress towards goals.
 3. Assertion (A): ICT tools can support collaboration in learning.
Reason (R): Shared online documents can allow multiple users to contribute to the same work.
 4. Assertion (A): Data exploration is useful before training an AI model.
Reason (R): It can reveal patterns, missing values, and possible problems in the dataset.
 5. Assertion (A): Accuracy alone is always sufficient to evaluate every AI classification model.
Reason (R): Precision, recall, and the confusion matrix can provide additional information about model performance.

Section C – Competency-Based Questions (5 × 2 = 10 marks)

1. A team is preparing a presentation, but members keep misunderstanding each other's instructions. Identify two communication practices that could help the team work more effectively.
2. A student has three assignments and a practical activity to complete in one week. Suggest two self-management strategies to help the student complete the work on time.
3. Your class is creating a shared report using an online document. State two safe and responsible ICT practices the class should follow.
4. A school wants to develop an AI solution to identify students who may need extra academic support. Write two questions that should be considered during Problem Scoping before collecting data.
5. An AI model predicts whether an email is spam. Out of 100 emails, it correctly identifies 40 of 50 spam emails and incorrectly labels 10 genuine emails as spam. Explain why the school should examine more than overall accuracy before using the model.

Section D – Case-Based Studies (5 × 4 = 20 marks)

Case Study 1: Communication Skills

Riya is the coordinator of a group assignment. She gives instructions quickly without checking whether everyone understands. Two students complete the wrong task, and the group misses an internal deadline.

1. Identify one communication barrier shown in the case.
2. Suggest two ways Riya can improve communication with the group.
3. Why is feedback important in this situation?

Case Study 2: Management Skills

Aman wants to improve his performance in AI. He studies without a plan, checks social media frequently, and begins assignments just before the deadline. He feels stressed and leaves some work incomplete.

1. Identify two self-management problems in Aman's routine.
2. Suggest two practical actions Aman can take to manage his time better.

3. How can setting a SMART goal help him?

Case Study 3: ICT Skills

A group of students uses online tools to prepare a project report. One student shares the document publicly, another uses a weak password, and a third copies information from a website without acknowledging the source.

1. Identify two digital safety or responsible-use issues in the case.
2. Suggest one way to protect the shared document.
3. Why should students acknowledge the sources of information they use?

Case Study 4: AI Project Cycle and Modelling

A school wants to build an AI model to estimate whether students may need additional help in mathematics. The team first speaks with teachers to understand the problem, then collects relevant historical data. It notices that some records are incomplete and that the data includes students from only one section.

1. Name the AI Project Cycle stage in which the team clarifies the problem and stakeholders.
2. Why should the team check and prepare the data before modelling?
3. State one possible bias or limitation in the dataset.
4. Why should personal student information be handled carefully?

Case Study 5: Evaluating Models

Two models are tested to identify a rare but important condition. Model A has 96% accuracy but misses many actual positive cases. Model B has 91% accuracy and identifies more of the actual positive cases, although it produces some false alarms.

1. Which model may have higher recall? Give a reason.
2. What does a false negative mean in this context?
3. Name one tool or measure that can help evaluate the models beyond accuracy.
4. Why should the team consider the real-world impact of errors before selecting a model?

Submission Checklist

- ☐ All 20 questions/sets attempted.
- ☐ Answers are numbered correctly and written neatly.
- ☐ Examples and explanations are included where required.
- ☐ Work is submitted on or before the date announced by the teacher.

Think • Practise • Apply • Create