

पीएम श्री केंद्रीय विद्यालय क्रमांक-2 फिरोज़पुर छावनी
ग्रीष्मकालीन अवकाश परियोजना कार्य

कक्षा- 6

सत्र- 2026-27

सामान्य निर्देश:-

1. सभी प्रश्न अनिवार्य हैं।
2. सभी प्रश्नों को विषय की अभ्यास पुस्तिका में ही हल करें।
3. यदि कोई समस्या है तो अपने विषयाध्यापक से बात कर लें।

Subject- English

1. Handwriting Improvement:

Neat Copying: Copy 1 page of English text on your holiday homework notebook. Put date on the left side of the page every day. At the end of the vacation, you must have completed 40 pages of English handwriting.

2. Design an Invitation Card

Topic: Teacher's Day

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colorful.

3. Unseen Comprehension Worksheets: Complete the worksheets on your holidays homework notebook that will be shared in your WhatsApp Group.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favorite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

7. Write the irregular verbs five times on your holiday homework notebook. The list will be shared in your WhatsApp Group.

विषय – हिन्दी

1. अपनी पाठ्य-पुस्तक में से प्रतिदिन कोई भी 5 वाक्य अपनी अभ्यासपुस्तिका में लिखें। (दिनांक और दिन ऊपर लिख दें)।

2. निम्न विषयों पर अनुच्छेद (paragraph) लिखें – (प्रत्येक 70-80 शब्द)

(क) मेरा प्रिय खेल

(ख) मेरे जीवन का लक्ष्य

(स) वृक्षों का महत्व

3. आप घर पर माताजी के कौन-कौन से कामों में उनकी मदद करते हैं? लिखें।

4. महात्मा गांधी जी के जीवन के बारे कोई 10 वाक्य लिखिए।

5. आपके घर में हिंदी की कौन-कौन सी किताबें हैं? उनके नाम लिखें और आपको कौन सी किताब सबसे अच्छी लगी और क्यों?

6. अपनी मनपसंद कविता स्वरचित या किसी किताब से लिखकर याद करो। (जैसे पुष्प की अभिलाषा, भारतवर्ष इत्यादि)

Subject- Math

Chapter Focus: Patterns in Mathematics

Instructions:

1. Complete the work neatly in your Maths notebook.
2. Show all necessary steps wherever required.
3. Use colored pencils for pattern drawings.
4. Revise the chapter 'Patterns in Mathematics' before attempting the questions.

Section A: Number Patterns

1. Identify the pattern and write the next three numbers:
 - a) 2, 4, 6, 8, _____, _____, _____
 - b) 5, 10, 20, 40, _____, _____, _____
 - c) 1, 3, 6, 10, 15, _____, _____
2. Write the rule for the following patterns:
 - a) 7, 14, 21, 28, ...
 - b) 3, 6, 12, 24, ...
3. Create your own number pattern of 6 numbers and write the rule used.

Section B: Shape Patterns

4. Draw and extend the following pattern:
 $\triangle \circ \triangle \circ \triangle \circ$ _____
5. Draw a pattern using squares and triangles and repeat it at least 10 times.
6. Create a border design using repeating shapes.

Section C: Thinking Questions

7. Find the missing number:

4, 9, 14, 19, _____, _____

8. Observe the pattern:

$$1^2 = 1$$

$$2^2 = 4$$

$$3^2 = 9$$

$$4^2 = 16$$

Continue the pattern up to 10^2 .

9. Write a pattern where each number increases by 7. Write the first 8 numbers.

Activity Work

1. Collect pictures of patterns from daily life (tiles, clothes, rangoli, etc.) and paste them in your notebook.
2. Draw at least two rangoli or decorative patterns using mathematical shapes.
3. Learn and write the tables from 1-20

Subject- Science

1. To read chapter 1,2 and 3 loudly at home three times and to complete exercise from chapter 1 to 3
2. List junk foods you eat frequently. Suggest some healthy options
3. Find out about Project Tiger and other similar projects to protect our biodiversity and make a chart on it.
4. learn and practice chapter 1 to 3 all questions for test.
5. exploratory projects

Chapter 3, page 58,59 of science book curiosity

Project 3 and 6 of learning further

Complete all questions of chapter 1 to 3 if not done earlier.

No holiday homework copy. Every work needs to be done in your homework notebooks

Subject- Social science

Label and locate states and union territories on India Map and paste in your notebook.

(ii) Label and locate Continents and Oceans on World Map and paste in your notebook.

1. What is a Map? What are the different types of Maps? Explain.
2. Write about a tourist place of India which you like the most.
3. What are the three components of Maps? Explain with examples.
4. What are the Latitudes and Longitudes. Explain with diagram.

5. Write about them-

(i) Geologists (ii) Palaeontologists (iii) Anthropologists (iv) Archaeologists.

1. Delhi's and Bengaluru's latitudes are 29°N and 13°N ; their longitudes are almost the same, 77°E . How much will be the difference in local time between the two cities? the name of India's neighboring nations.

2. Write the names of all the states and union territories of India and their capitals.

3. Write about the fundamental rights and duties of Indian citizens given by the Indian Constitution.
4. Write about on a local historical place nearby you.
5. What are the sources of History? Make a diagram of Sources of History. (Textbook Page no. 67)

विषय- संस्कृत

1. पठ धातु के रूप लट् लकार (वर्तमान काल) में लिखिए ।
2. सर्वनाम शब्दों का प्रयोग करते हुए संस्कृत में 10 वाक्य लिखिए जैसे-सःपठति।सा पठति आदि।
3. वर्ण संयोजन और वर्ण विच्छेद करके दस,दस उदाहरण लिखिए।
4. संस्कृत में प्रतिज्ञा लिखिए और याद कीजिए।
5. बालक (पुल्लिंग) और रमा या बालिका (स्त्रीलिंग) के शब्द रूप लिखिए।
6. विद्या के महत्व पर 3 श्लोक संकलित करके लिखिए

Subject- Punjabi

- * ਪਾਠ 1-2 ਯਾਦ ਕਰੋ।
- * 5 ਵਾਰ ਵਰਨਮਾਲਾ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਮੁਕਤਾ, ਬਿਹਾਰੀ, ਸਿਹਾਰੀ, ਔਕੜ, ਦੁਲੈਂਕੜ, ਲਾਵਾਂ, ਦੁਲਾਵਾਂ, ਹੋੜਾ, ਕਨੌੜਾ ਮਾਤਰਾ ਦੇ 10-10 ਸ਼ਬਦ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਪਾਠ 2 ਅਤੇ 3 ਵਿਚੋਂ ਸੁੰਦਰ ਲਿਖਾਈ ਵਿੱਚ 40 ਪੰਨੇ(ਪੇਜ) ਲਿਖੋ।
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Subject- AI

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Chapter 3, page 58,59 of science book curiosity

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विषय- संस्कृत

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2. सर्वनाम शब्दों का प्रयोग करते हुए संस्कृत में 10 वाक्य लिखिए जैसे-सःपठति।सा पठति आदि।
3. वर्ण संयोजन और वर्ण विच्छेद करके दस,दस उदाहरण लिखिए।
4. संस्कृत में प्रतिज्ञा लिखिए और याद कीजिए।
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Subject- Punjabi

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Subject- AI

केन्द्रीय विद्यालय संगठन

PM SHRI KENDRIYA VIDYALAYA NO-2, FEROZEPUR CANTT

SUMMER VACATIONS HOMEWORK

CLASS – VII A

SUBJECT- ENGLISH

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

Homework:

1. Handwriting Improvement:

Neat Copying: Copy 1 page of English text on your holiday homework notebook. Put date on the left side of the page everyday. At the end of the vacation, you must have completed 40 pages of English handwriting.

2. Design an Invitation Card

Topic: Independence Day

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Unseen Comprehension Worksheets: Complete the worksheets on your holidays homework notebook that will be shared in your WhatsApp Group.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

7. Write the irregular verbs five times on your holiday homework notebook. The list will be shared in your WhatsApp Group

SUBJECT- HINDI

ग्रीष्मकालीन छुट्टियों (Summer Vacation) का गृहकार्य :- 2026-27

कक्षा – सातवीं

विषय – हिन्दी

प्रश्न 1 निम्नलिखित सभी विषयों पर लगभग 100-100 शब्दों में अनुच्छेद लिखिए-

(1) स्वतंत्रता दिवस (15 अगस्त) (2) पर्यावरण प्रदूषण

(3) मेरा प्रिय त्योहार-होली (4) विश्व योग दिवस का महत्व (21 जून)

प्रश्न 2 अपने मित्र को नववर्ष की बधाई देते हुए एक बधाई पत्र लिखिए।

प्रश्न 3 विद्यालय के प्राचार्य को स्थानांतरण प्रमाण-पत्र हेतु एक प्रार्थना पत्र लिखिए।

प्रश्न 4 निम्नलिखित शब्दों के तीन-तीन पर्यायवाची शब्द लिखिए-

सूर्य, पृथ्वी, समुद्र, राजा, फूल, पहाड़, अमृत, आकाश, अग्नि, गणेश, मित्र, वृक्ष, चंद्रमा, दिन, रात

प्रश्न 5 सामयिक परीक्षा (PT-1) के पाठ्यक्रम से संबंधित पाठों को पढ़ेंगे और याद भी करेंगे। (1 से 3 पाठ)

प्रश्न 6 अपनी मल्हार पुस्तक में से कोई 4 कविताएँ लिखेंगे और याद भी करेंगे।

प्रश्न-7 सामयिक परीक्षा (PT-1) में आने वाले पाठों की Learner's डायरी भी बनाएंगे। (1 से 3 पाठ)

नोट-सभी विद्यार्थी ग्रीष्मकालीन छुट्टियों (Summer Vacation) के गृहकार्य को हिन्दी विषय के गृहकार्य के रजिस्टर में करेंगे।

SUBJECT- MATHS

1. Write in Indian and International Number System:

a) 45678932 b) 908070605 c) 120045006

2. Insert commas and write number names:

a) 78543210 b) 904567821 c) 600700800

3. A calculator has following buttons : +10,00,000 , +1,00,000 , +10,000 , +1,000 , +100 , +10 , +1.

(a) Find out which buttons should be clicked and how many times to get the number 5072?

(b) Find out which buttons should be clicked and how many times to get the number 8300?

4. Simplify using BODMAS:

a) $15 + 6 \times 4$ b) $50 \div 5 + 12 \times 3$ c) $100 - 20 \times 3 + 10$

5. Using all digits from 0 to 9 exactly once to create a 10 - digit number, write the

(a) Largest multiple of 5.

(b) Smallest even number.

6. How many lakhs make a billion?

7. A bar tailed godwit holds the record for the longest recorded non-stop flight. It travelled 13,560 km from Alaska to Australia without stopping . Its journey started on 13 October 2022 and continued for about 11 days. Find out the approximate distance it covered every day. Find out the approximate distance it covered every hour.

8. Solve:

a) $45 + (30 \div 5 \times 2)$

b) $60 - (20 + 5 \times 4)$

c) $(80 \div 4) \times (6 + 2)$

9. Fill in the blanks:

a) $25 + \underline{\quad} \times 4 = 45$

b) $\underline{\quad} \div 5 + 6 = 10$

c) $100 - \underline{\quad} \times 2 = 60$

Word Problems

10. Riya bought 5 packets of chocolates. Each packet has 12 chocolates. She gave away 10

chocolates. How many are left?

11. A shopkeeper sold 8 boxes of pens. Each box contains 15 pens. He sold 20 pens separately. Find total pens sold.

12. For each of the following situations, write the expression describing the situation, identify its terms and find the value of the expression.

(a) Queen Alia gave 100 gold coins to Princess Elsa and 100 gold coins to Princess Anna last year. Princess Elsa used the coins to start a business and doubled her coins. Princess Anna bought jewellery and has only half of the coins left. Write an expression describing how many gold coins Princess Elsa and Princess Anna together have.

(b) A metro train ticket between two stations is ₹40 for an adult and ₹20 for a child. What is the total cost of tickets:

(i) for four adults and three children?

(ii) for two groups having three adults each?

13. Find the values of the following expressions:

(a) $(6 + 10) - 2$ and $6 + (10 - 2)$

(b) $16 - (8 - 3)$ and $(16 - 8) - 3$

(c) $27 - (18 + 4)$ and $27 + (-18 - 4)$

14. Evaluate the following :

(a) $1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10$

(b) $1 - 1 + 1 - 1 + 1 - 1 + 1 - 1 + 1 - 1$

SUBJECT- SCIENCE

Summer break homework for science for class 7

1. To read chapter 1,2 and 3 loudly at home three times and to complete exercise from chapter 1 to 3

2. create Rangoli at home using acidic and basic substances at home, click a photo of it and draw picture too. Mark A for acidic and B for basic.

3. Collect a soil sample of your area and find if it is acidic, basic or neutral

4. learn and practice chapter 1 to 3 all questions for test.

5. exploratory projects

Chapter 3, page 40 of science book curiosity

Project 3 and 4

Complete all questions of chapter 1 to 3 if not done earlier.

No holiday homework copy. Every work needs to be done in your homework notebooks

SUBJECT- SOCIAL SCIENCE

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)
2. What are some key geographical features of India.
3. Write about a tourist place of India which you like the most.
4. What are the three main ranges of Himalaya? Explain.
5. Write about the 'Cold Desert of India'
6. Write a paragraph on World Environment Day (5 June).
7. Write about on a local historical place nearby you.
8. Write about the fundamental rights and duties of Indian citizens given by the Indian Constitution.
9. Complete your Social Science MDP work. (Water Conservation).
10. Write and learn the 'Preamble' of the Indian Constitution.
11. Imagine you are a historian studying ancient India. What types of sources (archaeological, literary, etc.) would you use to learn more about the mahājanapadas?
12. "The introduction of iron metallurgy was a key catalyst for the Second Urbanisation." Evaluate this statement.

SUBJECT- SANSKRIT

सामान्य निर्देश:-

1. सभी प्रश्न अनिवार्य हैं।
2. सभी प्रश्नों को संस्कृत विषय की अभ्यास पुस्तिका में ही हल करें।
3. यदि कोई समस्या है तो अपने विषयाध्यापक से बात कर लें।

1. भू धातु के पांचों लकार में रूप लिखिए (लट्, लृट्, लोट्, लङ्, विधि लिङ्ग)
2. विद्यालय, उद्यानम्, मम गृहम् का चित्र बनाकर पांच पांच वाक्य लिखिए

3. इकारान्त पुल्लिङ्ग (हरि) शब्द रूप लिखिए, नदी शब्द के स्त्रीलिङ्ग रूप लिखिए
4. राष्ट्रीय ध्वज के महत्व के बारे में 10 वाक्य संस्कृत भाषा में लिखिए।
5. परिश्रम विषय पर 3 श्लोक संकलित करके लिखिए।
6. संस्कृत में प्रतिज्ञा लिखिए और याद कीजिए।

SUBJECT- PUNJABI

**ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ
ਜਮਾਤ ਸੱਤਵੀਂ**

- * 5 ਵਾਰ ਵਰਨਮਾਲਾ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਪਾਠ 1,2,3 ਯਾਦ ਕਰੋ।
- * 30 ਪੰਨੇ(ਪੇਜ) ਸੁੰਦਰ ਲਿਖਾਈ ਵਿੱਚ ਲਿਖੋ।
- * ਲਿੰਗ ਬਦਲੋ, ਵਚਨ ਬਦਲੋ, ਵਿਰੋਧੀ ਸ਼ਬਦ 20-20 ਸ਼ਬਦ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਕਰਵਾਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।

SUBJECT- ARTIFICIAL INTELLIGENCE

Write Chapter -1 in notebook and learn it.

Also attempt MCQ and Question Answers from the chapter -1

Marked PDF will be shared with you

CLASS 7 ENGLISH HOLIDAY HOMEWORK

Summer Break 2026

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

Homework:

Handwriting Improvement:

Neat Copying: Copy 1 page of English text on your holiday homework notebook. Put date on the left side of the page everyday. At the end of the vacation, you must have completed 40 pages of English handwriting.

2. Design an Invitation Card

Topic: Independence Day

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Unseen Comprehension Worksheets: Complete the worksheets on your holidays homework notebook that will be shared in your WhatsApp Group.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

7. Write the irregular verbs five times on your holiday homework notebook. The list will be shared in your WhatsApp Group.

पीएम श्री केंद्रीय विद्यालय क्रमांक-2 फिरोज़पुर छावनी

ग्रीष्मकालीन अवकाश परियोजना कार्य

कक्षा- 7

विषय - हिन्दी

सत्र- 2026-27

प्रश्न- 1 अपने दैनिक जीवन में प्रयोग होने वाले पांच पांच मुहावरे एवं लोकोक्तियों (कहावतें) लिखिए एवं उनका वाक्यों में प्रयोग कीजिए ।

प्रश्न-2 हिन्दी विराम चिन्हों का, हिन्दी वर्णमाला, कारक के नाम व पहचान चिह्न इनमें से किसी एक विषय पर एक चार्ट तैयार कीजिए जिसको कक्षा में लगाया जा सके।

प्रश्न-3 आप अपनी आत्मकथा अपने शब्दों में लिखिए। (लगभग 100-150 शब्दों में)

प्रश्न-4 आप अपनी हिन्दी किताब की या स्वरचित मन पसंद कोई एक कविता लिखिए और याद कीजिए।

प्रश्न- 5 प्रतिदिन अपनी हिन्दी किताब, समाचार पत्र, कहानी, उपन्यास आदि पढ़ने का अभ्यास कीजिए। कोई 10 अच्छी बातें जो आपको किसी पुस्तक से सीखने मिली, अपनी अभ्यासपुस्तिका में लिखें।

प्रश्न- 6 कोई पांच पहेलियाँ संकलित करके लिखें और अवकाश के बाद कक्षा में पूछें, कितने विद्यार्थी उसका सही जवाब दे पाते हैं।

Maths Holiday HW

1. Write in Indian and International Number System:

- a) 45678932 b) 908070605 c) 120045006

2. Insert commas and write number names:

- a) 78543210 b) 904567821 c) 600700800

3. A calculator has following buttons : +10,00,000 , +1,00,000 , +10,000 , +1,000 , +100 , +10 , +1.

- (a) Find out which buttons should be clicked and how many times to get the number 5072?
(b) Find out which buttons should be clicked and how many times to get the number 8300?

4. Simplify using BODMAS:

- a) $15 + 6 \times 4$ b) $50 \div 5 + 12 \times 3$ c) $100 - 20 \times 3 + 10$

5. Using all digits from 0 to 9 exactly once to create a 10 - digit number, write the

- (a) Largest multiple of 5.
(b) Smallest even number.

6. How many lakhs make a billion?

7. A bar tailed godwit holds the record for the longest recorded non-stop flight. It travelled 13,560 km from Alaska to Australia without stopping . Its journey started on 13 October 2022 and continued for about 11 days. Find out the approximate distance it covered every day. Find out the approximate distance it covered every hour.

8. Solve:

- a) $45 + (30 \div 5 \times 2)$
b) $60 - (20 + 5 \times 4)$
c) $(80 \div 4) \times (6 + 2)$

9. Fill in the blanks:

a) $25 + \underline{\hspace{1cm}} \times 4 = 45$

b) $\underline{\hspace{1cm}} \div 5 + 6 = 10$

c) $100 - \underline{\hspace{1cm}} \times 2 = 60$

Word Problems

10. Riya bought 5 packets of chocolates. Each packet has 12 chocolates. She gave away 10 chocolates. How many are left?

11. A shopkeeper sold 8 boxes of pens. Each box contains 15 pens. He sold 20 pens separately. Find total pens sold.

12. For each of the following situations, write the expression describing the situation, identify its terms and find the value of the expression.

(a) Queen Alia gave 100 gold coins to Princess Elsa and 100 gold coins to Princess Anna last year. Princess Elsa used the coins to start a business and doubled her coins. Princess Anna bought jewellery and has only half of the coins left. Write an expression describing how many gold coins Princess Elsa and Princess Anna together have.

(b) A metro train ticket between two stations is ₹40 for an adult and ₹20 for a child. What is the total cost of tickets:

(i) for four adults and three children?

(ii) for two groups having three adults each?

13. Find the values of the following expressions:

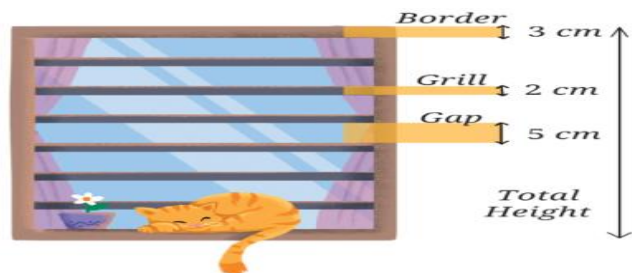
(a) $(6 + 10) - 2$ and $6 + (10 - 2)$

(b) $16 - (8 - 3)$ and $(16 - 8) - 3$

(c) $27 - (18 + 4)$ and $27 + (-18 - 4)$

14. Evaluate the following : (a) $1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10$ (b) $1 - 1 + 1 - 1 + 1 - 1 + 1 - 1 + 1 - 1$

15. Find the total height of the window by writing an expression describing the relationship among the measurements shown in the picture.



Summer break homework for science for class 7

1. To read chapter 1, 2 and 3 loudly at home three times and to complete exercise from chapter 1 to 3

2. create Rangoli at home using acidic and basic substances at home, click a photo of it and draw picture too. Mark A for acidic and B for basic.

3. Collect a soil sample of your area and find if it is acidic, basic or neutral

4. learn and practice chapter 1 to 3 all questions for test.

5. exploratory projects Chapter 3, page 40 of science book curiosity Project 3 and 4

6. Complete all questions of chapter 1 to 3 if not done earlier.

No holiday homework copy. Every work needs to be done in your homework notebooks

HOLIDAY HOMEWORK
SUMMER VACATION (08.05.2026 to 16.06.2026)
CLASS – VII
SOCIAL SCIENCE

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)
2. What are some key geographical features of India.
3. Write about a tourist place of India which you like the most.
4. What are the three main ranges of Himalaya? Explain.
5. Write about the 'Cold Desert of India'
6. Write a paragraph on World Environment Day (5 June).
7. Write about on a local historical place nearby you.
8. Write about the fundamental rights and duties of Indian citizens given by the Indian Constitution.
9. Complete your Social Science MDP work. (Water Conservation).
10. Write and learn the 'Preamble' of the Indian Constitution.
11. Imagine you are a historian studying ancient India. What types of sources (archaeological, literary, etc.) would you use to learn more about the mahājanapadas?
12. "The introduction of iron metallurgy was a key catalyst for the Second Urbanisation." Evaluate this statement.

ग्रीष्मकालीन अवकाश परियोजना कार्य

कक्षा सप्तमी

विषय- संस्कृत

सत्र- 2026-27

सामान्य निर्देश:-

सभी प्रश्न अनिवार्य हैं।

सभी प्रश्नों को संस्कृत विषय की अभ्यास पुस्तिका में ही हल करें।

यदि कोई समस्या है तो अपने विषयाध्यापक से बात कर लें।

भू धातु के पांचों लकार में रूप लिखिए (लट्, लृट्, लोट्, लङ्, विधि लिङ्ग)
विद्यालय, उद्यानम्, मम गृहम् का चित्र बनाकर पांच पांच वाक्य लिखिए
इकारान्त पुलिङ्ग (हरि) शब्द रूप लिखिए, नदी शब्द के स्त्रीलिङ्ग रूप लिखिए
राष्ट्रीय ध्वज के महत्व के बारे में 10 वाक्य संस्कृत भाषा में लिखिए।
परिश्रम विषय पर 3 श्लोक संकलित करके लिखिए।
संस्कृत में प्रतिज्ञा लिखिए और याद कीजिए।
ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ

ਜਮਾਤ ਸੱਤਵੀਂ (PUNJABI)

- * 5 ਵਾਰ ਵਰਨਮਾਲਾ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਪਾਠ 1,2,3 ਯਾਦ ਕਰੋ।
- * 30 ਪੰਨੇ(ਪੇਜ) ਸੁੰਦਰ ਲਿਖਾਈ ਵਿੱਚ ਲਿਖੋ।
- * ਲਿੰਗ ਬਦਲੋ, ਵਚਨ ਬਦਲੋ, ਵਿਰੋਧੀ ਸ਼ਬਦ 20-20 ਸ਼ਬਦ ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਕਰਵਾਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।

SUBJECT- ARTIFICIAL INTELLIGENCE

Write Chapter -1 in notebook and learn it.

Also attempt MCQ and Question Answers from the chapter -1

Marked PDF will be shared with you

ग्रीष्मकालीन अवकाशीय गृहकार्य (Summer Vacation) का गृहकार्य :- 2026-27

कक्षा – 8 अ+ब विषय – हिन्दी

प्रश्न 1 निम्नलिखित सभी विषयों पर लगभग 100-100 शब्दों में अनुच्छेद लिखिए-

(1) क्रिसमस दिवस (25 दिसम्बर) (2) मेरा प्रिय पालतू जानवर-तोता

(3) शिक्षक दिवस (5 सितंबर) (4) विश्व योग दिवस का महत्त्व (21 जून)

प्रश्न 2 अपने मित्र को कक्षा में प्रथम आने पर बधाई देते हुए एक पत्र लिखिए।

प्रश्न 3 विद्यालय के प्राचार्य को चरित्र प्रमाण-पत्र प्राप्त करने हेतु एक प्रार्थना पत्र लिखिए।

प्रश्न 4 निम्नलिखित शब्दों के वचन बदलकर लिखिए-

संतरा, पपीता, गमला, ताला, कपड़ा, रास्ता, छाता, बछड़ा, बकरा, साला, भानजा, भतीजा, रात, कहानी, दरी

प्रश्न 5 सामयिक परीक्षा (PT-1) के पाठ्यक्रम से संबंधित पाठों को पढ़ेंगे और याद भी करेंगे। (1 से 3 पाठ)

प्रश्न 6 अपनी मल्हार पुस्तक में से कोई 4 कविताएँ लिखेंगे और याद भी करेंगे।

प्रश्न-7 सामयिक परीक्षा (PT-1) में आने वाले पाठों की शिक्षार्थी डायरी भी बनाएंगे। (1 से 3 पाठ)

नोट-सभी विद्यार्थी ग्रीष्मकालीन (Summer Vacation) के गृहकार्य को हिन्दी विषय के गृहकार्य के रजिस्टर में करेंगे।

CLASS – VIII

SOCIAL SCIENCE

Map work-

Label and locate states and union territories with their capitals on India Map and paste in your notebook.

Label and locate Continents and Oceans on World Map and paste in your notebook.

Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.

Write about a tourist place of India which you like the most.

What is the main purpose of the International Solar Alliance (IASA), launched by India and France?

How can India avoid the 'Natural Resource Curse'?

MATHEMATICS

Questions (Chapter 1 to 4)

Chapter 1: A Square and a Cube

- Which of the following numbers has the digit 6 in the units place?
(a) 382 (b) 822 (c) 662 (d) 352
- $1 + 3 + 5 + 7 + 11 + \dots + \text{up to 19th term} = ?$
(a) 182 (b) 192 (c) 202 (d) 212
- What is the length of the side of a square whose area is 121 m^2 ?
(a) 14 (b) 13 (c) 12 (d) 11
- How many unit cubes are there in a cube with edge length 6 units?
(a) 6 (b) 36 (c) 216 (d) 1296
- $13 + 15 + 17 + 19 = (?)^3$
(a) 2 (b) 3 (c) 4 (d) 5
- What is the n th odd number?
- Find the smallest number by which 936 must be multiplied to make it a perfect square. Also find the square root of the product.
- Express Hardy-Ramanujan number as the sum of two cubes in two different ways.
- State True/False with reason:
(i) The cube of any odd number is even.
(ii) There is no perfect cube that ends with 8.
- A cube of volume $13,824 \text{ cm}^3$ is divided into smaller cubes of side 6 cm.
(i) How many small cubes are formed?
(ii) If 64 cubes are packed in one box, how many boxes are needed?

Chapter 2: Power Play

- If the initial thickness of paper is 'v' and it is folded 10 times, the final thickness is:
(a) 2^{10} (b) $2^{10}v$ (c) 10^2v (d) $10v$
- Assertion: $a^0 = 0$
Reason: Zero exponent property
(a) Both true and correct explanation
(b) Both true but incorrect explanation
(c) Assertion true, Reason false
(d) Assertion false, Reason true
- 10^{100} is called:
(a) Googol (b) Googolplex (c) Billion (d) Million
- Standard form of 70,04,00,00,000 is:
(a) 7004×10^7 (b) 70.04×10^9
(c) 7.004×10^{10} (d) 700.4×10^8
- Which Indian number-name corresponds to 10^7 ?
(a) Arab (b) Neel (c) Crore (d) Lakh

6. Explain why: $3^7 = 3^2 \times 3^5$

7. Find x if: $2^x = (64)^{1/2}$

8. Identify the greater number:

(a) 2^8 or 8^2

(b) 100^2 or 2^{100}

9. Simplify:

(a) $p^3 \times p^{-10}$

(b) $2^4 \div (-4)^{-2}$

10. Write 8^6 as a power of a power in two ways.

Chapter 3: A Story of Numbers

1. Which civilization developed base-60 system?

(a) Egyptian (b) Roman (c) Mesopotamian (d) Chinese

2. The oldest known tally stick is:

(a) Ishango bone (b) Lebombo bone

(c) Mayan shell (d) Bakhshali stick

3. Binary system is:

(a) Base-10 (b) Base-5 (c) Base-2 (d) Base-20

4. The invention of zero made possible:

(a) Infinite counting

(b) Place value system

(c) Roman numerals

(d) Stone tools

5. Roman numeral XL stands for:

(a) 40 (b) 60 (c) 90 (d) 110

Chapter 4: Quadrilateral

1. Sum of interior angles of a quadrilateral is:

(a) 180° (b) 90° (c) 360° (d) 540°

2. Assertion: Opposite sides of parallelogram are parallel

Reason: Sum of adjacent angles is 180°

3. A parallelogram with equal diagonals that bisect at right angle is:

(a) Rectangle (b) Rhombus (c) Square (d) Trapezium

4. In parallelogram ABCD, $\angle A = 70^\circ$, find $\angle B$:

(a) 180° (b) 90° (c) 360° (d) 110°

5. A kite has all sides equal. It is:

(a) Rectangle (b) Rhombus (c) Parallelogram (d) Trapezium

6. In rectangle ABCD, AC = 8 cm. Find BD, OA, and OC.

7. In parallelogram RING, $\angle R = 70^\circ$. Find all angles.

8. In square ABCD, $\angle AOB = 60^\circ$. Find $\angle BAO$.

9. Construct a rhombus with diagonals 4 cm and 6 cm.

10. Write properties of a parallelogram.

Differentiate between the administration under Delhi sultanate and under Mughal empire.

Write a paragraph on World Environment Day (5 June).

What are renewable resources? How are they different from non-renewable ones? What can people do to ensure that renewable resources continue to be available for our use and that of future generations? Give two examples.

Write about on a local historical place nearby you.

Write and learn the 'Preamble' of the Indian Constitution.

Complete your Social Science MDP work. (Artificial Intelligence in Daily Life).

CLASS 8 - ENGLISH HOLIDAY HOMEWORK

Summer Break 2026

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

HOMEWORK

1. Handwriting Improvement:

Neat Copying: Copy 1 page of English text on your holiday homework notebook. Put date on the left side of the page everyday. At the end of the vacation, you must have completed 40 pages of English handwriting.

2. Design an Invitation Card

Topic: Annual Sports Day

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Unseen Comprehension Worksheets: Complete the worksheets on your holidays homework notebook that will be shared in your WhatsApp Group.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

7. Write the irregular verbs five times on your holiday homework notebook. The list will be shared in your WhatsApp Group.

ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ

ਅੱਠਵੀਂ

- * ਪਾਠ 1,2,3 ਯਾਦ ਕਰੋ।
- * ਸਮਾਨਾਰਥਕ ਸ਼ਬਦ ਯਾਦ ਕਰੋ।
- * ਲੇਖ ਲਿਖੋ-ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ, ਦਿਵਾਲੀ, ਕੰਪਿਊਟਰ।
- * ਆਪਣੇ ਮਿੱਤਰ ਨੂੰ ਗਰਮੀਆਂ ਦੀਆਂ ਛੁੱਟੀਆਂ ਕਿਸੇ ਪਹਾੜੀ ਸਥਾਨ 'ਤੇ ਬਿਤਾਉਣ ਲਈ ਪੱਤਰ ਲਿਖੋ।
- * ਆਪਣੇ ਚਾਚਾ ਜੀ ਨੂੰ ਇੱਕ ਪੱਤਰ ਲਿਖੋ ਜਿਸ ਵਿੱਚ ਉਹਨਾਂ ਨੇ ਤੁਹਾਡੇ ਜਨਮਦਿਨ ਤੇ ਜੇ ਤੇਹੜਾ ਭੇਜਿਆ ਹੈ ਉਸ ਦਾ ਧੰਨਵਾਦ ਕਰੋ।
- * ਸੁੰਦਰ ਲਿਖਾਈ ਵਿੱਚ 15 ਪੰਨੇ(ਪੇਜ) ਲਿਖੋ।
- * ਕਰਵਾਏ ਗਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।

ਗ੍ਰੀਸ਼ਮਕਾਲੀਨ ਅਵਕਾਸ਼ ਪਰਿਯੋਜਨਾ ਕਾਰਜ

ਕਖਾ ਅਫ਼ਮੀ

ਵਿਥਯ- ਸੰਸਕ੍ਰੁਤ

ਸਤ੍ਰ- 2026-27

ਸਾਮਾਨਯ ਨਿਰੱਦੇਸ਼:-

1. ਸਮੀ ਪ੍ਰਸ਼ਨ ਅਨਿਵਾਰਯ ਹੈ।
2. ਸਮੀ ਪ੍ਰਸ਼ਨੋਂ ਕੋ ਸੰਸਕ੍ਰੁਤ ਵਿਥਯ ਕੀ ਅਥਯਾਸ ਪੁਸਤਿਕਾ ਮੇਂ ਹੀ ਹਲ ਕਰੋਂ।
3. ਯਦਿ ਕੋਓਂ ਸਮਸਯਾ ਹੈ ਤੋ ਅਪਨੇ ਵਿਥਯਾਥਯਾਪਕ ਸੇ ਬਾਤ ਕਰ ਲੋਂ।

1. ਭਵਤ੍ ਤਥਾ ਰਾਜਨ੍ ਸ਼ਬਦੋਂ ਕੇ ਪੁਲਿੰਗ ਸ਼ਬਦ ਰੂਪ ਲਿਖਿਏ
2. ਸ੍ਰੀਲਿੰਗ 'ਕਖਾ' ਸ਼ਬਦ ਕੇ ਸ਼ਬਦ ਰੂਪ ਲਿਖਿਏ
3. ਇਚ੍ਥ ਧਾਤੁ ਕੇ ਪਾਂਚੋਂ ਲਕਾਰੋਂ ਮੇਂ ਧਾਤੁਰੂਪ ਲਿਖਿਏ।
4. ਸੰਸਕ੍ਰੁਤ ਮੇਂ ਪ੍ਰਤਿਯਾ ਲਿਖਿਏ ਔਰ ਯਾਦ ਕੀਯਿਏ।
5. ਸਦਾਚਾਰ ਅਥਵਾ ਵਿਧਾ ਕੇ ਮਹਤ੍ਵ ਪਰ ਪਾਂਚ ਸ਼ਲੋਕ ਲਿਖਿਏ ।
6. ਰੇਲਵੇਸਟੇਸ਼ਨ ਕਾ ਚਿਤ੍ਰ ਬਨਾਕਰ ਪਾਂਚ ਵਾਕਯ ਸੰਸਕ੍ਰੁਤ ਮੇਂ ਲਿਖਿਏ

SUBJECT- ARTIFICIAL INTELLIGENCE

Write Chapter -1 in notebook and learn it.

Also attempt MCQ and Question Answers from the chapter -1

Marked PDF will be shared with you

HOLIDAY HOMEWORK
SUMMER VACATION (08.05.2026 to 16.06.2026)
CLASS – VIII

MATHEMATICS

Questions (Chapter 1 to 4)

Chapter 1: A Square and a Cube

1. Which of the following numbers has the digit 6 in the units place?

(a) 382 (b) 822 (c) 662 (d) 352

2. $1 + 3 + 5 + 7 + 11 + \dots +$ up to 19th term = ?

(a) 182 (b) 192 (c) 202 (d) 212

3. What is the length of the side of a square whose area is 121 m^2 ?

(a) 14 (b) 13 (c) 12 (d) 11

4. How many unit cubes are there in a cube with edge length 6 units?

(a) 6 (b) 36 (c) 216 (d) 1296

5. $13 + 15 + 17 + 19 = (?)^3$

(a) 2 (b) 3 (c) 4 (d) 5

6. What is the n th odd number?

7. Find the smallest number by which 936 must be multiplied to make it a perfect square. Also find the square root of the product.

8. Express Hardy-Ramanujan number as the sum of two cubes in two different ways.

9. State True/False with reason:

(i) The cube of any odd number is even.

(ii) There is no perfect cube that ends with 8.

10. A cube of volume $13,824 \text{ cm}^3$ is divided into smaller cubes of side 6 cm.

(i) How many small cubes are formed?

(ii) If 64 cubes are packed in one box, how many boxes are needed?

Chapter 2: Power Play

1. If the initial thickness of paper is ' v ' and it is folded 10 times, the final thickness is:

(a) 2^{10} (b) $2^{10}v$ (c) 10^2v (d) $10v$

2. Assertion: $a^0 = 0$

Reason: Zero exponent property

(a) Both true and correct explanation

(b) Both true but incorrect explanation

- (c) Assertion true, Reason false
 (d) Assertion false, Reason true

3. 10^{100} is called:
 (a) Googol (b) Googolplex (c) Billion (d) Million

4. Standard form of 70,04,00,00,000 is:
 (a) 7004×10^7 (b) 70.04×10^9
 (c) 7.004×10^{10} (d) 700.4×10^8

5. Which Indian number-name corresponds to 10^7 ?
 (a) Arab (b) Neel (c) Crore (d) Lakh

6. Explain why: $3^7 = 3^2 \times 3^5$

7. Find x if: $2^x = (64)^{1/2}$

8. Identify the greater number:
 (a) 2^8 or 8^2
 (b) 100^2 or 2^{100}

9. Simplify:
 (a) $p^3 \times p^{-10}$
 (b) $2^4 \div (-4)^{-2}$

10. Write 8^6 as a power of a power in two ways.

1. Which civilization developed base-60 system?
(a) Egyptian (b) Roman (c) Mesopotamian (d) Chinese
2. The oldest known tally stick is:
(a) Ishango bone (b) Lebombo bone
(c) Mayan shell (d) Bakhshali stick
3. Binary system is:
(a) Base-10 (b) Base-5 (c) Base-2 (d) Base-20
4. The invention of zero made possible:
(a) Infinite counting
(b) Place value system
(c) Roman numerals
(d) Stone tools
5. Roman numeral XL stands for:
(a) 40 (b) 60 (c) 90 (d) 110

Chapter 4: Quadrilateral

1. Sum of interior angles of a quadrilateral is:
(a) 180° (b) 90° (c) 360° (d) 540°
2. Assertion: Opposite sides of parallelogram are parallel
Reason: Sum of adjacent angles is 180°

3. A parallelogram with equal diagonals that bisect at right angle is:

(a) Rectangle (b) Rhombus (c) Square (d) Trapezium

4. In parallelogram ABCD, $\angle A = 70^\circ$, find $\angle B$:

(a) 180° (b) 90° (c) 360° (d) 110°

5. A kite has all sides equal. It is:

(a) Rectangle (b) Rhombus (c) Parallelogram (d) Trapezium

6. In rectangle ABCD, $AC = 8$ cm. Find BD, OA, and OC.

7. In parallelogram RING, $\angle R = 70^\circ$. Find all angles.

8. In square ABCD, $\angle AOB = 60^\circ$. Find $\angle BAO$.

9. Construct a rhombus with diagonals 4 cm and 6 cm.

10. Write properties of a parallelogram.

SOCIAL SCIENCE

1. Map work-

(I) Label and locate states and union territories with their capitals on India Map and paste in your notebook.

(II) Label and locate Continents and Oceans on World Map and paste in your notebook.

2. Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.

3. Write about a tourist place of India which you like the most.

4. What is the main purpose of the International Solar Alliance (IASA), launched by India and France?

5. How can India avoid the 'Natural Resource Curse'?

6. Differentiate between the administration under Delhi sultanate and under Mughal empire.

7. Write a paragraph on World Environment Day (5 June).

8. What are renewable resources? How are they different from non-renewable ones? What can people do to ensure that renewable resources continue to be available for our use and that of future generations? Give two examples.

9. Write about on a local historical place nearby you.

10. Write and learn the 'Preamble' of the Indian Constitution.

11. What are some considerations to keep in mind in the production of goods for our current use?

12. Complete your Social Science MDP work. (Artificial Intelligence in Daily Life).

SCIENCE

1. To read chapter 1,2 and 3 loudly at home three times and to complete exercise from chapter 1 to 3

2. learn and practice chapter 1 to 3 all questions for test.

3. exploratory projects

Chapter 3, page

Complete all questions of chapter 1 to 3 if not done earlier in your notebooks.

No holiday homework notebooks to be taken separately.

Holiday homework will be done in homework copy only.

1. Attempt 15 MCQs and two case studies for each chapter. Questions written earlier need not to be done again.

2. Exploratory projects for class 8

Search a working model/ model from google class 8 science

And make anyone relevant model from chapter 2 or chapter 3

विषय- संस्कृत

सत्र- 2026-27

सामान्य निर्देश:-

सभी प्रश्न अनिवार्य है।

सभी प्रश्नों को संस्कृत विषय की अभ्यास पुस्तिका में ही हल करें।

यदि कोई समस्या है तो अपने विषयाध्यापक से बात कर लें।

भवत् तथा राजन् शब्दों के पुल्लिङ्ग शब्द रूप लिखिए

स्त्रीलिङ्ग 'कक्षा' शब्द के शब्द रूप लिखिए

इच्छ धातु के पांचों लकारों में धातुरूप लिखिए।

संस्कृत में प्रतिज्ञा लिखिए और याद कीजिए।

सदाचार अथवा विद्या के महत्व पर पांच श्लोक लिखिए ।

रेलवेस्टेशन का चित्र बनाकर पांच वाक्य संस्कृत में लिखिए

ग्रीष्मकालीन अवकाशीय गृहकार्य (Summer Vacation) का गृहकार्य :- 2026-27

कक्षा - 8 अ+ब

विषय - हिन्दी

प्रश्न 1 निम्नलिखित सभी विषयों पर लगभग 100-100 शब्दों में अनुच्छेद लिखिए-

(1) क्रिसमस दिवस (25 दिसम्बर)

(2) मेरा प्रिय पालतू जानवर-तोता

(3) शिक्षक दिवस (5 सितंबर)

(4) विश्व योग दिवस का महत्व (21 जून)

प्रश्न 2 अपने मित्र को कक्षा में प्रथम आने पर बधाई देते हुए एक पत्र लिखिए।

प्रश्न 3 विद्यालय के प्राचार्य को चरित्र प्रमाण-पत्र प्राप्त करने हेतु एक प्रार्थना पत्र लिखिए।

प्रश्न 4 निम्नलिखित शब्दों के वचन बदलकर लिखिए-

संतरा, पपीता, गमला, ताला, कपड़ा, रास्ता, छाता, बछड़ा, बकरा, साला, भानजा, भतीजा, रात, कहानी, दरी

ਪ੍ਰਸ਼ਨ 5 ਸਾਮਯਿਕ ਪਰੀਖਾ (PT-1) ਦੇ ਪਾਠ੍ਯਕ੍ਰਮ ਸੇ ਸੰਬੰਧਿਤ ਪਾਠਾਂ ਕੋ ਪਛੋਗੇ ਔਰ ਯਾਦ ਭੀ ਕਰੋਗੇ। (1 ਸੇ 3 ਪਾਠ)

ਪ੍ਰਸ਼ਨ 6 ਅਪਨੀ ਸਲ੍ਹਾਰ ਪੁਸਤਕ ਮੋਂ ਸੇ ਕੋਝੋਂ 4 ਕਵਿਤਾਓਂ ਲਿਖੋਗੇ ਔਰ ਯਾਦ ਭੀ ਕਰੋਗੇ।

ਪ੍ਰਸ਼ਨ-7 ਸਾਮਯਿਕ ਪਰੀਖਾ (PT-1) ਮੋਂ ਆਨੇ ਵਾਲੇ ਪਾਠਾਂ ਕੀ ਸ਼ਿਕਸਾਰਥੀ ਡਾਯਰੀ ਭੀ ਬਨਾਓਗੇ। (1 ਸੇ 3 ਪਾਠ)

ਨੋਟ-ਸਭੀ ਵਿਦ੍ਯਾਰਥੀ ਗ੍ਰੀਸ਼ਮਕਾਲੀਨ (Summer Vacation) ਕੇ ਗ੍ਰਹਕਾਰ੍ਯ ਕੋ ਹਿੰਦੀ ਵਿਸ਼ਯ ਕੇ ਗ੍ਰਹਕਾਰ੍ਯ ਕੇ ਰਜਿਸਟਰ ਮੋਂ ਕਰੋਗੇ।

ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ

ਅੱਠਵੀਂ

*** ਪਾਠ 1,2,3 ਯਾਦ ਕਰੋ।**

*** ਸਮਾਨਾਰਥਕ ਸ਼ਬਦ ਯਾਦ ਕਰੋ।**

*** ਲੇਖ ਲਿਖੋ-ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ, ਦਿਵਾਲੀ, ਕੰਪਿਊਟਰ।**

*** ਆਪਣੇ ਮਿੱਤਰ ਨੂੰ ਗਰਮੀਆਂ ਦੀਆਂ ਛੁੱਟੀਆਂ ਕਿਸੇ ਪਹਾੜੀ ਸਥਾਨ 'ਤੇ ਬਿਤਾਉਣ ਲਈ ਪੱਤਰ ਲਿਖੋ।**

*** ਆਪਣੇ ਚਾਚਾ ਜੀ ਨੂੰ ਇੱਕ ਪੱਤਰ ਲਿਖੋ ਜਿਸ ਵਿੱਚ ਉਹਨਾਂ ਨੇ ਤੁਹਾਡੇ ਜਨਮਦਿਨ ਤੇ ਜੇ ਤੇਹਫਾ ਭੇਜਿਆ ਹੈ ਉਸ ਦਾ ਧੰਨਵਾਦ ਕਰੋ।**

*** ਸੁੰਦਰ ਲਿਖਾਈ ਵਿੱਚ 15 ਪੰਨੇ(ਪੇਜ) ਲਿਖੋ।**

*** ਕਰਵਾਏ ਗਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।**

SUBJECT- ARTIFICIAL INTELLIGENCE

Write Chapter -1 in notebook and learn it.

Also attempt MCQ and Question Answers from the chapter -1

Marked PDF will be shared with you

CLASS 9 - ENGLISH HOLIDAY HOMEWORK
Summer Break 2026

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

HOMEWORK

1. Create Your Personal Email ID & Write Email

Create your personal Gmail ID.

Using this email ID, write an email to arshdk389@gmail.com about how you view your school and teachers in 100 words. Take a printout or screenshot and paste it in your notebook. In case you don't know to create an email and write an email take help from You Tube videos.

2. Design an Invitation Card

Topic: Van Mahotsav Event

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Grammar Worksheets: Complete Exercise 1 to 50 of Wren and Martin Books. You can discuss the doubts through WhatsApp messages.
4. Book Review: Read any one English during the holidays.
Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words
5. PENDING CLASSWORK: Complete any pending work.
6. Revise the syllabus done in class for Periodic Test 1.

हिंदी

ग्रीष्मावकाशकालीन गृहकार्य (2026-27)

कक्षा- नवमी अ

अनुच्छेद लेखन-

- 1 शहरी जीवन में बढ़ता प्रदूषण
- 2 वनों का महत्व
- 3 पृथ्वी और पर्यावरण
- 4 पर्वों का बदलता स्वरूप
- 5 इंटरनेट: एक संचार क्रांति

पत्र लेखन-

- 1 गर्मी के मौसम में स्वास्थ्य के प्रति सचेत कराते हुए अपने छोटे भाई को पत्र लिखें।
- 2 स्टेट बैंक ऑफ इंडिया में अवर श्रेणी लिपिक पद के लिए आवेदन पत्र लिखें।
- 3 आपके मोहल्ले में आए दिन चोरियाँ हो रही हैं। उनकी रोकथाम के लिए थानाध्यक्ष को गश्त बढ़ाने हेतु पत्र लिखिए।

4 अपने प्रधानाचार्य को आर्थिक सहायता प्राप्त करने हेतु आवेदन-पत्र लिखिए।

5 लाउडस्पीकरों के मनमाने उपयोग की शिकायत करते हुए 'दैनिक ट्रिब्यून' चंडीगढ़ के संपादक को पत्र लिखिए।

संवाद लेखन-

1. परीक्षा के बाद दो मित्रों की बातचीत
 2. माँ और बेटी के बीच मोबाइल के उपयोग पर चर्चा
 3. पुस्तक मेले में दो मित्रों का संवाद
 4. पर्यावरण दिवस पर शिक्षक और छात्र के बीच बातचीत
 5. बस में दो अनजान यात्रियों की बातचीत
- निम्नलिखित व्यावहारिक जीवन से संबंधित

सूचना लेखन-

1. पानी की आपूर्ति बंद रहेगी
2. स्कूल में योग शिविर का आयोजन
3. पुस्तकें जमा करने की अंतिम तिथि
4. रक्तदान शिविर का आयोजन
5. बिजली बंद रहने की सूचना

Maths Holiday HW

1. The point $(5, -7)$ lies in:

(a) First quadrant (b) Second quadrant (c) Third quadrant (d) Fourth quadrant

2. Which point lies on the x-axis?

(a) $(0,6)$ (b) $(5,0)$ (c) $(-3,4)$ (d) $(2, 7)$

3. Which point is equidistant from the x-axis and y-axis?

(a) $(3,3)$ (b) $(4,5)$ (c) $(-2,3)$ (d) $(5,0)$

4. If a point is 4 units away from the origin along the x-axis, it can be:

(a) $(4,0)$ or $(-4,0)$ (b) $(0,4)$ or $(0,-4)$
(c) $(3,3)$ or $(-3,-3)$ (d) $(2,2)$ or $(-2,-2)$

5. Which point lies in the second quadrant?

(a) $(6,3)$ (b) $(-4,5)$ (c) $(-5,-6)$ (d) $(3,-7)$

6. The distance between points $(-2, -3)$ and $(-2,4)$ is:

(a) 5 (b) 6 (c) 7 (d) 8

7. Which of the following points is the midpoint of $(-3,5)$ and $(1,1)$?

(a) $(-1,3)$ (b) $(-2,2)$ (c) $(1,3)$ (d) $(0,2)$

8. Which point lies in the third quadrant?

(a) $(4,6)$ (b) $(-3,5)$ (c) $(-4,-7)$ (d) $(6,-2)$

9. The coordinates of two towns are A $(3,5)$ and B $(-1,9)$. A courier wants to go from A to B in a straight path. Find the distance between the two towns.

10. A park has two entrances at A(2,1) and A(8,5). A security guard walks along the straight path

joining the entrances. Find the distance he walks.

Find the point on the x-axis which is equidistant from (2, -5) and (-2, 9).

Check whether the points A(2,3), B(6,7), C(10,11) are collinear.

13. Show that the points A(1,1), B(5,1), C(5,5), D(1,5) are the vertices of a square.

14. Evaluate the linear polynomial $p(x) = 7x - 5$ for $x = -2$.

15. Identify the coefficient of x in the linear polynomial $\frac{1}{2}x + 10$

Social Science

Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)

2. Write about on a local historical place nearby you.

3. Write a paragraph on World Environment Day (5 June).

4. "Democracy is considered better than other forms of government." Justify the statement.

5. Explain the scope of Social Science by describing Geography, History, Political Science, and Economics, and show how they overlap in real life.

6. Write about the features of democracy.

7. Explain the major causes of floods in India and suggest effective flood management measures.

8. What are some natural disasters mitigations ?

9. What are renewable and non renewable resources? How can we conserve them?

10. What are the challenges to free and fair elections in India?

11. Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.

12. Write and learn the 'Preamble' of the Indian Constitution.

ਪੰਜਾਬੀ
ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ
ਜਮਾਤ ਨੌਵੀਂ

- * ਸਮਾਂ(ਕਵਿਤਾ), ਵਿਸਾਖੀ ਦਾ ਮੇਲਾ(ਕਵਿਤਾ), ਵਹਿਮੀ ਤਾਇਆ(ਲੇਖ) ਯਾਦ ਕਰੋ।
- * ਕਿਰਿਆ, ਮੁਹਾਵਰੇ(/ਓ/) ਯਾਦ ਕਰੋ।
- * ਵਾਤਾਵਰਣ ਅਤੇ ਪ੍ਰਦੂਸ਼ਣ 'ਤੇ ਲੇਖ ਲਿਖੋ।
- * ਸਕੂਲ ਦੀ ਸਫ਼ਾਈ ਅਤੇ ਸਮਾਂ ਵਿਸ਼ਿਆਂ 'ਤੇ ਪੈਰਾ ਲਿਖੋ।
- * ਛੁੱਟੀਆਂ ਦੌਰਾਨ ਜਿਸ ਜਗ੍ਹਾ 'ਤੇ ਗਏ, ਉਸ ਥਾਂ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ 200 ਸ਼ਬਦਾਂ ਵਿੱਚ ਪੇਸ਼ ਕਰੋ।
- * ਕਿਸੇ ਵੀ ਪੰਜਾਬੀ ਅਖ਼ਬਾਰ ਵਿੱਚੋਂ ਢੁਕਵਾਂ ਲੇਖ ਲਿਖੋ ਅਤੇ ਉਸ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ ਦਿਓ।
- * ਜਮਾਤ ਵਿੱਚ ਕਰਵਾਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।

AI

Write and learn the :

1. Assignment Q/A
2. MCQ' and Back Ex.

of communication cycle and Introduction to AI Project cycle.

Class IX B Holiday HW

ENGLISH

GENERAL INSTRUCTIONS:*

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

HOMEWORK

1. Create Your Personal Email ID & Write Email

Create your personal Gmail ID.

Using this email ID, write an email to arshdk389@gmail.com about how you view your school and teachers in 100 words. Take a printout or screenshot and paste it in your notebook.

In case you don't know to create an email and write an email take help from You Tube videos.

2. Design an Invitation Card

Topic: Van Mahotsav Event

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Grammar Worksheets: Complete Exercise 1 to 50 of Wren and Martin Books. You can discuss the doubts through WhatsApp messages.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

HINDI

प्रश्न 1 उपसर्ग और प्रत्यय की परिभाषा बताते हुए उनमें अन्तर उदाहरण सहित समझाइए

प्रश्न 2 संज्ञा, सर्वनाम, विशेषण और क्रिया की परिभाषा बताते हुए उसके भेद उदाहरण सहित समझाइए

प्रश्न 3 वाक्य की परिभाषा बताते हुए अर्थ के आधार पर उसके भेद व दो-दो उदाहरण लिखकर समझाइए

प्रश्न 4 अलंकार की परिभाषा बताते हुए अनुप्रास, यमक और श्लेष अलंकार के बारे में बताते हुए दो-दो उदाहरण लिखकर समझाइए

प्रश्न 5 अपने मित्र को निबंध प्रतियोगिता में प्रथम आने पर बधाई देते हुए एक पत्र लिखिए

प्रश्न 6 विद्यालय के प्राचार्य को खेल सामग्री उपलब्ध कराने हेतु एक प्रार्थना पत्र लिखिए

प्रश्न 7 बस यात्रा के दौरान दो मित्रों (राम व श्याम) के बीच की गई बातचीत को 80 शब्दों में एक संवाद लिखिए

प्रश्न 8 निम्नलिखित सभी विषयों पर संकेत बिंदुओं के आधार पर लगभग 120-120 शब्दों में अनुच्छेद लिखिए :

(i) साइबर सुरक्षा : जागरूकता ही समाधान

(ii) स्वस्थ जीवन-शैली - *स्वस्थ जीवन-शैली की आवश्यकता

(iii) एक यादगार पारिवारिक अवकाश –

नोट-सभी विद्यार्थी ग्रीष्मकालीन छुट्टियों (Summer Vacation) के गृहकार्य को हिन्दी विषय के गृहकार्य के रजिस्टर में करेंगे।

MATHEMATICS

1. The point $(5, -7)$ lies in:

(a) First quadrant (b) Second quadrant (c) Third quadrant (d) Fourth quadrant

2. Which point lies on the x-axis?

(a) $(0,6)$ (b) $(5,0)$ (c) $(-3,4)$ (d) $(2, 7)$

3. Which point is equidistant from the x-axis and y-axis?

(a) $(3,3)$ (b) $(4,5)$ (c) $(-2,3)$ (d) $(5,0)$

4. If a point is 4 units away from the origin along the x-axis, it can be:

(a) $(4,0)$ or $(-4,0)$ (b) $(0,4)$ or $(0,-4)$
(c) $(3,3)$ or $(-3,-3)$ (d) $(2,2)$ or $(-2,-2)$

5. Which point lies in the second quadrant?

(a) $(6,3)$ (b) $(-4,5)$ (c) $(-5,-6)$ (d) $(3,-7)$

6. The distance between points $(-2, -3)$ and $(-2,4)$ is:

(a) 5 (b) 6 (c) 7 (d) 8

7. Which of the following points is the midpoint of $(-3,5)$ and $(1,1)$?

(a) $(-1,3)$ (b) $(-2,2)$ (c) $(1,3)$ (d) $(0,2)$

8. Which point lies in the third quadrant?

(a) $(4,6)$ (b) $(-3,5)$ (c) $(-4,-7)$ (d) $(6,-2)$

09. The coordinates of two towns are $A(3,5)$ and $B(-1,9)$. A courier wants to go from A to B in a

straight path. Find the distance between the two towns.

10. A park has two entrances at $A(2,1)$ and $A(8,5)$. A security guard walks along the straight path joining the entrances. Find the distance he walks.

11. Find the point on the x-axis which is equidistant from $(2, -5)$ and $(-2,9)$.

12. Check whether the points $A(2,3)$, $B(6,7)$, $C(10,11)$ are collinear.

13. Show that the points $A(1,1)$, $B(5,1)$, $C(5,5)$, $D(1,5)$ are the vertices of a square.

14. Evaluate the linear polynomial $p(x)=7x-5$ for $x=-2$.

15. Identify the coefficient of x in the linear polynomial $\frac{1}{2}x+10$

SCIENCE

. To read chapter 1,2 and 3 loudly at home three times and to complete exercise from chapter 1 to 3

2. learn and practice chapter 1 to 3 all questions for test.

3. exploratory projects

Chapter 3, page

Complete all questions of chapter 1 to 3 if not done earlier in your notebooks.

No holiday homework notebooks to be taken separately.

Holiday homework will be done in homework copy only.

1. Attempt 15 MCQs and two case studies for each chapter. Questions written earlier need not to be done again.

2. Exploratory projects for class 9

Search a working model/ model from google class 9 science

And make any relevant model from chapter 2 or chapter 3 or from any relevant topic from science.

SOCIAL SCIENCE

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)

2. Write about a local historical place nearby you.

3. Write a paragraph on World Environment Day (5 June).

4. "Democracy is considered better than other forms of government." Justify the statement.

5. Explain the scope of Social Science by describing Geography, History, Political Science, and Economics, and show how they overlap in real life.

6. Write about the features of democracy.

7. Explain the major causes of floods in India and suggest effective flood management measures.

8. Describe the major seasons of India and explain the climatic conditions associated with each season.

9. What are the main functions of the Election Commission of India?

10. What are the challenges to free and fair elections in India?

11. Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.

12. Write and learn the 'Preamble' of the Indian Constitution.

13. Learn chapter - Understanding Social Science, shaping of the Earth's surface and Atmosphere and climate for Monthly Test June 2026.

PUNJABI

ਸਮਾਂ(ਕਵਿਤਾ), ਵਿਸਾਖੀ ਦਾ ਮੇਲਾ(ਕਵਿਤਾ), ਵਹਿਮੀ ਤਾਇਆ(ਲੇਖ) ਯਾਦ ਕਰੋ।

* ਕਿਰਿਆ, ਮੁਹਾਵਰੇ(/ਓ/) ਯਾਦ ਕਰੋ।

* ਵਾਤਾਵਰਣ ਅਤੇ ਪ੍ਰਦੂਸ਼ਣ 'ਤੇ ਲੇਖ ਲਿਖੋ।

* ਸਕੂਲ ਦੀ ਸਫ਼ਾਈ ਅਤੇ ਸਮਾਂ ਵਿਸ਼ਿਆਂ 'ਤੇ ਪੈਰਾ ਲਿਖੋ।

* ਛੁੱਟੀਆਂ ਦੌਰਾਨ ਜਿਸ ਜਗ੍ਹਾ 'ਤੇ ਗਏ, ਉਸ ਥਾਂ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ 200 ਸ਼ਬਦਾਂ ਵਿੱਚ ਪੇਸ਼ ਕਰੋ।

* ਕਿਸੇ ਵੀ ਪੰਜਾਬੀ ਅਖ਼ਬਾਰ ਵਿਚੋਂ ਢੁਕਵਾਂ ਲੇਖ ਲਿਖੋ ਅਤੇ ਉਸ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ ਦਿਓ।

* ਜਮਾਤ ਵਿੱਚ ਕਰਵਾਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ।

A.I.

Write and learn the :

1. Assignment Q/A

2. MCQ' and Back Ex.of communication cycle and Introduction to AI Project cycle.

CLASS 10 - ENGLISH HOLIDAY HOMEWORK

Summer Break 2026

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

HOMEWORK

1. Create Your Personal Email ID & Write Email

Create your personal Gmail ID.

Using this email ID, write an email to chandsharma763@gmail.com your how you view your school and teachers in 100 words. Take a printout or screenshot and paste it in your notebook.

In case you don't know to create an email and write an email take help from You Tube videos.

2. Design an Invitation Card

Topic: Van Mahotsav Event

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Grammar Worksheets: Complete Exercise 1 to 50 of Wren and Martin Books. You can discuss the doubts through WhatsApp messages.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

ग्रीष्मावकाशकालीन गृहकार्य (2026-27)

कक्षा- दसवीं अ

अनुच्छेद लेखन- 1 विद्यालयों में अनुशासनहीनता 2 मीठी बानी बोलिए 3 पृथ्वी बचाओ 4 पर्यटन का महत्व 5 बढ़ता

आतंकवाद- एक चुनौती

पत्र लेखन- 1 परिश्रम का महत्व बताते हुए भाई को पत्र लिखिए।

2 गर्मियों की छुट्टियों में घूमने हेतु मित्र को निमंत्रण पत्र लिखिए।

3 संपादक को पत्र लिखिए जिसमें सामान्य नागरिक की कठिनाइयों का वर्णन हो।

4 जुर्माना माफी/फीस माफी हेतु प्राचार्य को पत्र लिखिए।

5 गली-मुहल्ले की सड़कों और नालियों की समुचित सफाई न होने की शिकायत करते हुए नगर-निगम के अध्यक्ष को पत्र लिखिए।

स्ववृत्त लेखन-

1. शिक्षक पद के लिए स्ववृत्त

2. कंप्यूटर ऑपरेटर पद के लिए स्ववृत्त

3. बैंकिंग क्षेत्र के लिए स्ववृत्त

4. सेल्स/मार्केटिंग पद के लिए स्ववृत्त

5. ऑफिस असिस्टेंट/क्लर्क पद के लिए स्ववृत्त

ई-मेल लेखन-

1 प्रमाण पत्र के अनुरोध हेतु ई-मेल

2 अवकाश की अनुमति हेतु ई-मेल

3 पुस्तक न मिलने की सूचना हेतु ई-मेल

4 इंटरनेट सेवा में समस्या की शिकायत हेतु ई-मेल

5 परियोजना (Project) जमा करने की समय सीमा बढ़ाने हेतु अनुरोध

विज्ञापन लेखन-

1. सेकंड हैंड कार बिक्री हेतु विज्ञापन

2. घरेलू सहायिका की आवश्यकता

3. कोचिंग संस्थान का विज्ञापन
4. भाड़े पर मकान उपलब्ध
5. नौकरी की तलाश में उम्मीदवार

संदेश लेखन-

- 1 जन्मदिन की शुभकामना संदेश
- 2 दीवाली पर्व पर संदेश
- 3 शादी की सालगिरह पर संदेश
- 4 नव वर्ष की शुभकामना संदेश
- 5 सफलता पर बधाई संदेश

PM SHRI KENDRIYA VIDYALAYA NO.2 FZR CANTT.

SUMMER VACATION HOME-WORK (2026-27)

SUBJECT-MATHS

CLASS-10

Instructions for Submission:

1. Prove that:

- a) $\sqrt{2}$ is an irrational number.
- b) $\sqrt{3}$ is an irrational number.

2. Find the HCF and LCM of 56 and 72 using prime factorization.

3. For the quadratic polynomial $x^2 - 5x + 6$, find its zeros and verify the relationship between the zeros and the coefficients.

4. Verify that:

- $\text{HCF} \times \text{LCM} = \text{Product of the two numbers for } (48, 84).$

5. Find the prime factorisation of 360 and express it as a product of primes.

6. Prove that $3 + 2\sqrt{5}$ is irrational.

7. Prove that $7\sqrt{2}$ is irrational.

8. Find the zero(s) of the following polynomials:

- $x^2 - 7x + 10$
- $x^2 + 2x - 15$
- $x^2 - 9$

09. If α and β are the zeros of the polynomial $x^2 - 3x + 2$, find:

- $\alpha + \beta$
- $\alpha\beta$
- Verify the relationship with coefficients.

10. Form a quadratic polynomial whose sum and product of zeroes are:

- (a) 4, 1
- (b) -3, 2

11. If one zero of the polynomial $x^2 + kx + 6$ is 2, find the value of k and the other zero.

12. Form a pair of linear equations in two variables using the following information and solve it graphically: Five years ago, Sheela was twice as old as Tina. Ten year later Sheela's age will be ten years more than Tina's age. Find their present ages. What was the age of Sheela when Tina was born?
13. Madhu went to a bank to withdraw 10000. He asked the cashier to give her 100 and 200 notes only. Madhu got 60 notes in all. Find how many notes of 100 and 200 she received.
14. The sum of a two-digit number and the number obtained by reversing the order of its digits is 99. If ten's digit is 3 more than the unit's digit, then find the number
15. Amita buys some books for ₹1920. If she had bought 4 more books for the same amount each book would cost her ₹ 24 less. How many books did she buy? What was the initial price of one book?

ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ

ਜਮਾਤ ਦਸਵੀਂ

- * ਸੋ ਕਿਉ ਮੰਦਾ ਆਖਿਐ(ਕਵਿਤਾ), ਕਿਰਪਾ ਕਰਕੇ ਬਖਸ਼ ਲੈ(ਕਵਿਤਾ), ਕੁਲਫੀ(ਕਹਾਣੀ), ਘਰ ਦਾ ਪਿਆਰ(ਲੇਖ) ਯਾਦ ਕਰੋ।
- * ਮੁਹਾਵਰੇ(ਕ,ਖ ਵਾਲੇ) ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਕਿਰਿਆ - ਵਿਸ਼ੇਸ਼ਣ ਯਾਦ ਕਰੋ।
- * ਕਿਸੇ ਵੀ ਪੰਜਾਬੀ ਅਖਬਾਰ ਵਿਚੋਂ ਇੱਕ ਢੁਕਵਾਂ ਆਰਟੀਕਲ(ਲੇਖ) ਕੱਟ ਕੇ ਚਿਪਕਾਓ ਅਤੇ ਉਸ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ ਪੇਸ਼ ਕਰੋ।
- * ਲੋਹੜੀ ਅਤੇ ਸ਼ਹੀਦ ਭਗਤ ਸਿੰਘ 'ਤੇ ਲੇਖ ਲਿਖੋ।
- * ਅਣਡਿੱਠਾ ਪੈਰਾ(ਵਾਰਤਕ ਅਤੇ ਕਵਿਤਾ) ਦਾ ਅਭਿਆਸ ਕਰੋ।
- * ਛੁੱਟੀਆਂ ਦੌਰਾਨ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ 'ਤੇ ਬੋਲਣ ਦੀ ਤਿਆਰੀ ਕਰੋ।(ਸਮਾਂ 3 ਤੋਂ 5 ਮਿੰਟ)।

SUMMER VACATION HOME-WORK (2026-27)

AI

Write and learn the :

1. Assignment Q/A

2. MCQ' and Back Ex.

of communication cycle and Introduction to AI Project cycle.

SUMMER VACATION HOLIDAY HOMEWORK

CLASS – X

SOCIAL SCIENCE

- 1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)**
- 2. Do Map practice of History and Geography.**
- 3. “Money in your pocket cannot buy all the goods and services that you may need to live well.” Justify the statement with example.**
- 4. What are the different forms of power sharing in modern democracies? Give an example of each of these.**
- 5. Write the Ethnic composition of Belgium and Sri Lanka.**
- 6. What criteria does UNDP compare to measure the human development index? Explain.**
- 7. Briefly trace the process of German and Italy unification.**
- 8. What steps did the French revolutionaries take to create a sense of collective identity among the French people? Write any five.**

9. Prepare a project in a project file on the topic “Consumer Rights”. (15-20 A4 size papers)

10. Briefly trace the geographical and ethnic variations of the Balkans region. Why did this region become politically very explosive?

11. What was the main aim of the Treaty of Vienna 1815? What were the main provisions of the Treaty of Vienna held in 1815?

12. Learn Chapter - Development, Resources and Development, Power Sharing for Monthly Test June 2026.

KENDRIYA VIDYALAYA NO.2 FEROZEPUR CANTT

SUMMER VACATION HOMEWORK (2026-27)

CLASS-10

SUBJECT-ENGLISH

GENERAL INSTRUCTIONS:

1. Complete all work in a separate Holiday Homework Notebook.
2. Write neatly with proper date and heading for each task.
3. Submit the notebook on the first day after school reopens.

HOMEWORK

1. Create Your Personal Email ID & Write an Email.

Create your personal Gmail ID.

Using this email ID, write an email to arshdk389@gmail.com about how you view your school and teachers in 100 words. Take a printout or screenshot and paste it in your notebook.

In case you don't know to create an email and write an email take help from You Tube videos.

2. Design an Invitation Card

Topic: Van Mahotsav Event

Design a formal invitation card on an A4 sheet. Include Date, Time, Venue and RSVP details. Make it neat and colourful.

3. Grammar Worksheets: Complete Exercise 1 to 50 of Wren and Martin Books. You can discuss the doubts through WhatsApp messages.

4. Book Review: Read any one English during the holidays.

Write a review covering: Title, Author, Your Favourite Character, and What You Learnt - 120 words

5. PENDING CLASSWORK: Complete any pending work.

6. Revise the syllabus done in class for Periodic Test 1.

SUBJECT-HINDI

निर्देश: (प्रिय विद्यार्थियों, खंड- क एक अलग फाइल में करना है, और पोर्ट फोलियो वाली फाइल में खंड-ख भी करना है। दो अलग-अलग फाइल बनानी है)

1. लेखन स्वच्छ, शुद्ध व आकर्षक हो. चित्र/बॉर्डर से सजावट करें.
2. अंतिम तिथि: विद्यालय खुलने के 5 दिन के अंदर.

खंड-क: (रचनात्मक लेखन) 25 अंक

1. अनुच्छेद लेखन – 5 अंक | 100-120 शब्द

निम्नलिखित विषय पर अनुच्छेद लिखिए:

क. कृत्रिम बुद्धिमत्ता: वरदान या अभिशाप

ख. मेरी प्रिय पुस्तक जिसने मेरी सोच बदल दी

ग. “एक पेड़ माँ के नाम” – अभियान की सार्थकता

2. पत्र लेखन – 5 अंक

क. आपके क्षेत्र में बढ़ते साइबर फ्रॉड की रोकथाम हेतु पुलिस अधीक्षक को पत्र लिखिए.

ख. छोटे भाई को मोबाइल का सीमित व सार्थक उपयोग बताते हुए पत्र लिखिए.

3. संदेश लेखन – 5 अंक | 30-40 शब्द

क. आपकी माताजी बाजार गई हैं. बिजली विभाग से फोन आया कि कल 8 से 2 बजे तक बिजली नहीं रहेगी. पिताजी के लिए संदेश लिखिए.

ख. आपके मित्र ने बोर्ड परीक्षा में जिले में प्रथम स्थान प्राप्त किया है. उसे बधाई संदेश लिखिए.

4. विज्ञापन लेखन – 5 अंक | 50 शब्द

क. “मधु-हर्बल शहद” के लिए आकर्षक विज्ञापन तैयार कीजिए.

ख. आपके विद्यालय द्वारा आयोजित “ग्रीष्मकालीन हिंदी लेखन कार्यशाला” का विज्ञापन लिखिए.

5. ई-मेल लेखन – 5 अंक

क. प्रधानाचार्य को ई-मेल लिखकर विद्यालय में “साहित्य क्लब” शुरू करने का सुझाव दीजिए.

To: principal@school.com | Subject: साहित्य क्लब प्रारंभ करने हेतु अनुरोध

ख. अपने मित्र को ई-मेल लिखकर ग्रीष्मावकाश में किए गए सामाजिक कार्य का अनुभव साझा कीजिए.

खंड-ख: प्रोजेक्ट कार्य | 20 अंक

पाठ: राम-लक्ष्मण-परशुराम संवाद | क्षितिज भाग-2

शीर्षक: “संवाद से चरित्र निर्माण: राम-लक्ष्मण-परशुराम संवाद का मंचन व विश्लेषण”

कार्य:

1. चरित्र चित्रण – 5 अंक: राम, लक्ष्मण व परशुराम – तीनों के 5-5 चरित्रिक गुण उदाहरण सहित A4 पर लिखें. चित्र भी चिपकाएँ. 2. मूल्य-आधारित विश्लेषण – 5 अंक: राम-लक्ष्मण-परशुराम संवाद से आपको कौन-से 3 जीवन-मूल्य मिलते हैं? 100 शब्दों में लिखें. जैसे: धैर्य, विनम्रता, क्रोध पर नियंत्रण.

मूल्यांकन बिंदु: विषय-वस्तु 40%, भाषा-प्रस्तुति 30%, मौलिकता 20%, समय पर जमा 10%

खंड-ग: अपठित बोध अभ्यास | 5 अंक

1. समाचार-पत्र से पर्यावरण/शिक्षा संबंधी एक गद्यांश काटकर चिपकाएँ व उस पर 5 प्रश्न स्वयं बनाकर उत्तर लिखें.

कुल अंक: 50

SUBJECT-MATHS

1. Prove that:

- a) $\sqrt{2}$ is an irrational number.
- b) $\sqrt{3}$ is an irrational number.

2. Find the HCF and LCM of 56 and 72 using prime factorization.

3. For the quadratic polynomial $x^2 - 5x + 6$, find its zeros and verify the relationship between the zeros and the coefficients.

4. Verify that:

- $\text{HCF} \times \text{LCM} = \text{Product of the two numbers for } (48, 84).$

5. Find the prime factorisation of 360 and express it as a product of primes.

6. Prove that $3 + 2\sqrt{5}$ is irrational.

7. Prove that $7\sqrt{2}$ is irrational.

8. Find the zero(s) of the following polynomials:

- $x^2 - 7x + 10$
- $x^2 + 2x - 15$
- $x^2 - 9$

9. If α and β are the zeros of the polynomial $x^2 - 3x + 2$, find:

- $\alpha + \beta$
- $\alpha\beta$
- Verify the relationship with coefficients.

10. Form a quadratic polynomial whose sum and product of zeroes are:

- (a) 4, 1
- (b) -3, 2

11. If one zero of the polynomial $x^2 + kx + 6$ is 2, find the value of k and the other zero.

12. Form a pair of linear equations in two variables using the following information and solve it graphically: Five years ago, Sheela was twice as old as Tina. Ten years later Sheela's age will be ten years more than Tina's age. Find their present ages. What was the age of Sheela when Tina was born?

13. Madhu went to a bank to withdraw 10000. He asked the cashier to give her 100 and 200 notes only. Madhu got 60 notes in all. Find how many notes of 100 and 200 she received.

14. The sum of a two-digit number and the number obtained by reversing the order of its digits is 99. If ten's digit is 3 more than the unit's digit, then find the number

15. Amita buys some books for ₹1920. If she had bought 4 more books for the same amount each book would cost her ₹ 24 less. How many books did she buy? What was the initial price of one book?

SUBJECT-SCIENCE

Days 1–20: Chemical Reactions & Equations

[31] Days 1–5: Basics & Writing Equations

- Write 20 chemical equations daily
- Practice:
 - Skeletal $\rightarrow$ Balanced equations
- Activity:
 - Identify reactions from daily life (cooking, rusting)

Days 6–10: Types of Reactions

- Study:
 - Combination
 - Decomposition
 - Displacement
 - Double displacement
- Task:
 - Write 5 examples of each type

- Make a **comparison chart**

Days 11–15: Redox Reactions

- Identify:
 - Oxidation & Reduction
- Practice:
 - 15 questions daily
- Activity:
 - Observe oxidation (cut apple, rusting iron)

Days 16–20: Effects of Oxidation

- Topics:
 - Corrosion
 - Rancidity
- Project:
 - Case study (2 pages):
“How to prevent corrosion in daily life”

Days 21–25: Reflection of Light

- Practice:
 - Ray diagrams (mirror cases)
- Draw:
 - Concave & convex mirror images
- Solve:
 - 10 numericals daily

Days 26–30: Mirror Formula & Numericals

- Solve **15 numericals daily**
- Practice sign convention
- Create a **formula sheet**

Days 31–35: Refraction of Light

- Learn:
 - Laws of refraction
- Draw:
 - Refraction through glass slab
- Activity:

Observe bending of pencil in water

Days 36–40: Lens & Power

Practice:

- Convex & concave lens diagrams
- Solve:
 - 15 numericals daily
- Make: **Ray diagram notebook (neat & labeled)**

SUBJECT- S.S

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)

2. Do Map practice of History and Geography.

3. “Money in your pocket cannot buy all the goods and services that you may need to live well.” Justify the statement with example.

4. What are the different forms of power sharing in modern democracies? Give an example of each of these.

5. Write the Ethnic composition of Belgium and Sri Lanka.

6. What criteria does UNDP compare to measure the human development index? Explain.
7. Briefly trace the process of German and Italy unification.
8. What steps did the French revolutionaries take to create a sense of collective identity among the French people? Write any five.
9. Prepare a poster on the topic “Consumer Rights”.

SUBJECT- PUNJABI

ਗਰਮੀ ਦੀਆਂ ਛੁੱਟੀਆਂ ਦਾ ਕੰਮ

ਜਮਾਤ ਦਸਵੀਂ

- * ਸੋ ਕਿਉਂ ਮੰਦਾ ਆਖਿਐ(ਕਵਿਤਾ), ਕਿਰਪਾ ਕਰਕੇ ਬਖਸ਼ ਲੈ(ਕਵਿਤਾ), ਕੁਲਫ਼ੀ(ਕਹਾਣੀ), ਘਰ ਦਾ ਪਿਆਰ(ਲੇਖ) ਯਾਦ ਕਰੋ।
- * ਮੁਹਾਵਰੇ(ਕ,ਖ ਵਾਲੇ) ਲਿਖੋ ਅਤੇ ਯਾਦ ਕਰੋ।
- * ਕਿਰਿਆ - ਵਿਸ਼ੇਸ਼ਣ ਯਾਦ ਕਰੋ।
- * ਕਿਸੇ ਵੀ ਪੰਜਾਬੀ ਅਖ਼ਬਾਰ ਵਿਚੋਂ ਇੱਕ ਢੁਕਵਾਂ ਆਰਟੀਕਲ(ਲੇਖ) ਕੱਟ ਕੇ ਚਿਪਕਾਓ ਅਤੇ ਉਸ ਬਾਰੇ ਆਪਣੇ ਵਿਚਾਰ ਪੇਸ਼ ਕਰੋ।
- * ਲੋਹੜੀ ਅਤੇ ਸ਼ਹੀਦ ਭਗਤ ਸਿੰਘ 'ਤੇ ਲੇਖ ਲਿਖੋ।
- * ਅਣਡਿੱਠਾ ਪੈਰਾ(ਵਾਰਤਕ ਅਤੇ ਕਵਿਤਾ) ਦਾ ਅਭਿਆਸ ਕਰੋ।
- * ਛੁੱਟੀਆਂ ਦੌਰਾਨ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ 'ਤੇ ਬੋਲਣ ਦੀ ਤਿਆਰੀ ਕਰੋ।(ਸਮਾਂ 3 ਤੋਂ 5 ਮਿੰਟ)।

SUBJECT: AI

Write and learn the:

1. Assignment Q/A

2. MCQ' and Back Exercise

of communication cycle and Introduction to AI Project cycle.

PM SHRI KENDRIYA VIDYALAY NO.2, FEROZPUR CANTT

HOLIDAYS HOMEWORK

CLASS XI

SUBJECT: PHYSICS

Complete NCERT Back exercise of chapter 1 and 2 . Solve examples of these chapters.

SUBJECT: CHEMISTRY

Dear Students,

The purpose of this holiday homework is to strengthen your understanding of the fundamental concepts of chemistry and improve analytical thinking. Complete the work neatly in your chemistry notebook/file. Use proper chemical symbols, units, and calculations wherever required.

Learning Objectives

- Understand the importance of chemistry in daily life.
- Practice SI units, dimensional analysis, and scientific notation.
- Develop numerical problem-solving skills.
- Learn concepts of mole, molar mass, and stoichiometry.
- Improve presentation and research skills.

Section A – Theory Based Questions

1. Define chemistry. Explain its importance in daily life.
2. Differentiate between physical and chemical changes with two examples each.
3. What are SI units? Write SI units of mass, length, temperature, and amount of substance.
4. Explain the law of conservation of mass with an example.
5. Differentiate between atoms, molecules, and ions.
6. Write short notes on: (a) Significant figures (b) Scientific notation.
7. Explain the term mole. Why is it important in chemistry?
8. State Avogadro's number and write its significance.

Section B – Numerical Problems

1. Calculate the number of moles present in 18 g of water.
2. Find the molar mass of CaCO_3 .
3. Calculate the number of molecules in 2 moles of oxygen gas.
4. Convert 0.00567 into scientific notation.
5. Round off the number 45.6789 to 4 significant figures.
6. How many atoms are present in 23 g of sodium?
7. Calculate the percentage composition of oxygen in H_2SO_4 .
8. A sample contains 3.01×10^{23} molecules. Calculate the number of moles.

Section C – Activity / Project Work

- Prepare a chart showing the branches of chemistry and their applications.
- Make a table of common laboratory apparatus with their uses and diagrams.
- Collect information about three Indian scientists who contributed to chemistry.
- Prepare a handwritten assignment on 'Chemistry in Everyday Life' (2–3 pages).

Creative Learning Task

Design a colorful mind map for the chapter ‘Some Basic Concepts of Chemistry’ including terms such as mole concept, SI units, significant figures, atoms, molecules, and stoichiometry.

Submission Instructions

- Complete all work neatly and systematically.
- Use blue/black ink only.
- Draw diagrams with proper labeling.
- Submit the homework after the summer vacation.
- Marks will be awarded for presentation, accuracy, and creativity.

SUBJECT: MATHEMATICS

Chapter: Sets

INSTRUCTIONS:

1. Attempt all questions in your Maths notebook unless stated otherwise.
2. Show all necessary steps clearly.
3. Use proper mathematical notation.
4. Revise the NCERT chapter 'Sets' before attempting the questions.

SECTION A: BASIC CONCEPTS OF SETS

1. Define the following terms with examples:

- (a) Set
- (b) Finite Set
- (c) Infinite Set
- (d) Equal Sets
- (e) Equivalent Sets

2. Write the following sets in roster form:

- (a) $A = \{x : x \text{ is a vowel in the word 'MATHEMATICS'}\}$
- (b) $B = \{x : x \text{ is a natural number less than } 10\}$

3. Write the following sets in set-builder form:

- (a) $\{2, 4, 6, 8, 10\}$
- (b) $\{1, 4, 9, 16, 25\}$

SECTION B: TYPES OF SETS

4. Identify the type of set (finite, infinite, empty, singleton):

- (a) $\{x : x \text{ is a month with 32 days}\}$
- (b) $\{0\}$
- (c) Set of natural numbers

5. If $A = \{1,2,3,4\}$ and $B = \{3,4,5,6\}$, find:

- (a) $A \cup B$
- (b) $A \cap B$
- (c) $A - B$
- (d) $B - A$

SECTION C: VENN DIAGRAMS

6. Draw Venn diagrams to represent the following:

- (a) $A \cup B$
- (b) $A \cap B$
- (c) $A - B$

SECTION D: HIGHER ORDER THINKING QUESTIONS

7. If $A = \{1,3,5,7,9\}$ and $B = \{2,3,5,7,11\}$, verify that:

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

8. Let $U = \{1,2,3,4,5,6,7,8,9,10\}$, $A = \{1,3,5,7,9\}$, $B = \{2,3,5,7\}$. Find:

- (a) A'
- (b) B'
- (c) $A \cup B$
- (d) $A \cap B$

9. Create a real-life example where sets are used (for example, students who play different sports) and represent it using a Venn diagram.

SUBJECT: HINDI

निम्नलिखित अप्रत्याशित विषयों पर लेख लिखिए-

- 1 अगर पेड़ बोल सकते
- 2 मोबाइल फोन: मित्र या शत्रु
- 3 एक दिन बिना बिजली के
- 4 यदि मैं प्रधानाचार्य होता/होती
- 5 सोशल मीडिया का प्रभाव

औपचारिक विषयों पर पत्र लेखन-

- 1 प्रधानाचार्य को अवकाश हेतु आवेदन पत्र
- 2 नगर निगम को सफाई व्यवस्था सुधार हेतु शिकायत पत्र
- 3 बिजली विभाग को अनियमित बिजली आपूर्ति के संबंध में पत्र
- 4 बैंक प्रबंधक को एटीएम कार्ड बंद/नया जारी करने हेतु पत्र
- 5 समाचार पत्र के संपादक को सामाजिक समस्या पर पत्र

अभिव्यक्ति और माध्यम-

निम्नलिखित पाठों का अध्ययन करना है-

- 1 जनसंचार माध्यम
- 2 पत्रकारिता के विविध आयाम

अपठित गद्यांश- कोई पाँचा

अपठित पद्यांश- कोई पाँचा

SUBJECT: ENGLISH

HOLIDAY HOMEWORK

For Class – XI (English)

TO BE DONE IN THE ENGLISH NOTEBOOK

Write each of the following questions in 100-120 words.

1. Explain the reasons of changing relationship between the grandmother and the author.
2. Sketch the character of the grandmother.
3. Discuss the values highlighted in the chapter The Portrait of a Lady.
4. Identify the poetic devices used in the poem A Photograph and discuss their meanings.
5. Human life is short-lived in contrast to nature. Comment on the statement in the light of the poem A Photograph.
6. Can the act of stealing be ever justified? Give your views in the context

of reading of The Summer of the Beautiful White Horse.

PART A: HOLIDAY HOMEWORK FILE (Creative Portfolio)

(MAKE AN ASSIGNMENT FILE)

(To be done on A4 sheets in a well-presented file with cover page, index & bibliography)

◆ 1. Literary Analysis (Prose)

Chapter: The Portrait of a Lady

Write a character sketch of the grandmother (150–200 words).

Explain the theme of changing values and generation gap.

Pick any one value (love / discipline / spirituality) and relate it to your own life.

✂ Activity (Real-life connection):

Interview your grandparents/elderly person and write:

5 questions you asked

Their responses

A short reflection: “How is their life similar/different from the grandmother?”

◆ 2. Poetry Appreciation

Poem: A Photograph

Explain the theme of loss and memory.

Identify and explain any 3 poetic devices (e.g., alliteration, metaphor, imagery).

Write a short paragraph: “Why do photographs become more valuable over time?”

✂ Creative Task:

Paste or draw a photograph from your childhood and write:

What memory it holds

How you feel about it now.

■ PART B: ACTIVITY-BASED LEARNING

◆ 1. Real-Life Observation Task

Observe your surroundings and write a short report (150–200 words) on:

“Generation Gap in Today’s Society”

OR

“Role of Technology in Family Relationships”

SUBJECT: BIOLOGY

The Living World (Q1 to Q10.)

Given below are four options against each question. Choose the option which you consider the most appropriate as your answer.

1. Identify the correct sequence of taxonomic hierarchy:- (a) Species Genus Family Order Class (b) Species Family Order Genus Class (c) Genus Species Family Class Order (d) Genus Species Family Order Class

2. Genus represents (a) An individual plant or animal (b) A collection of plants or animals (c) A group of closely related species of plants or animals (d) None of these

3. Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals .It is used in the preparation of (a) Monographs (b) Flora (c) both a and b (d) None of these
4. Which among the following is not a genus? (a) Solanum (b) indica (c) Felis (d) Homo
5. Which of the following is a defining characteristic of living organisms? (a) Growth (b) Ability to make sound (c) Reproduction (d) Response to external stimuli
6. The basic unit of biological classification is (a) Kingdom (b) Taxon (c) Genus (d) None of these
7. Panthera tigris is the zoological name of (a) Lion (b) Tiger (c) both a and b (d) None of these
8. The term is used for plants, in place of phylum for animals. (a) Order (b) Flora (c) Division (d) None of these
9. First great taxonomist is (a)Aristotle (b) Linnaeus (c) Hooker (d) None of these
10. The term 'phylum' in animal classification was coined by (a)Aristotle (b) Linnaeus (c) Hooker (d) Ernst Haeckel
11. Mention any four characteristics of living beings.
12. Why are the living beings given scientific names?
13. Mention the rules of binomial nomenclature.
14. What is the importance of classification?
15. What is taxonomy?
16. What do you understand by 'taxonomical hierarchy of categories'? Explain with a suitable example.
17. Mango may have different names in different parts of the country of the world. But for the botanist it is Mangifera indica. (a) Why do people give vernacular names to species? (b)As a student of biology what do you feel are the advantages of giving scientific names to the Mango?
18. what is the difference between taxonomy and systematics?
19. write down the taxonomic hierarchy of man housefly, mango and wheat?
- 20.write about a) genus b) species c) family d)ordere)phylumf)kingdom
- 21)write about concept of species?
- 22) why there is need of classification in biodiversity?
- 23) Explain ICBN and ICZN.
- 24) what is trinomial nomenclature?
- 25) what are Tautonyms?
- 26) what is taxon?
- 27) draw a flowchart of taxonomic hierarchy
- 28) Explain Two Kingdom Classification.
- 29)Explain Five kingdom classification.
- 30) write down the criteria on the basis of five kingdom classification is based?

31) READ CHAPTER -2 BIOLOGICAL CLASSIFICATION.

32) Write down the all the examples of various taxonomic hierarchy of all kingdoms in biological classification.

33) Draw all diagrams given in chapter 2.

34) READ chapters 3 and 4.

SUBJECT: PHYSICAL ACTIVITY TRAINER

Yoga & Flexibility Master 5 basic Asanas (e.g., Tadasana, Bhujangasana). Write a brief note on the benefits of each.

6 - 10 First Aid & Safety Create a "First Aid Cheat Sheet" for common sports injuries like sprains, strains, and heat exhaustion.

11 - 15 Game Rules Select two major sports (e.g., Football, Badminton). Draw the court/field dimensions and list 5 major fouls.

16 - 20 Session Planning Design a 40-minute lesson plan for a primary school class, including Warm-up, Main Activity, and Cool-down.

SUBJECT- CS

Write Chapter -1 Computer Organization in notebook and learn it.

Also attempt Question Answers from the chapter -1

Marked PDF will be shared with you

*****END OF HOMEWORK*****

PM SHRI KENDRIYA VIDYALAYA No 2 FEROZEPUR CANTT

Class: XII - B

Session: 2026-27

Subject: Accountancy

Holiday Homework

1 Solve all NCERT numerical questions from the following chapter

Accounting for partnership firms:

- Fundamentals of partnership
- Change in profit sharing ratio
- Valuation of goodwill

2

Work Sheet No 1

Chapter : Fundamentals of Partnership Firm

Q.N
O

QUESTION

1

Is the sleeping partner liable for act of other partners?

.....

.....

2

Would a charitable dispensary run by 8 members be deemed a partnership firm? Give one reason in support of our answer.

.....

.....

.....

3

Why should a firm have a partnership deed?

.....

.....

.....

4

Ram and Karim are two partners in a firm without a partnership deed. Ram is an active partner and claims a salary of Rs 18,000 per month. State the reason whether the claim is valid or not?

.....

.....

				
5	Sita, Shyam and Muskan decided that interest on capital will be provided to each other @ 5% P.A. but after one year, Muskan wants that no interest on capital should be provided to any partner. State how Muskan can do this?			1
6	How interest on drawing calculated , if the drawings are made at regular intervals as on the first day of each month?			1
7	If the dates of drawings made during the year are not given then for what period the interest on the total amount of drawings will be calculated?			1
8	Name the method of calculating interest on drawings if different amounts are withdrawn at different dates?			1
9	A partnership deed provides for the payment of interest on capital but there was a loss instead of profit during the year 2014-15. At what rate the interest on capital be allowed?			1
10	How does the nature of business affect the value of goodwill of a firm?			1

				
	11	On 1st April 2023 Brij and Nandan entered into partnership to construct toilets in Govt Girls school in the remote area of U.P.They contributed capital of Rs 10,00,000 and 15,00,000 respectively. Their profit sharing ratio was 2:3. Interest on capital will be given 12% P.A. During the year ended 31st March 2015 the firm earned the profit of Rs 2,00,000. Prepare the profit and loss appropriations account for the year ended 31st March 2025. 		4
	12	Lalit , Huma, and Hema were partners in a firm sharing profits in the ratio of 3:4:5 . Their fixed capital were Rs 4,00,000 ; Rs 5,00,000 ; and Rs 6,00,000 respectively. The partnership deed provided for the following: (1) Interest on capital @ 6% P.A. (2) Salary of Rs 30,000 P.A. to Hema		4

14	Reema , Zaara and Praveen were partners in a firm. Their fixed capital were Rs 50,000 ; Rs 25,000 ; and Rs 25,000 respectively. As per the provision of partnership deed: (1)Reema was entitled to a salary of Rs 5,000 P.A. (2)All the partners are entitled to interest on capital 5% P.A. (3)Profits were to be shared in the ratio of capitals. The net profit for the year ending 31st March 2014 of Rs 33,000 and 31st March 2015 of Rs 45,000 were divided equally without providing for the above terms. Pass an adjustment entry to rectify the above error.		5

[illegible]

Q.NO	Questions	Marks
1	Following are the essential elements of a partnership firm except (A) Atleast two persons (B) There is an agreement between all partners (C) Equal share of profits and losses (D) Partnership agreement is for some business	1
ANS		
2	Which of the following statement is true (A) A minor can not be admitted as a partner (B) A minor can be admitted as a partner , only into the benefits of the partnership (C) A minor can be admitted as partner but his rights and liabilities are same of adult partner (D) None of the above	1
Ans		
3	The relation of partner with the firm is that of (A) An owner (B) An Agent (C) An owner and agent (D) Manager	1
Ans		
4	X,Y,and Z are partners sharing profits and losses equally. Their capital balances on March 31 st 2012 are Rs 80,000, Rs 60,000, Rs 40,000 respectively. Their personal assets are worth as follows X: Rs 20,000 , Y RS 15,000 and Z Rs 10,000. The extent of their liability in the firm would be: (A) X RS 80,000 , Y RS 60,000 and Z Rs 40,000 (B) X RS 20,000 , Y RS 15,000 and Z Rs 10,000 (C) X RS 1,00,000 , Y RS 75,000 and Z Rs 50,000 (D) Equal	1
Ans		
5	Partnership Deed is also called..... (A) Prospectus (B) Articles of association (C) Principles of partnership (D) Articles of partnership	1

	Ans			
	6	In The absence of partnership deed the following rule will apply (A) No interest on capital capital ratio (B) Profit sharing in (C) Profit based salary to working partner drawings (D) 9% P.A. interest on		1
	Ans			
	7	Interest on capital will be paid to the partners if provided for in the partnership deed but only out of: (A) Profits (B) Reserves (C) Accumulated Profits (D) Goodwill		
	Ans			
	8	If any loan or advance is provided by partner then balance of such loan account should be transferred to : (A) B/S Assets side (B) B/S liability side (C) Partner 's Capital a/c (D) Partner current a/c		
	Ans			
	9	In the absence of partnership deed the allowable rate of interest on partner loan account will be (A) 6% simple interest (B) 6% p.a. simple interest (B) 12% simple interest (D) 12% compounded interest		
	Ans			
	10	Which of the following items are recorded in the profit and loss appropriation account of a partnership firm? (A) Interest on capital (B) Salary to partner (C) Transfer to reserve		

	(D)All of the above	
Ans		
Work Sheet No 3 Topic : Calculation of profit and Division of profit among partners		
Q.NO	Questions	
1	According to profit and loss account the net profit for the year is Rs 1,50,000. The total interest on partner capital is Rs 18,000 and interest drawings is Rs 2,000. The net profit as per profit and loss appropriation will be (A) Rs 1,66,000 (B) Rs 1,77,000 (C) Rs 1,30,000 (D) Rs 1,34,000	
Ans		
2	Sangeeta and Ankita are partners in a firm . Sangeeta capital is Rs 70,000 and Ankita capital is Rs 50,000.Firm profit is Rs 60,000. Ankita share in profit will be (A) Rs 25,000 (B) Rs 30,000 (C) Rs 35,000 (D)Rs 20,000	
Ans		
3	A,B,C are partners in a firm in the ratio 5:3:2 . Before B's salary of Rs 17,000 firm profit is Rs 97,000. How much profit B will receive from the firm. (A) Rs 17,000 (B) Rs 40,000 (C) Rs24,000 (D)Rs 41,000	
Ans		
4	A , B, And C are partners without agreement . They have contributed Rs 50,000, Rs 30,000 and Rs 20,000 by way of capital in the firm. A was	

		unable to work for six months in a year due to illness. At the end of the year firm earned a profit of Rs 15,000. A share of profit will be (A)Rs 7,500 (B) Rs 3,750 (C)Rs 5,000 (D) Rs 2,500		
	Ans			
	5	Which of the following statement is true (A)Fixed capital account will always have a credit balance (B) Current account can have a positive or a negative balance (C) Fluctuating capital account can have positive or a negative balance (D) All of above		1
	Ans			
	6	P and Q were partners in a firm sharing profits in 3:2. On 1.4.2015, they admitted R as anew partner for 1/8 share in profits with a guaranteed profit of Rs 1,50,000. Deficiency if any will be borne by P and Q in 2:3. The profit of the firm for the year ended 31.3.2016 was Rs 9,00,000. Prepare P & L Appropriation account. 3		
	Ans			
	7	Vikasand Vivek were Partners in a Firm Sharing Profits in the ratio of 3:2. On 1-4-2014 they admitted vandana as a new Partner for 1/8the Share in the Profits with a guaranteed Profit of 1,50,000. The New Profit Sharing		

		ratio between Vikas and Vivek will remain the same but they decided to bear any deficiency on account of guarantee to Vandana in the ratio 2:3. The Profit of the Firm for the year ended 31-3-2015 was 9,00,000. Prepare Profit and Loss Appropriation Account.		
	Ans			
Work Sheet No 4 Topic : Capital of partners and interest on capital				
	Q.NO	Questions		
	1	Which account are opened when the capitals are fluctuating (A) Only capital accounts (B) Only current accounts (C) Capital accounts as well as current accounts (D) Either capital accounts or current accounts		

Ans			
2	Which item is recorded on the credit side of partner current accounts (A)Interest on partner capitals (B)Salaries of partners (C)Share of profit of partners (D)All of above		1
Ans			
3	If the partners capital accounts are fluctuating in that case following item will be recorded in the credit side of capital accounts (A)Interest on capital (B) Salary of partners (C)Commission of partners (D) All of above		1
Ans			
4	For the firm interest on drawing is (A)Capital payments (B) Expenses (C)Capital revenue (D)income		1
Ans			
5	When partners capital account are floating which one of the following items will be written on the credit side of partners capital accounts (A)Interest on drawings (B)Loan advanced by partner to the firm (C)Partners share in the firm loss (D)Salary to the active partners		1
Ans			
6	X And Y are partners in the ratio of 3:2. Their capital are Rs 2,00,000 and Rs 1,00,000 respectively . Interest on capital is allowed @ 8% P.A. Firm earned a profit of Rs 60,000 for the year ended 31 st March 2019. Interest on capital will be (A)X Rs16,000 ; Y Rs 8,000 (B) X Rs8,000 ; Y Rs 4,000 (C) X Rs 14,400; Y Rs 9,600 (D) No interest will be allowed		1
Ans			

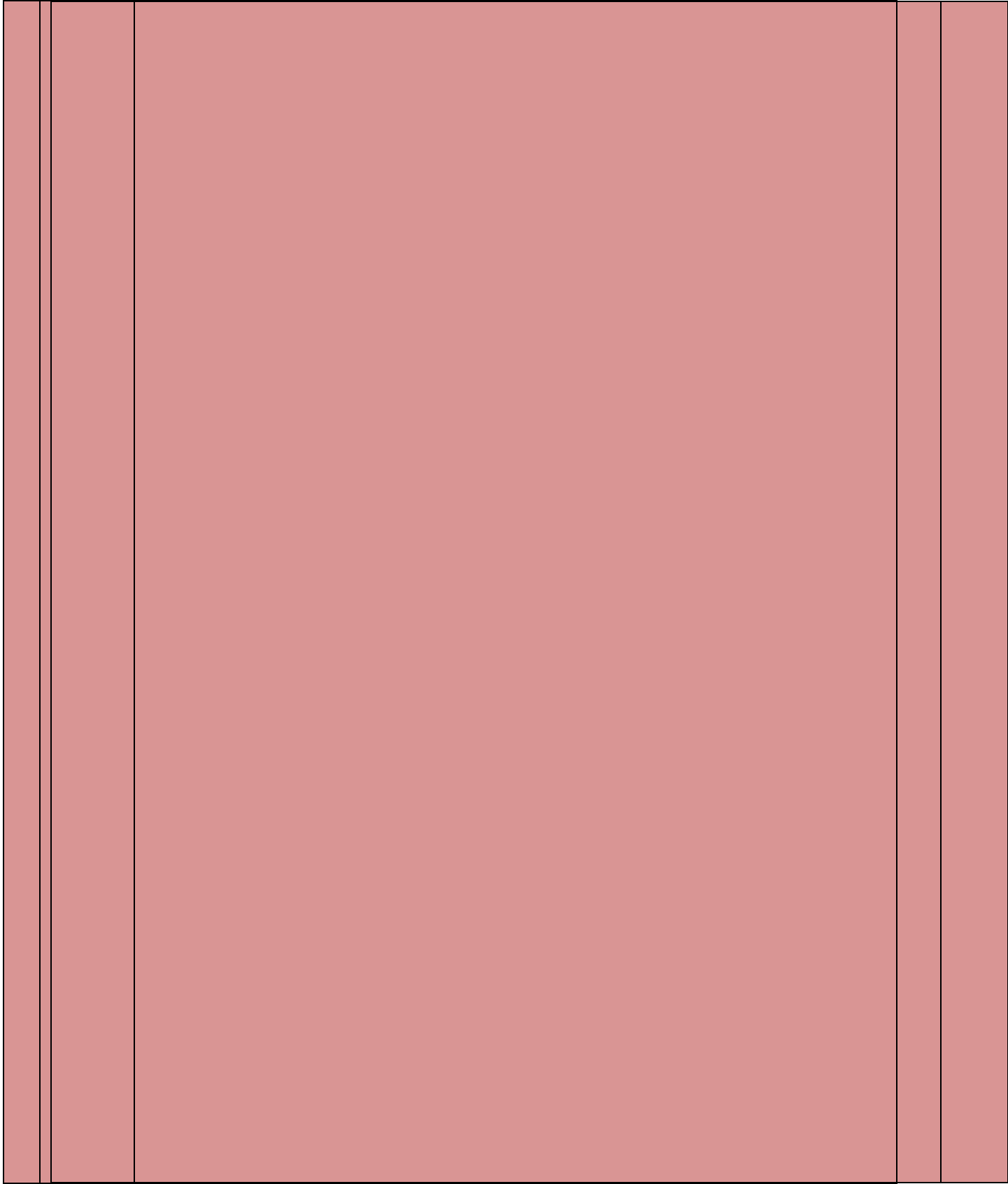
	7	X And Y are partners in the ratio of 3:2. Their capital are Rs 2,00,000 and Rs 1,00,000 respectively . Interest on capital is allowed @ 8% P.A. Firm earned a profit of Rs 15,000 for the year ended 31st March 2019. As per partnership deed Interest on capital is charge on the profit. Interest on capital will be (A) X Rs16,000 ; Y Rs 8,000 (B) X Rs 9,000 ; Y Rs 6,000 (C) X Rs 10,000; Y Rs 5,000 (D) No interest will be allowed		1
	Ans			
	8	A and B are partners sharing profits in the ratio of 3: 2 with capitals of Rs 5,00,000 and Rs 3,00,000 respectively. Interest on capital is agreed @ 6% p.a. B is to be allowed an annual salary of Rs 25000. During 2017, the profits of the year prior to calculation of interest on capital but after charging B's salary amounted to Rs 1,25,000. A provision of 5% of the profits is to be made in respect of Manager's commission. Prepare an account showing the allocation of profits and partners' capital accounts.		6
	Ans			

Q.NO	Questions
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Questions

1	Partners are suppose to pay interest on drawing only when.....by the (A)Provided (B)Permitted, Investors (B)Agreed, Partners (D) A &C Above		1
Ans			
2	If date of drawings of the partners is not given in the question, Interest is charged for.....Month.		1
Ans			
3	Tick mark which one is correct (A)If a Fixed amount is withdrawn by a partner on the first day of every month, interest on the total amount is charged for 6 months (B) If a Fixed amount is withdrawn by a partner on the first day of every month, interest on the total amount is charged for 6.5months (C) If a Fixed amount is withdrawn by a partner on the first day of every month, interest on the total amount is charged for 5.5 months (D) If a Fixed amount is withdrawn by a partner on the first day of every month, interest on the total amount is charged for 12 months		1
Ans			
4	In a partnership firm a partner withdrew Rs 5,000 per month on the first day of every month during the year for personal expenses. If interest on drawings is charged @ 6% P.A. the interest charges will be (A)Rs 3,600 (B) Rs 1,950 (C)Rs 1,800 (D)Rs 1,650		1
Ans			
5	If the fixed amount is withdrawn by a partner on the last day of each quarter interest on the total amount is charged for.....months		1
Ans			
6	If equal amount is withdrawn by a partner is each month during a period of 6 months interest on the total amount will be charged for month		1
Ans			

7	A and C are partners with fixed capitals of Rs. 2,00,000, Rs. 1,50,000 and Rs. 1,00,000 respectively. The balance of current accounts on 1st January, 2004 were A Rs. 10,000 (Cr.); B Rs. 4,000 (Cr.) and C Rs. 3,000 (Dr.). A gave a loan to the firm of Rs. 25,000 on 1st July, 2004. The Partnership deed provided for the following:- (i) Interest on Capital at 6%. (ii) Interest on drawings at 9%. Each partner drew Rs. 12,000 on 1st July, 2004. (iii) Rs. 25,000 is to be transferred in a Reserve Account. (iv) Profit sharing ratio is 5:3: 2 up to Rs. 80,000 and above Rs. 80,000 equally. Net Profit of the firm before above adjustments was Rs. 1,98,360. From the above information prepare Profit and Loss Appropriation Account, Capital and Current Accounts of the partners.
Ans	



Work Sheet No 6
Topic : Adjustment in closed accounts

Q.NO	Questions
1	Anu and Tanu are equal partners with fixed capital of Rs 2,00,000 and Rs 1,00,000 Respectively . After closing the accounts for the year ending 31 March 2019 it was discovered that interest on capitals @ 8% P.A was omitted to be provided . In the adjustment entry (A)Anu will be credited by Rs 16,000 and Tanu will be credited by Rs 8,000 (B) Anu will be debited by Rs 16,000 and Tanu will be debited by Rs 8,000 (C) Anu will be credited by Rs 4,000 and Tanu will be debited by Rs 4,000 (D) Anu will be debited by Rs 4,000 and Tanu will be credited by Rs 4,000
Ans	
2	Sony and Romy are equal partners with fixed capitals of Rs 4,00,000 and Rs 3,00,000 respectively. After closing the accounts for the year ending 31 st march 2019 it was discovered that interest on capital was provided @8% instead of 10% P.A.. Write which statement is true (A)Sony will be credited by Rs 8,000 and Romy will be credited by Rs6,000 (B) Sony will be debited by Rs 8,000 and Romy will be debited by Rs6,000 (C) Sony will be debited by Rs 1,000 and Romy will be credited by Rs1,000 (D) Sony will be credited by Rs 1,000 and Romy will be debited by Rs1,000
Ans	
3	Asha and Vipasha are equal partners with fixed capitals of Rs 5,00,000 and Rs 2,00,000 respectively. After closing the accounts for the year ending 31 st March 2019. It was discovered that interest on capitals was provided @6% instead of 5% P.A. . In the adjustment entry Asha will be debited by Rs 1,500 and Vipasha will be Rs 1,500
Ans	
4	P and Q sharing profits in the ratio 2:1. They have fixed capitals of RS 90,000 and Rs 60,000 respectively. After closing the accounts for the year ending 31 st March 2019 it was discovered that interest on capitals was provided @ 6% instead of 8% P.A.

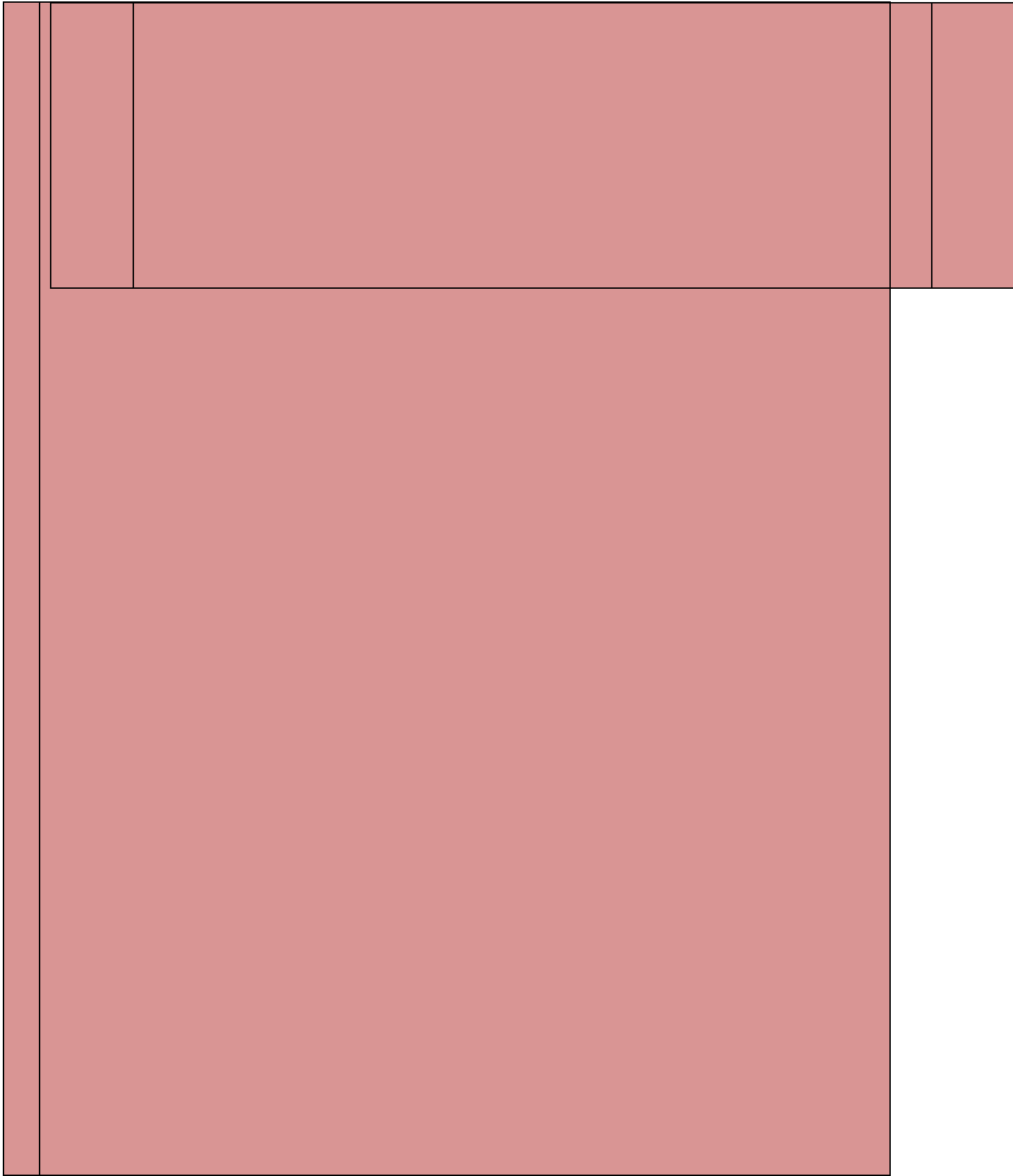
		Do the adjustment Entry		
	Ans			
	5	A , B, And C sharing profits in the ratio of 2:2:1 have fixed capitals of Rs 3,00,000 ; Rs 2,00,000 and RS 1,00,000 respectively. After closing the accounts for the year ending 31 st March 2019 it was discovered that interest on capitals was provided @12% instead of 10% P.A..Do the adjustment entry		3
	Ans			

[illegible]

7	A, B and C were partners in a firm. On 1st January, 2009, their capitals stood at ₹ 50,000; ₹ 25,000 and ₹ 25,000 respectively. As per the provisions of the partnership deed: i. C was entitled for a salary of ₹ 1,500 per month. ii. Partners were entitled to interest on capital @ 5% p.a. iii. Profits were to be shared in the ratio of capitals. The net profit for the year 2009 of ₹ 45,000 was divided equally without providing for the above terms. Pass an adjustment entry to rectify the above error.		3
Ans			

Work Sheet No 7 Topic : Guarantee of profit to a partner				
Q.NO	Questions			
1	When a partner is given guarantee by other partner los on such guarantee will be borne by (A)Partnership firm (B)All the other partners (C)Partners who give the guarantee (D)Partners with highest profit sharing ratio			
Ans				
2	Guarantee given to a partner A by the other partners B And C Means (A)In case of loss A will not contribute towards that loss (B)In case of insufficient profits A will receive only the minimum guarantee amount (C)In case loss or insufficient profits A will withdrawn the minimum guarantee amount (D)All of the above			
Ans				
3	Ram, Shayam and Zamila are partners in the ratio of 5:4:3. X has given t Z a guarantee of minimum Rs 10,000 profits. For the ending 31 st March 2019 Firm profits is Rs 28,800. X share in profit will be Rs.....			
Ans				
4	Pitter,Quarasi,Riya are partners in a firm in 3:2:1. Riya is guaranteed th she will get minimum of Rs 20,000 as her share of profit every year. Fir profit was Rs 90,000. Calculate share of profits of Pitter,Quarasi,Riya			
Ans				

[illegible]





Class: XII - B	
Subject: Business Studies	
Holiday Homework	
1	Prepare a project from Part-A of business studies i) Principles and functions of management ii) Business environment iii) Demonetization Or any other topic.
2	Practice application and value based question from NCERT Book.
3	Solve any three CBSE (P.Y.) question paper.
4	Revise and make notes of the following chapters: i) Nature and significance of management ii) Principles of management iii) Management and business environment iv) Planning- A function of Management
	Source based questions for Practice: PRINCIPLES OF MANAGEMENT

5

Q. 1. In your school, you observe that books are kept in office, chalks in the library and office records in the staff room.

1. Which principle of management is violated here and why?
2. How will that affect the achievement of school objectives?
3. As a manager, what steps will you take to rectify the shortcomings? (3 marks)

Ans.

1. The principle of „Order“
2. In the absence of orderliness, school objectives will not be achieved efficiently and effectively.
3. Things should be placed at appropriate places to achieve maximum efficiency with given time framework.

Q. 2. The production manager of an automobile company asked the foreman to achieve a target production of 200 scooters per day. But he did not give him the authority of requisition tools and materials from the stores department. Can the production manger blame the foreman if he is not able to achieve the desired target? Explain briefly the principle relating to the situation. (3 marks)

Ans. No, the production manager cannot blame the foreman because he did not give him the authority to requisition tools and materials form the stores department. Since he has no authority, he could not fulfill his responsibility.

In this case the principle of „Authority and Responsibility“ is violated. Fayol suggested tht there must be a balance between authority and responsibility. Authority and responsibility must go hand in hand. Responsibility without adequate authority will make the subordinate ineffective, I.e., he will not be able to perform his duties properly. At the same time giving authority without fixing responsibility may lead to misuse of of authority.

Q. 3. Soniya Ltd. was engaged in the business of manufacturing auto components. Lately, its business was expanding due to increased demand for cars. The competition was also increasing. In order to keep its market share intact, the company directed its workforce to work overtime. But this resulted in many problems.

Due to increased pressure of work the efficiency of workers declined. Sometimes, the subordinates had to work for more than one superiors. The workers were becoming indisciplined. The spirit of teamwork, which had characterized the company previously, had begun to wane. Identify any three principles of management (as given by Henry Fayol) which were begin violated, quoting the lines from the above case. (3 marks)

Ans.

1. Unity of command

“Sometimes, the subordinates had to work for more than one superiors.”

1. Discipline

„The workers were becoming indisciplined.”

1. Spirit de corps

„The spirit of teamwork, which had characterized the company previously, had begun to wane.”

Q.4 A subordinate receives order from more than one boss. Which principle is violated? Ans: Unity of command.

Q5. The production manager of a company is trying to produce good with minimum cost. Name the concept which is being focused by management. Ans: efficiency

Q. 6. Radhika opens a jewelry showroom in Jaipur after completing a course in jewelry designing. She has employed eleven persons in her showroom. For greater productivity, she divides the work into small tasks and each employee is trained to perform his/her specialized job. The sales persons are allowed to close a deal with a buyer by giving a maximum of 10% discount, whereas the decision to give any further discount rests with Radhika as the final authority. In the earlier days of starting of the business, five of her employees were asked to put in extra hours of work. In return she had promised to give them a special incentive within a year. Therefore, after six months when the business was doing well, she awarded a cash bonus to each of these employees to honour her commitment. However, when it comes to settling the conflicts among her employees, she tends to be more biased towards her female employees.

In context of the above case:

1. Identify and explain the various principles of management that are being applied by Radhika by quoting lines from the paragraph.

2. Identify and explain the principle of management which is being violated by Radhika by quoting lines from the paragraph.

3. State any one effect of the violation of the principle of management by Radhika as identified in part (b) of the question.

Ans.

1. The various principles of management that are being applied by Radhika are listed below:

1. Principle of Division of work:

“For greater productivity, she divides the work into small tasks and each employee is trained to perform his/her specialized job.”

1. Principle of Centralization and Decentralization:

“The sales persons are allowed to close a deal with a buyer by giving a maximum of 10% discount, whereas the decision to give any further discount rests with Radhika as the final authority.”

1. Principle of Discipline:

“Therefore, after six months when the business was doing well, she awarded a each bonus to each of these employees to honour her commitment.”

1. The principle of management which is being violated by Radhika is Equity.

“However, when it comes to setting the conflicts among her employees, she tends to be more biased towards her female employees.”

1. One effect of the violation of the Principle of Equity is that it may lead to job dissatisfaction among the male workers.

Q7. Neeraj is selected for the post of software developer in an IT Company. On the first day of his joining Mehul, his project manager tells Neeraj that during the course of his work he will come across many such opportunities which may tempt him to misuse his powers for individual or family's benefit at the cost of larger general interest of the company. In such situations, he should rather exhibit exemplary behavior as it will raise his stature in the eyes of the company. Also, for interacting with anyone in the company on official matters, he should adopt the formal chain of authority and communication.

In context of the above case:

1. Identify and explain the various principles of management that Mehul is advising Neeraj to follow while doing his job.
2. List any two values that Mehul wants to communicate to Neeraj.

Ans.

1. The various principles of management that Mehul is advising Neeraj to follow while doing his job are as follows:

1. Subordination of Individual Interest to General Interest:
2. Scalar Chain:

1. The two values that Mehul wants to communicate to Neeraj are:

1. Honesty
2. Self restraint

Q8. Davinder is a class twelfth commerce student in a reputed school in Punjab. Satinder is his elder brother who is doing his Masters in Hospital administration from Delhi after completing his B. Sc course. During vacations when Satinder comes home, Davinder shows him the business studies project that he is preparing on the topic 'Principles of Management'. Satinder tells him that these principles are also a part of MBA course curriculum at the beginner's level as they form the core of management in practice. But he finds these principle different from those of pure science.

In context of the above case:

1. Outline the concept of principles of management.
2. Why does Satinder find the principle of management different from those of pure science?
3. Why do the principles of management form the core of management in practice?

Explain by giving any two points highlighting the importance of principles of management.

Ans.

1. The principles of management serve as a broad and general guideline for the managerial decision making and action.
2. Satinder finds the principles of management different from those of pure science because the management principles are not as rigid as principles of pure science. This is due to the fact that they deal with the human behavior and thus, need to be applied creatively in the light of given situation.
3. The importance of principles of management is described below:
 1. Providing managers with useful insights into reality:
 2. Optimum utilization of resources and effective administration:

Q.9 Nutan Tiffin Box service was started in Mumbai by Mumbai dabbawalas. The Dabbawalas who are the soul of entire Mumbai aim to provide prompt and efficient services by providing tasty homemade tiffin to all office goers at right time and place. The service is uninterrupted even on the days of bad weather, political unrest and social disturbances. Recently they have started online booking system through their website 'mydabbawals.com'. Owing to their tremendous popularity amongst the happy and satisfied customers and members, the dabbawalas were invited as guest lecturers by top business schools. The Dabbawalas operate in a group of 25-30 people along with a group pleader. Each group teams up with other groups in order to deliver the tiffin on time. They are not transferred on frequent basis as they have to remember the addresses of their customers. They follow certain rules while doing trade-No alcohol during working hours; No leave without permission; Wearing of white cap & carrying ID cards during business hours. Recently on the suggestion of a few self-motivated fellow men, the dabbawalas thought out and executed a plan of providing food left in tiff

ins by customers to slum children. They have instructed their customers to place red sticker if food is left in the tiffin, to be fed to poor children later.

1. State any one principle of management given by Fayol & one characteristic of management mentioned in the above case.
2. Given any two values which the Dabbawalas want to communicate to the society.

(4 marks)

Ans.

1. Principles of management (any one)

1. Stability of Personnel

2. Initiative

3. Discipline

4. Esprit de corps

Characteristic of management (any one)

1. Goal oriented

2. Group activity

2. Values that have been communicated by the Dabbawalas: (any two)

1. Fulfilling social responsibility;

2. Empathy towards disadvantaged children;

3. Team work (or any other suitable value)

Q10. 'Aapka vidyalaya' believes in holistic development of students and encourages team building through a mix of curricular, co-curricular and sports activities. On its founders day a stage performance had to be put up. A committee of ten prefects was constituted to plan different aspect of the function. They all decided to use recycled paper for decoration. There was a spirit of unit and harmony and all members supported each other. With mutual trust and belongingness the programme was

systematically planned and executed. Kartik, one of the prefects realized that unknowingly the group had applied one of the principles of management while planning and executing the programme. He was so inspired by the success of the function that he asked his father to apply to same principle in his business. His father replied that he was already using this principle.

1. Identify the principle of management applied for the success of the programme.
2. State any two features of management highlighted in the above para.
3. Identify any two values which 'Aapka Vidyalaya' communicated to the society.

(4 marks)

Ans.

1. Espirit de corps

2.

1. Management is pervasive--„ *...he asked his father to apply the same principle in his business.*

Management is pervasive as it can be applied to all types/levels of organizations.

2. Management is a group activity –„*There was a spirit of unity and harmony and all members supported each other.*

Management is a group activity because it requires team work and/or coordination of individual efforts.

3. Values being communicated to the society: (Any two)

1. Concern for the environment.

2. Holistic development of children.

3. Teamwork

Q11. Nikita and Salman completed the MBA and started working in a multinational company at the same level. Both are working hard and are happy with their employer. Salman had the habit of backbiting and wrong reporting about his colleagues to impress his boss. All the employees in the organization knew about it. At the time of performance

appraisal the performance of Nikita was judged better than Salman. Even then their boss, Mohammed Sharif decided to promote Salman stating that being a female Nikita will not be able to handle the complications of a higher post.

1. Identify and explain the principle of management which was not followed by this multinational company.
2. Identify the values which are being ignored quoting the lines from the above para.

(5 marks)

Ans.

1. The principle violated is EQUITY.

It advocates that there should be no discrimination against anyone on account of sex, religion, language, caste, belief, nationality etc.

It emphasizes kindness and justice in the behavior of managers towards the workers to ensure loyalty and devotion.

1. The values which are being ignored are:

1. *Good human behavior* because „Salman had the habit of backbiting and wrong reporting about his colleagues to impress his boss.“

2. *Gender Equality* because „Their boss decided to promote Salman stating that being a female Nikita will not be able to handle the complications of a higher post.

Q12. Sigma Ltd. is a large company manufacturing electric motors. The company has several departments – Production, Marketing, Finance and HR. Mr. Shashank, CEO of the company set the target sale of 10 crore in a month. To increase the sales, the marketing manager, Mr. Ishaan insists on offering 10% discount to customers. But the finance manager, Mr. Mohak does not approve such discount as it would mean loss of revenue. Because of dual subordination, the sales manager, Mr. Anshik could not achieve the sales target.

1. Which concept of management Sigma Ltd. is lacking? State it.

2. Which principle of management has been overlooked by this company? State it.

3. Which principle of management has been overlooked by this company? State it.

(6 marks)

Ans.

1. The company is lacking „Coordination“.

It is the process by which the activities of different departments are synchronized to ensure unity of action.

1. Unity of command

There should be one and only one boss for every individual employee. If an employee gets orders from two superiors at the same time, the principle of unity of command is violated. Consequences of violation: Authority is undermined, discipline is in jeopardy, order is disturbed and stability is threatened.

1. Spirit de Corps

Management should promote a team spirit of unity and harmony among employees. It is necessary for coordination.

Q13. ABC Ltd. is engaged in producing electricity from domestic garbage. There is almost equal division of work and responsibility between workers and management. The management even takes workers into confidence before taking important decisions.

All the workers are satisfied as the behavior of the management is very good.

1. State the principle of management described in the above para.

2. Identify any two values which the company wants to communicate to the society.

(3 marks)

Ans.

1. The principle of Taylor described in the above para is Cooperation, Not Individualism.

It states that there should be complete cooperation between the labour and the management. Competition should be replaced by cooperation.

1. Values which the company wants to communicate to the society are:

1. Good behavior in human interaction.

2. Concern for the environment

Q14. Voltech India Ltd. is manufacturing LED bulbs to save electricity and running under heavy losses.

To revive from the losses, the management thought of shifting the unit to a backward area where labour is available at a low cost. The management also asked the workers to work overtime without any additional payment and promised to increase wages of the workers after achieving its mission. Within a short period the company started earning profits because both the management and the workers honoured their commitments.

1. State the principle of management described in the above para.

2. Identify any two values that the company wants to communicate to the society.

(3 marks)

Ans.

1. The principle of management described in the above para is Discipline.

Discipline is the obedience to organizational rules and employment agreement which are necessary for the working of the organization.

1. Values that the company wants to communicate to the society are:

1. Concern for the environment

2. Development of backward regions

Q15. Kushal Ltd. is a leading automobile company in which the various departments are setting up their own objectives without paying any interest to the organizational objectives.

1. Which aspect of management the company is lacking? What will be its impact on the organization?
2. Identify the principle of management which has been overlooked by this organization.
3. State any two values neglected by the people of this organization. (5 marks)

Ans.

1. The company is lacking „Coordination“.

Its different departments like production, marketing, etc. do not coordinate their work. In the absence of coordination, there will be overlapping and chaos instead of harmony and integration of activities. The company will fail to achieve its objectives.

1. Subordination of individual interest to general interest.

2. Values:

1. Mutual cooperation
2. Unity of action
3. Optimum utilization of resources

Q16. Telco Ltd. is manufacturing files and folders from old clothes to discourage use of plastic fields and folders. For this, they employ people from nearby villages where very less job opportunities are available. An employee, Harish, designed a plan for cost reduction but it was not welcomed by the production manager. Another employee gave some suggestion for improvement in design, but it was also not appreciated by the production manager.

1. State the principle of management described in the above para.
2. Identify any two values that the company wants to communicate to the society.

(3 marks)

Ans.

1. Initiative. It means eagerness to initiate action without being asked to do so.
2. Values which the company wants to communicate to the society are:

1. Sensitivity towards the environment
2. Creation of job opportunities
3. Development of backward regions.

Q17. Khandelwal Ltd., a tyre manufacturing concern has been established for more than ten years. Having made good profits in the past, company wanted to expand further and hence did not declare bonus for the previous year. The workers got agitated and trade union declared strike and demanded bonus and other facilities. The management decided not to give into their demands.

1. Which principle of scientific management is overlooked in the given case?

2. State any two values overlooked/ignored by the management in the above case.

(3 marks)

Ans.

1. Harmony, not Discord
2. Values overlooked are:
 1. Mutual understanding
 2. Empathy
 3. Peace and stability
 4. Law and Order
 5. Sense of belongingness (any two)

Q18. Hritik is desirous of setting up a small factory to manufacture different kinds of eco-friendly packaging materials. He proposes to adopt to logical approach to his business rather than hit and trial method as he knows that this can result in tremendous saving of human energy as well as wastage of time and materials. He plans to adopt paternalistic style of management in practice in order to avoid any kind of class-conflict that may emerge between him and the workers. Moreover, he plans to seek the opinion of his workers before taking any important decisions and also offers incentives to them for providing valuable suggestions for the business.

In context of the above case:

1. Identify and explain the various principle of scientific management that Hritik plans to apply in his business.
2. List any two values that he wants to communicate to the society by offering eco-friendly packaging material.

Ans.

1. The various principle of scientific management that Hritik plans to apply in his business are described below:

1. *Science, not Rule of Thumb:*
2. *Harmony, Not Discord:*
3. *Cooperation, Not Individualism:*

1. The two values that Harit wants to communicate to the society by offering eco-friendly packaging material are:

1. Concern for environment

2. Sense of responsibility

Q19. Gaurika has been appointed as the chief organizer of a weeklong cultural event. Being a staunch follower of scientific management, she decides to execute her work by putting into practice the various techniques of scientific management. On the basis of several observations, she is able to determine that the standard time taken by the security officer at the gat to check the credentials of each visitor is 30 seconds. So she decides to employ two persons on this job for every function along with the other necessary support staff. She considers the fact that every day, the functions will take place in three shifts of four hours each, therefore it is important to give breaks to the support staff even in a single shift to take her/his lunch etc. moreover, on introspection, she determines that the best way to distribute refreshment boxes to the visitors will be to hand it over to them at the exit gate as it would help to save time and eliminate any kind of confusion.

In the context of the above case:

1. Identify and explain the various techniques of work study which have been put into practice by Gaurika.

2. List any two values that Gaurika wants to communicate to the society.

Ans.

1. The various techniques of work study which have been put into practice by Gaurika are outlined below:

1. *Time Study*:

2. *Fatigue Study*:

3. *Method Study*:

1. The two values that Gaurika wants to communicate to the society are:

1. Optimum utilization of resources

2. Concern for employees

Q20. Study Buddy Pvt.' Is company dealing in stationery items. In order to establish standards of excellence and quality in materials and in the performance of men and machines, the company adheres to benchmarks during production. Moreover, its products are available in limited varieties, sizes and dimensions thereby eliminating superfluous diversity of products.

3. Identify the technique of scientific management which has been adopted by 'Study Buddy Pvt. Ltd.'

4. Ans. Standardization and Simplification of Work is the technique of scientific management which has been adopted by „Study Buddy Pvt. Ltd.“

Q21 Tina and Anshu completed their MBA and started working in a multinational company at the same level. Both are working hard. Anshu has the habit of backbiting and wrong reporting about his colleagues to impress the boss. All the employees in the organization know about it. At the time of performance appraisal also Tina's performance was rated better than Anshu. Even then their boss decided to promote Anshu stating that being a female, Tina will not be able to handle the complications of higher post.

1. Identify and explain the principle of management that was not followed by this company.

2. Identify the values being ignore.

Ans.

1. Company is violating the "Principle of Equity."
2. The values ignored are

1. Gender equality
2. Reward for performance
3. Good human behavior.

Q22 The production department of Alpha Ltd. was not performing well on detailed analysis, it was observed that the workers of that department were overburdened. They were forced to work for longer hours without any break. So the management planned to replace the production manager. They appointed Mr. Hari as the new Production Manager. He observed the average worker and note down their times. He noted down the time they worked and the time they required to be fresh to join back the work. Based on this observation, he set the break intervals for workers. He gave small breaks to workers to recharge their energy.

1. Name and explain the technique of scientific management used by Mr. Hari.
2. State the value which Mr. Hari wants to communicate to the society by allowing rest intervals to workers.

Ans.

1. Fatigue study.
2. Value of humanity/sympathy/respect towards employees.

Q23. In the staff meeting the principal of the school raised objection that teachers start the teacher after 5 to 10 minutes in third floor classes. He warned them as students are complaining about this. The teachers explained the principal that when we climb steps from ground to third floor. We get some tiredness and need 5 to 10 minutes rest before starting the lecture. The principal planned to install a lift in school so that teachers do not waste their energy on wasteful activity of climbing steps.

1. State the techniques of scientific management used by principal.
2. State any other technique of scientific management.

Ans.

1. "Technique of motion study."

2. Other two techniques:

1. Functional foremanship

2. Time study.

Q24. In a factory the toolbox was kept under the table of every worker, whenever worker needs tools he had to bend tape out tool from tool box and keep it back after use. The newly appointed supervisor observed it and suggested to keep a stool near every worker's chain where toolbox can be placed so that workers do not waste their energy in bending again and again.

1. Which technique of scientific management is used by New Supervisor.

2. State the objective of motion study.

Ans.

1. Motion study.

2. The objective of motion study is to eliminate unproductive movements of workers.

Q25. Mr. Rajiv the senior manager of Unique enterprise considered himself very wise and used to take all the decisions himself without consulting the employees, he never used to help any one nor he used to take help of anyone. The employees of unique enterprise were not working efficiently and company's profit margin started declining to tackle the problem, the company appointed a new manager from IIM Bangalore. The new manager after joining made a policy that all the decisions will be taken after consulting employees in the meeting. All employees must give some suggestions and best suggestions will be rewarded with financial and nonfinancial incentives. This policy had a very positive effects on company.

1. State the principle of Hencry Fayol used by new manager.

2. State the technique of scientific management related to above case.

Ans.

1. Principle of initiative.

2. "Cooperation not individualism."

	Source based questions Topic: Planning Q. 1. Laxmi Chemicals Ltd., a soap manufacturing company wanted to increase its market share from 30% to 55% in the long run. A recent report submitted by the Research & Development Department of the company had predicted a growing trend of herbal and organic products. On the basis of this report the company decided to diversify into new variety of soaps with natural ingredients having benefits and fragrances of Jasmine, Rose, Lavender, Mogra, Lemon Grass, Greed Apple, Strawberry etc. The Unique Selling Proposition (USP) was to promote eco-friendly living the contemporary life style. The company decided to allocate Rs. 30 crores to achieve the objective. Identify the type of one of the functions of management mentioned above which will help the company to acquire dominant position in the market. (1 mark) Ans. Strategy Q. 2. Suhasini a home science graduate from a reputed college has recently done a cookery course. She wished to start her own venture with a goal to provide 'health food' at reasonable price. She discussed her idea with her teacher (mentor) who encouraged her. After analyzing various options for starting her business venture, they shortlisted the option to sell ready-made and 'ready to make' vegetable shakes and sattu milk shakes. Then they both weighed the pros and cons of both the shortlisted optins. 1. Name the function of management being discussed above and give any one of its characteristics. 2. Also briefly discuss any three limitations the function discussed in the case.(5 marks) Ans. 1. Planning. Characteristic of planning Planning focuses on achieving objectives 1. Limitation of planning 1. Planning leads to rigidity:

- 2. Planning reduces creativity:
- 3. Planning is a time-consuming process:

Q. 3. A company is manufacturing garments. The manager wants to increase profits by purchasing new high speed machines or increasing the sale price or using waste material in manufacturing stuffed toys. He decided that 'using waste material' to increase the profit is the best solution for him.

- 1. Identify the concept of management involved.
- 2. Mention the steps involved in the above process by quoting the line from the question.
- 3. To complete the process of the concept identified in (a), what two next steps does the manager have to take? Explain. (6 marks)

Ans.

1. The concept of management involved is PLANNING.

2. Steps involved are:

- ☐ Setting objectives: increasing profits
- ☐ Developing planning premises: making certain assumptions about future.
- ☐ Identifying alternative courses of action:
 - ☐ Purchasing new high speed machines, or
 - ☐ Increasing the sale price, or
 - ☐ Using waste material in manufacturing stuffed toys
- ☐ Evaluating alternatives and selecting an alternative:

1. Further steps to complete the process of planning:

- ☐ Formulating derivate plans:
- ☐ Implementing the plan and follow-up-action:

Q. 4. Two year ago, Madhu completed her degree in food technology. She worked for sometime in a company that manufactured chutneys, pickles and murabbas. She was not happy in the company and decided to have her own organic food processing unit for the same. She set the objectives and the targets and formulated an action plan to achieve the same.

One of her objectives was to earn 10% profit on the amount invested in the first year. It was decided that raw materials like fruits, vegetables,

spices, etc. will be purchased on three months credit from farmers cultivating only organic crops. She also decided to follow the steps required for marketing of the products through her own outlets. She appointed Mohan as the Production Manager who decided that exact manner in which the production activities were to be carried out. Mohan also prepared a statement showing the number of workers that will be required in the factory throughout the year. Madhu informed Mohan about her area wise sales target for different products for the forthcoming quarter. While working on the production table, a penalty of Rs. 100 per day for not wearing caps, gloves and apron was announced.

Quoting lines from the above paragraph, identify and explain the different types of plans discussed.

Ans.

The different types of plan discussed above are listed below:

1. Objectives:

“One of her objectives was to earn 10% profit on the amount invested in the first year.”

1. Policy:

“It was decided that the raw materials like fruits, vegetables, spices, etc. will be purchased on three months credit from farmers cultivating only organic crops.”

1. Method:

“The exact manner in which the production activities are to be carried out.”

1. Procedure:

“She also decided to follow the steps required for marketing of the products through her own outlets.”

1. Rule:

“While working on the production Table, a penalty of Rs. 100 per day for not wearing caps, gloves and aprons was announced.”

Q. 5. During partition, Kundan Lal came to Mumbai from Lahore with a lot of wealth. Keeping in view his innate ability to visualize and create things, he decided to work as a junior assistant in a film studio. Over a period of time, as he gained experience and his work was well acclaimed, he decided to set up his own film studio. Initially he was himself looking into every aspect of the business, but as his work increased manifolds and his own productivity reduced with age, he hired Jummy as manager. Jimmy being immature in his work started giving bookings for the studio haphazardly. He would never decide anything in advance or do any kind of forecasting of events. This led to lot of confusions and conflicts. As a result, the goodwill earned by Kundan Lal over the years began to decline.

In context of the above case:

1. Identify and explain the function of management which Jimmy failed to perform by quoting lines form the paragraph.
2. Describe briefly any two features of the function of management as identified in part (a).

Ans.

1. Planning is the function of management which Jimmy failed to perform.

Planning is deciding in advance what to do, how to do, when to do and who has to do it. It is one of the basic managerial functions. Thus, it involves setting objectives and developing an appropriate course of action to achieve those objectives.

1. The two features of the planning function of management are as follows:

1. Planning is pervasive:
2. Planning involves decision-making:

Q. 6. After completing a diploma in Bakery and Patisserie, Payal sets up a small outlet at Goa Airport to provide a healthy food option to the travellers. To begin with, she has decided to sell five types of patties, three type of pizzas and low sugar muffins in four flavours. Thus, by deviding in advance what to do and how to do, she is able to reduce the

risk of uncertainty and avoid overlapping and wasteful activities. But sometimes her planning does not work due to some unavoidable circumstances like cancellation of flights due to bad weather conditions, government alert etc. which adversely affects her clientele.

In context of the above case:

1. Identify and explain the points highlighting the importance of planning mentioned in the above paragraph.
2. Describe briefly the limitation of planning which adversely affects Payal's business.

Ans.

1. The points highlighting the importance of planning mentioned in the above paragraph are described below:

1. Reduces the risk of uncertainty:
2. Avoiding overlapping and wasteful activities:

1. The limitation of planning which adversely affects Payal's business is:

1. Planning may not work in a dynamic environment:

Q. 7. Rahul, a worker, is given a target of assembling two computers per day. Due to his habit of doing things differently, an idea struck him which would not only reduce the assembling time of computers but would also reduce the cost of production of the computers. Rahul's supervisor instead of appreciating him, ordered him to complete the work as per the methods and techniques decided earlier as nothing could be changed at that stage.

The above para describes one of the limitation of planning function of management. Name that limitation. 1 mark)

Ans. Planning reduces creativity.

Q. 8. ABC Ltd. has a plan of increasing profits by 20%. It has devoted a lot of time and money to this plan. But the competition starts increasing, so it could not change its plan to beat its competitors because huge amount of money had already been devoted to the pre-decided plan. It caused losses to the company.

Explain any two limitations of planning highlighted in the above case. Also, quote the lines from it. (4 marks)

Ans.

1. „ABC Ltd. has devoted a lot of time and money to its plan.“

Planning is a time consuming process. It also involves huge costs.

„The competition starts increasing, so it could not change its plan to beat its competitors because huge amount of money had already been devoted to the pre-decided plan.“

Planning leads to rigidity. Following a pre-decided plan, when circumstances change, may not turn out to be in the organization's interest.

Q. 9. In 'Chak De India' movie, Shahrukh Khan becomes the coach of the girls' hockey team. He knows that he has to prepare the girls for the international hockey matches and bring the world cup after winning. For this he prepares a long-term plan and thinks the ways how to beat the competitors. He coaches the girls to play in different ways like defensive, offensive, etc. at the outset of a match he explains who will open the match, and how the ball will be passed by one player to another step by step.

Identify four types of plan that are highlighted in the above case, quoting the lines from it. (4 marks)

Ans.

1. Objective „...bring the world cup after winning.“

2. Strategy „For this he prepares long-term plan and thinks the ways how to beat the competitors.“

3. Method „He coaches the girls to play in different ways like defensive, offensive, etc.“

4. Procedure

„At the outset of a match he explains who will open the match, and how the ball will be passed by one player to another step by step.“

Q. 10. Flipkart is an e-commerce company founded in the year 2007 by Sachin Bansal and Binny Bansal. The company is registered in Singapore, but has its headquarters in Bengaluru, India. The company seeks to increase traffic (more clicks on their products) and boost sales and revenue through integration of Mobile Apps, Display, Pay Per Click and

search Engine Optimization. In order to dispel the fear of people related to shopping online, Flipkart was the first company to implement the popular 'Cash on Delivery' facility. All the products sold by the company under a particular category may have different return/replacement period. Flipkart allows multiple payment options such as cash on delivery, credit or debit card transactions, net banking, e-gift voucher and card swipe on delivery. The company operates both ways when an order is received. The products for which it holds inventory are dispatched by it directly. For the products they do not store in inventory, they just send the order received by them to the supplier who ships it. The company plans to spend about Rs. 75 crores on e-Commerce advertising in the year 2016. Flipkart reserves the right to terminate your membership and/or refuse to provide you with access to the website if it is brought to Flipkart's notice or if it is discovered that you are under the age of 18 years. This is because as per the Indian contract Act, 1872, the minors, un-discharged insolvents, etc. are not eligible to use the website. In context of the above case, identify and explain the different types of plans being used by Flipkart by quoting lines from the paragraph.

Ans. The different types of plans being used by Flipkart are listed below:

1. Objectives:

"The company seeks to increase traffic (more clicks on their products) and boost sales and revenue through integration of Mobiles Apps, Display, Pay Per Click and Search engine Optimization."

1. Strategy:

"In order to dispel the fear of people related to shopping online, Flipkart was the first company to implement the popular 'Cash On Delivery' facility."

1. Policy:

"All the products sold by the company under a particular category may have different return/replacement period."

1. Method:

"Flipkart allows multiple payment options such as cash on delivery, credit or debit card transactions, net banking, e-gift voucher and card swipe on delivery."

1. Procedure:

"The company operates both ways when an order is received. The products for which it holds inventory are dispatched by it directly. For the products they do not store in inventory, they just send the order received by them to the supplier who ships it."

1. Budget:

"The company plans to spend about Rs. 75 crores on e-Commerce advertising in the year 2016."

1. Rule:

Flipkart reserves the right to terminate your membership and/or refuse to provide you with access to the Website if it is brought to Flipkart's notice or if it is discovered that you are under the age of 18 years. This is because as per the Indian Contract Act, 1872, the minors, un-discharged insolvents etc. are not eligible to use the Website."

Q. 11. An electronic company is facing a problem of declining market share due to increased competition from other new and existing players in the market. Its competitors are introducing lower price models for mass consumers who are price sensitive. For quality conscious consumers, company is introducing new model LED TV and DVD players with added features and new technological advancements. For this, the company raises extra funds Rs. 5 crore from banks.

Name the type of plan the company is preparing. State the steps which the company follows to implement this plan quoting the line from the above para. (4 marks)

Ans. The type of plan needed to be prepared under this situation is „Strategy“.

Steps involved in preparing this plan are:

(i) Determining long-term objectives:

(ii) Adopting a particular course of action:

(iii) Allocating resources necessary to achieve the objectives:

Q. 12. Arush joins as a sales manager of a company dealing in naturotherapy produces. Being proficient in his work, he knew that without good planning he will not be able to organise, direct, control or perform any of the other managerial functions efficiently and effectively. Only on the basis of sales forecasting, he would assist in the preparation of the annual plans for its production and sales. Besides, he will have to prepare sales plans regularly on weekly, monthly, quarterly and half yearly basis. While preparing the sales forecasts, he undertakes intellectual thinking involving foresight, visualization and issued judgement rather than wishful thinking or guess work. Most importantly, all these planning activities will be meaningful only if they will coincide with the purpose for which the business is being carried out.

In context of the above case, identify the various features of planning highlighted in the above paragraph by quoting lines from it.

Ans. The features of planning highlighted in the above paragraph are explained below:

1. Planning is a primary function: "... without good planning he will not be able to organise, direct, control or perform any of the other managerial functions efficiently and effectively."
2. Planning is futuristic: "Only on the basis of sales forecasting, he would assist in the preparation of the annual plans for its production and sales."
3. Planning is continuous: "Besides, he will have to prepare sales plans regularly on weekly, monthly, quarterly and half yearly basis."
4. Planning is a mental exercise:

"While preparing the sales forecasts he undertakes intellectual thinking involving foresight, visualization and issued judgement rather than wishful thinking or guess work."

1. Planning focuses on achieving objectives:

"Most importantly, all these planning activities will be meaningful only if they will coincide with the purpose for which the business is being carried out."

Q. 13. Zyesha Ltd. is a company which manufactures leather bags. The CEO of the company wants to increase their sales and earn more profits. The consulted with a management consultant who suggested the top management of the company to work hard in thinking about the future

in making business prediction and achieve the targets since the business environment keeps on changing whether in terms of technological improvement, shifts in consumer preferences or entry of new competitors in the market.

1. Identify and state the concept of management discussed in the para.
2. State the characteristic feature of business environment highlighted in the above para. (3 marks)

Ans.

1. Planning

It involves setting objectives and developing appropriate course of action to achieve these objectives. Dreams (e.g. increase sales, earn more profits, etc.) can be turned into reality only if business managers think in advance on what to do and how to do it.

1. Business environment is dynamic as it keeps on changing.

Q. 14. Lira Ltd. is a company manufacturing designer socks. While making its plan, the company takes into consideration the business environment. It constantly adapt itself to changes in environment by making changes in its plan. However, it becomes difficult for the managers of the company to accurately foresee future trends in the environment. Competition in the market upsets its financial plans; then sales targets have to be revise3d and, accordingly cash budgets also need to be modified since they are based on sales figures.

1. What characteristic features of business environment are highlighted in the above lines? State any two.
2. State and explain the limitation of planning highlighted in the above lines.
3. Identify any two types of plan mentioned in the above pare by quoting the lines from it. (6 marks)

Ans.

1. (i) Business environment is dynamic as it keeps on changing.

(ii) Business environment is uncertain as it is difficult for the managers to accurately foresee future trends in the environment.

1. Planning may not work in a dynamic environment.

The organisation has to constantly adapt itself to changes in environment by making changes in its plans. However, since planning cannot foresee everything, there may be obstacles to effective planning.

1. (i) Strategy – „while making its plan, the company takes into consideration the business environment.“

(ii) Budget – „Competition in the market upsets its financial plans; then sales targets have to be revised and accordingly cash budgets also need to be modified since they are based on sales figures.“

Q. 15. Pan Masala and Sons is a manufacturer of tobacco products. It decided to increase profits by at least 20% in the next quarter. It has many options:

1. To increase the working hours of labourers without additional payment.

2. To employ children from the local community.

3. To sell its products outside the schools and colleges.

It opted the (ii) and (iii) options to achieve the target.

1. Identify the function of management described in the above para.

2. State the steps of the process involved in the function of management identified in (a) quoting the lines from the above para.

3. State any two values neglected by the organisation (6 marks)

Ans.

1. Planning

2. Steps involved in planning process:

(i) Setting organizational objectives:

(ii) Identifying and evaluating alternative courses of action:

(iii) Selecting the best possible alternatives(s):

1. Values neglected:

- ❑ Child labour is banned.
- ❑ Bad effect on students' health
- ❑ Moral values.

Q. 16. A reputed car manufacturing company in NCR is facing the problem of decline in its market share due to its internal mismanagement. Therefore it has planned to increase its production capacity at its Gurgaon plant by manufacturing low price eco-friendly cars for price sensitive consumers and introducing new models with added features for quality conscious consumers. For this the company issues shares to the public and raises Rs. 150 crore.

The company purchases more machinery required to increase production.

1. Identify the type of plan the company is preparing.
2. State the steps involved in this plan quoting the lines from the above case.
3. State any one value which the company wants to communicate to the society.(5 marks)

Ans.

1. Strategy

2. Steps involved in preparing a strategy are:

(i) Determining long-term objectives:

(ii) Adopting a particular course of action:

(iii) Allocating resources necessary to achieve the objectives:

1. Value:

2 Sensitivity towards environment

Socially responsible behavior

Q. 17. 'Agile Ltd.' is a well-known automobile manufacturing company in India. The company plans to increase the sale of its sedan cars by 20% in the next quarter. In order to achieve the desired target, the marketing team of the company considers the impact of policy of the government towards diesel vehicles and the level of competition in this segment of cars. They explore the various available option like offering more discount to dealers and customers, providing more customer friendly finance options, lucky draws on test drives, increasing advertising, offering more of free accessories on the purchase of the car, etc. a thorough analysis of the various available options is done keeping in view the relative viability of each option. The company decides to pursue the option of offering more discount to dealers and customers in order to boost the sale of sedan cars. In order to implement the plan,, they determine the various discount packages and communicate the same to their product dealers. To make the prospective consumers aware about the new available benefits, advertisements are made through various sources of print and electronic media. The market analysts of the company keep a close watch on the revenue from the sedan cars to study the effect of new initiatives by the company to promote its sales.

In context of the above case:

1. Name the function of management described in the above paragraph.
2. Identify and explain the various steps involved in process the function of management as identified in part (a) by quoting lines from the paragraph.

Ans.

1. Planning is the function of management which is being described in the above paragraph.
2. The various steps involved in the planning process are explained below:
 1. Setting objectives: "The company plans to increase the sale of its sedan cars by 20% in next quarter."
 2. Developing Premises: "In order to achieve the desired target the marketing team of the company considers the impact of policy of the

government towards diesel vehicles and level of competition in this segment of cars.”

3. Identifying alternative courses of action: “They explore the various available options like offering more discount to dealers and customers, providing more customer friendly finance options, lucky draws on test drives, increasing advertising, offering more of free accessories on the purchase of the car, etc.”

4. Evaluating alternative courses: “A thorough analysis of the various available options is done keeping in view the relative viability of each option.”

5. Selecting an alternative: “The company decides to pursue the option of offering more discount to dealers and customers in order to boost the sale of sedan car.”

6. Implement the plan: “In order to implement the plan, they determine the various discount packages and communicate the same to their product dealers. To make the prospective consumers aware about the new available benefits, advertisements are made through various sources of print and electronic media.”

7. Follow up action:

“The market analysts of the company keep a close watch on the revenue from the sedan cars to study the effect of new initiatives by the company to promote its sales.”

Q. 18. Palvinder, is working as a supervisor in Alpha Ltd. To achieve the target he wants to try a new method and different way of allocating the work. His superior did not permit him and forced him to do the work strictly as per the plan.

(i) Name the limitation of planning indicated in above case.

(ii) Name the value overlooked by Palvinder’s superior.

Ans.

1. „Planning reduces creativity.”

2. Value of motivating and encouraging employee to increase initiative level.

Q. 19. The management of ABC Ltd. set up the target of selling 10,000 units per week and made all their plans based on this target. But due to change in technology adapted by competitors which reduced their cost, the ABC Ltd. could not achieve their target.

(i) Identify the limitation of planning discussed in the above para.

(ii) State any other two limitations.

Ans.

(i) Planning may not work in dynamic environment.

(ii) Any two limitations: 1. Planning reduces creativity 2. Planning involve huge cost.

Q. 20. Alpha Ltd. spent a lot of money to hire specialized people for framing their plans and collecting important facts from environment. The company cut down their cost by cancelling the employee's trip for recreation.

(i) Name the limitation of planning mentioned in above para.

(ii) Name the value overlooked by management.

Ans.

1. Limitation: „Planning involves huge cost.“

2. Value overlooked: Psychological need of employees.

Q. 21. ABC Ltd. announced a plan nobody would smoke in the organization premises and they further added that certain penalty will be imposed on employees, overlooking this.

(i) Name the type of plan related to above paragraph.

(ii) Name the feature of that plan.

(iii) Name the values emphasized by the company.

Ans.

(i) "Rule" is the type of plan.

(ii) Rules are very Rigid.

(iii) Values: (a) Respect towards environment

(b) Follow discipline and order.

Q. 22. Alpha Ltd. has a plan of increasing profit by 20%. The company spent lot of time and money to frame and implement this plan. The competition start increasing, so it could not change its plan to beat its competitors because huge amount of money is already spent. State any two limitations of planning.

Ans.

- (i) Planning involve huge cost.
- (ii) Planning is time consuming.
- (iii) Planning may not work in dynamic environment.

Q. 23. 'Natural disaster like floods in Gujarat has been responsible for failure of production and sales plans of Jindal Textile Industry.' Which limitations of planning is highlighted in the given statement? State any three such limitations. (3)

Ans. External limitations of planning

1. Change in government policies (e.g. tax rates, bank rate, etc.) may lead to failure of planning.
2. Changes in the strategies of competitors also lead to failure of planning many tiems.
3. Rapid technological changes may affect planning.

Subject: Economics

Holiday Home Work

- 1 Read NCERT Book of Indian Economy.
2. Write on your notebook previous year Questions Related Given Topics National income, Money and Banking.
3. Make project file given topic.
4. Revise National income and money and Banking for monthly test.

विषय: हिंदी

ग्रीष्मावकाशकालीन गृहकार्य (2026-27)

कक्षा-बारहवीं

निम्नलिखित विषयों पर रचनात्मक लेख लिखिए-

- 1 काश! मैं उड़ पाता
- 2 जहाँ न पहुँचे रवि वहाँ पहुँचे कवि 3 अचानक जब हमारी मेट्रो रुक गई
- 4 मंसूरी के रास्ते बस का खराब होना 5 नदी किनारे बरसात में घिर जाना

अभिव्यक्ति और माध्यम-

निम्नलिखित पाठों का अध्ययन करना है-

पाठ संख्या 03- विभिन्न माध्यमों के लिए लेखन

पाठ संख्या 04- पत्रकारीय लेखन के विभिन्न रूप और लेखन प्रक्रिया

पाठ संख्या 05- विशेष लेखन- स्वरूप और प्रकार

अपठित गद्यांश- कोई पाँचा

अपठित पद्यांश- कोई पाँचा

परियोजना कार्य- छायावादी कवियों के जीवन, रचना एवं योगदान पर एक परियोजना तैयार कीजिए।
(प्रमुख छायावादी कवि- महादेवी वर्मा, जयशंकर प्रसाद, सूर्यकांत त्रिपाठी 'निराला' और सुमित्रानंदन पंत)

Subject: Mathematics

Holiday Homework: Class XII Mathematics

Chapters: Relations and Functions, Matrices, Determinants

General Instructions:

1. All questions are compulsory.
2. Maintain a separate thin notebook for holiday homework.
3. Show detailed steps for every calculation/derivation.
4. Label all diagrams and matrices clearly.

Section A: Relations and Functions

1. Check whether the relation R in the set R of real numbers, defined by $R = \{(a, b) : a \leq b^3\}$ is reflexive, symmetric or transitive.
2. Let $f: N \rightarrow R$ be a function defined as $f(x) = 4x^2 + 12x + 15$. Show that $f: N \rightarrow S$, where S is the range of f, is invertible. Find the inverse of f.
3. Show that the relation R in the set $A = \{1, 2, 3, 4, 5\}$ given by $R = \{(a, b) : |a - b| \text{ is even}\}$, is an equivalence relation.
4. Define an Onto function. If $f: A \rightarrow B$ is a bijection, what can you say about the cardinality of A and B?
5. Let R be a relation on the set of natural numbers N defined by nRm if n is a divisor of m. Is R an equivalence relation? Justify.

Section B: Matrices

1. If $A = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$, then prove by Principle of Mathematical Induction that $A^n = \begin{bmatrix} \cos n\theta & \sin n\theta \\ -\sin n\theta & \cos n\theta \end{bmatrix}$ for all $n \in N$.
2. Express the matrix $A = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ as the sum of a symmetric and a skew-symmetric matrix.

3. Find the values of x, y, z if the matrix $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A'A = I$.

4. If A and B are symmetric matrices of the same order, then show that AB is symmetric if and only if A and B commute (i.e., $AB = BA$).

5. Obtain the inverse of the matrix $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$ using elementary row transformations.

Section C: Determinants

1. Solve the following system of equations using matrix method:

$$2x + 3y + 3z = 5$$

$$x - 2y + z = -4$$

$$3x - y - 2z = 3$$

2. If $A = \begin{bmatrix} 2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2 \end{bmatrix}$, find A^{-1} . Using A^{-1} , solve the system of linear equations:

$$2x - 3y + 5z = 11; 3x + 2y - 4z = -5; x + y - 2z = -3$$

3. Find the area of the triangle with vertices $(a, b+c)$, $(b, c+a)$, and $(c, a+b)$ using determinants.

4. If x, y, z are different and $|x \ x^2 \ 1+x^3; y \ y^2 \ 1+y^3; z \ z^2 \ 1+z^3| = 0$, then show that $1 + xyz = 0$.

Section D: Project Work

Prepare a report on the application of Matrices and Determinants in real-life scenarios (e.g., Cryptography, Computer Graphics, or Economics). The report should be 5-7 pages long and include examples of solving linear equations using Cramer's rule or Matrix Inversion Method.

SUBJECT: ENGLISH

The Third Level (TO BE DONE IN THE NOTEBOOK)

i. Do you think that the third level was a medium of escape for Charley? Why?

ii. What do you infer from Sam's letter to Charley?

iii. 'The modern world is full of insecurity, fear, war, worry and stress.' What are the ways in which we attempt to overcome them?(6mark)

iv. Do you see an intersection of time and space in the story?(6mark)

v. Apparent illogicality sometimes turns out to be a futuristic projection? Discuss.(6mark)

vi. Philately helps keep the past alive. Discuss other ways in which this is done. What do you think of the human tendency to constantly move between the past, the present and the future? (6mark)

vii. You have read 'Adventure' by Jayant Narlikar in Hornbill Class XI. Compare the interweaving of fantasy and reality in the two stories. (6 mark)

Lost Spring By Anees Jung

i. What are the dreams of the poor like 'Saheb-e-Alam' and Mukesh? Could these be realised? What is the reality of the situation?

ii. Firozabad presents a strange paradox. Contrast the beauty of the glass bangles of Firozabad with the misery of the people who produce them.

iii.(a) "Survival in Seemapuri means rag-picking."

(b) "Garbage to them is gold."

(c) "For the children it (garbage) is wrapped in wonder, for the elders it is a means of survival."

In the light of the above remarks write an account of the life and activities of the Give a brief account of the life and activities of the Bangladeshi squatters like Saheb-e-Alam settled in Seemapuri.

iv. "The cry of not having money to do anything except carry on the business of making bangles, not even enough to eat, rings in every home. The young men echo the lament of their elders. Little has moved with time, it seems, in Firozabad." Comment on the hardships of the banglemakers of Firozabad with special emphasis on the forces that conspire against them and obstruct their progress.

V. Compare and contrast the two families of bangle-sellers portrayed in 'Lost Spring.' Comment on the roles of individuals in highlighting the issues raised by the author.

Part B – Writing Skills Practice

1. Notice Writing:

1. Your school is organizing a workshop on Cyber Safety for students. Draft a notice inviting students to attend the workshop.

2. You have lost your library card on the school premises. Write a notice for the school notice board.

3. As the Secretary of the Music Club of your school, draft a notice inviting students to audition for the Annual Music Competition.

4. Your school is organizing a tree plantation drive on the occasion of World Environment Day. Write a notice informing students about the event.

HOLIDAYS HOMEWORK

CLASS XII

SUBJECT: PHYSICS

Section A: Very Short Answer Questions (1 Mark)

1. Define electric charge.
2. State Coulomb's law.
3. What is electric field intensity?
4. Define electric dipole moment.
5. What is permittivity of free space?
6. Define electric potential.
7. What is potential difference?
8. Define capacitance.
9. Write SI unit of electric flux.
10. What is dielectric constant?

Section B: Short Answer Questions (2–3 Marks)

1. State and explain the properties of electric field lines.
2. Derive the expression for electric field due to a point charge.
3. What is Gauss's law? Write its mathematical form.
4. Explain electric dipole in a uniform electric field.
5. Derive relation between electric field and potential.
6. Define equipotential surface and write its properties.
7. Explain the working of a parallel plate capacitor.
8. What happens to capacitance when a dielectric is introduced?
9. Distinguish between conductor and insulator.
10. Define electrostatic shielding with example.

Section C: Long Answer Questions (4–5 Marks)

1. Derive Coulomb's law in vector form.
2. Derive electric field due to an electric dipole on axial line.
3. Use Gauss's law to find electric field due to infinite line charge and infinite plane sheet.
4. Derive expression for capacitance of a parallel plate capacitor.
5. Derive energy stored in a capacitor.

Section D: Numericals

1. Two charges $2\mu\text{C}$ and $3\mu\text{C}$ are placed 10 cm apart. Find force between them.
2. Calculate electric field at a point 5 cm away from a charge of $1\mu\text{C}$.
3. Find potential at a point due to a charge of $5\mu\text{C}$ at 2 m distance.
4. A capacitor of capacitance $5\mu\text{F}$ is charged to 100 V. Find energy stored.
5. A dielectric slab is inserted between capacitor plates. Calculate new capacitance if dielectric constant is 4.

Section E: Case Study / HOTS

1. Why birds sitting on high voltage wires do not get electric shock?
2. Why electric field inside a conductor is zero?
3. Why capacitor is used in electronic circuits?
4. Explain importance of earthing in daily life.

Activity Work

Make a model or chart on electric field lines / capacitor working / Gauss law applications OR write a short project on Applications of Electrostatics in Daily Life.

Prepare Practical file which will be shared in class group

Electric Charges & Fields

1. The SI unit of electric charge is:

- A) Coulomb ☒
- B) Volt
- C) Ampere
- D) Ohm

2. Two like charges repel each other because:

- A) They have mass
- B) Electric force acts between them ☒
- C) Magnetic force
- D) Gravity

3. Electric field at a point due to a positive charge is:

- A) Towards charge
- B) Away from charge ☒
- C) Circular
- D) Zero

4. Electric field inside a conductor is:

- A) Maximum
- B) Minimum
- C) Zero ☒
- D) Infinite

5. Electric field lines:

- A) Intersect each other
- B) Never intersect each other ☒
- C) Are circular
- D) Have no direction

6. Electric dipole moment depends on:

- A) Charge only
- B) Distance only
- C) Charge and separation both ☒
- D) None

7. The direction of electric field is:

- A) Direction of force on negative charge

- B) Direction of force on positive charge ☒
- C) Opposite to force
- D) Random

8. Electric flux depends on:

- A) Area and field
- B) Orientation
- C) Both A and B ☒
- D) None

9. Unit of electric field is:

- A) N/C ☒
- B) Volt
- C) Ampere
- D) Joule

10. Gauss law is valid for:

- A) Only symmetric cases
- B) All cases ☒
- C) Only charges
- D) None

⚡ Chapter 2: Electrostatic Potential & Capacitance

11. SI unit of electric potential is:

- A) Joule
- B) Volt ☒
- C) Coulomb
- D) Watt

12. Potential difference is work done per:

- A) Unit mass
- B) Unit charge ☒
- C) Unit force
- D) Unit energy

13. Equipotential surfaces are:

- A) Parallel
- B) Perpendicular to field lines ☒
- C) Circular
- D) Random

14. Capacitance depends on:

- A) Charge
- B) Voltage
- C) Geometry of conductor ☒
- D) Current

15. Energy stored in capacitor depends on:

- A) Voltage
- B) Capacitance

- C) Both A and B ☒
D) None

16. Dielectric increases capacitance because:

- A) Reduces field
B) Increases charge storage
C) Both A and B ☒
D) None

17. Work done in moving charge in equipotential surface is:

- A) Maximum
B) Zero ☒
C) Infinite
D) Negative

18. Capacitors in series:

- A) Increase capacitance
B) Decrease capacitance ☒
C) No change
D) Infinite

19. Capacitors in parallel:

- A) Decrease capacitance
B) Increase capacitance ☒
C) No change
D) Zero

20. Electric potential energy is:

- A) Scalar quantity ☒
B) Vector
C) Zero
D) Infinite

SUBJECT: CHEMISTRY

Chapter: Solutions (Advanced Level – CBSE + JEE/NEET Oriented)

Section 1: Case-Based Questions (10 Questions)

Q1. A beverage company studies carbonation using CO₂ gas. At 298 K, CO₂ is dissolved in water under different pressures. The following data is obtained:

Pressure (atm)

Mole fraction of CO₂

0.004

4

0.008

6

0.012

- a) Verify whether Henry's law is obeyed.
- b) Calculate Henry's law constant.
- c) Predict solubility at 10 atm.
- d) Explain why cold drinks are stored in sealed containers.

Q2. A solution of ethanol and water shows deviation from ideal behavior.

- a) Identify whether it shows positive or negative deviation if boiling point decreases.
- b) Sketch the vapor pressure vs composition graph.
- c) Explain intermolecular interactions responsible.
- d) What type of azeotrope is formed?

Q3. A protein solution shows abnormal molar mass in freezing point depression experiments.

- a) Define van't Hoff factor.
- b) Suggest reason for abnormal molar mass.
- c) How can aggregation affect colligative properties?
- d) Suggest a method to determine correct molar mass.

Q4. A student dissolves 5 g NaCl in 100 g water and observes ΔT_f higher than expected.

- a) Explain the reason.
- b) Calculate van't Hoff factor assuming complete dissociation.
- c) Why is experimental value lower than theoretical?
- d) Define degree of dissociation.

Q5. A solution shows vapor pressure lower than expected from Raoult's law.

- a) Identify deviation type.

- b) Give molecular explanation.
- c) Provide one real-life example.
- d) How does this affect boiling point?

Q6. Two volatile liquids A and B form a minimum boiling azeotrope.

- a) What type of deviation is shown?
- b) Why does azeotrope boil at constant temperature?
- c) Can it be separated by fractional distillation?
- d) Suggest alternative separation method.

Q7. A solution of glucose in water is isotonic with 0.9% NaCl solution.

- a) Define isotonic solutions.
- b) Calculate molarity of glucose solution.
- c) Why is NaCl used in saline instead of glucose?
- d) Explain osmotic pressure significance in biology.

Q8. A chemist observes osmotic pressure decreases with time in a polymer solution.

- a) Suggest reason.
- b) How does degradation affect molar mass?
- c) Write relation between osmotic pressure and molar mass.
- d) Why is osmotic pressure preferred for macromolecules?

Q9. A mixture of benzene and toluene behaves ideally.

- a) State Raoult's law for binary solution.
- b) Calculate total vapor pressure if mole fraction of benzene is 0.6.

(Given: $P^\circ_{\text{benzene}} = 100 \text{ torr}$, $P^\circ_{\text{toluene}} = 50 \text{ torr}$)

- c) Calculate vapor phase composition.
- d) Why do they form ideal solution?

Q10. A salt solution shows boiling point elevation.

- a) Derive relation between ΔT_b and molality.

- b) Why is elevation proportional to molality?
- c) Predict effect of adding more solute.
- d) Why is boiling point elevation a colligative property?

Section 2: Multiple Choice Questions (10 Questions)

Q11. Which condition is required for Raoult's law?

- A. Strong solute-solvent interaction
- B. Ideal solution behavior
- C. High temperature only
- D. Non-volatile solute

Q12. Which solution shows maximum boiling point elevation?

- A. 1 m glucose
- B. 1 m NaCl
- C. 1 m CaCl_2
- D. 1 m urea

Q13. Henry's law is applicable for:

- A. Liquid-liquid systems
- B. Gas-liquid systems
- C. Solid-liquid systems
- D. Solid-gas systems

Q14. Colligative properties depend on:

- A. Nature of solute
- B. Number of solute particles
- C. Nature of solvent
- D. Temperature only

Q15. If $i < 1$, the solute undergoes:

- A. Dissociation

B. Association

C. Ionization

D. Sublimation

Q16. Unit of Henry's law constant is:

A. atm

B. mol/L

C. atm^{-1}

D. dimensionless

Q17. Osmotic pressure is maximum for:

A. Dilute solutions

B. Concentrated solutions

C. Pure solvent

D. Solid solutions

Q18. Which shows negative deviation?

A. Benzene + toluene

B. Acetone + chloroform

C. Ethanol + water

D. Hexane + heptane

Q19. Which property is used for molar mass determination of proteins?

A. Boiling point

B. Osmotic pressure

C. Vapor pressure

D. Density

Q20. van't Hoff factor for K_2SO_4 (complete dissociation) is:

A. 2

B. 3

C. 4

D. 5

Section 3: Assertion-Reason Questions (10 Questions)

Options:

A. Both true, correct explanation

B. Both true, incorrect explanation

C. Assertion true, Reason false

D. Assertion false, Reason true

Q21.

Assertion: Vapor pressure of solution is lower than pure solvent.

Reason: Solute particles occupy surface area.

Q22.

Assertion: Osmotic pressure depends on molarity.

Reason: It is independent of temperature.

Q23.

Assertion: Ideal solutions obey Raoult's law.

Reason: Intermolecular forces remain same.

Q24.

Assertion: Electrolytes show abnormal molar mass.

Reason: They dissociate into ions.

Q25.

Assertion: Boiling point increases with solute addition.

Reason: Vapor pressure decreases.

Q26.

Assertion: Henry's law constant increases with temperature.

Reason: Gas solubility decreases with temperature.

Q27.

Assertion: Azeotropes have constant composition.

Reason: Vapor and liquid phases have same composition.

Q28.

Assertion: van't Hoff factor can be fractional.

Reason: Association reduces particle number.

Q29.

Assertion: Osmosis occurs through semipermeable membrane.

Reason: Only solute passes through membrane.

Q30.

Assertion: Colligative properties depend on molality.

Reason: Molality is temperature independent.

Section 4: Subjective Questions (10 Questions)

Q31. Derive Raoult's law for a binary solution of volatile liquids.

Q32. Derive expression for elevation in boiling point.

Q33. A solution contains 2 g solute in 100 g water and shows $\Delta T_f = 0.372$ K. Calculate molar mass. ($K_f = 1.86$ K kg mol⁻¹)

Q34. Explain positive and negative deviations with examples.

Q35. Define osmotic pressure and derive its relation with molarity.

Q36. Calculate osmotic pressure of 0.01 M solution at 300 K.

Q37. Explain abnormal molar mass and van't Hoff factor.

Q38. Why are colligative properties independent of solute nature?

Q39. Explain azeotropes and their types.

Q40. A 0.1 m solution shows $\Delta T_b = 0.052$ K. Find van't Hoff factor ($K_b = 0.52$).

Section 5: Long Answer Questions (5 Questions)

Q41. A solution contains 10 g of a non-volatile solute in 200 g water. It shows $\Delta T_b = 0.256$ K.

- a) Calculate molar mass.
- b) If solute associates to form dimers, calculate degree of association.
- c) Explain impact on colligative properties.

Q42. A binary solution of A and B has vapor pressures:

$P^\circ A = 120 \text{ torr}$, $P^\circ B = 80 \text{ torr}$. Mole fraction of A = 0.5.

- a) Calculate total vapor pressure.
- b) Calculate vapor phase composition.
- c) Predict deviation if interactions change.

Q43. A gas dissolves in water following Henry's law. At 300 K, $K_H = 2 \times 10^4 \text{ atm}$.

- a) Calculate mole fraction at 5 atm.
- b) Explain temperature effect.
- c) Why is scuba diving risky regarding gas solubility?

Q44. A NaCl solution shows van't Hoff factor 1.8.

- a) Calculate degree of dissociation.
- b) Predict effect on freezing point depression.
- c) Compare with ideal case.

Q45. Design an experiment to determine molar mass using osmotic pressure. Include:

- a) Apparatus
- b) Theory
- c) Calculations
- d) Sources of error

Introduction

When we add a drop of ink to water, the ink starts spreading throughout the water (solvent). Similarly, if we add a spoonful of salty water to a glass of water, the whole water becomes salty after some time. It means that when a substance present in a high concentration in a liquid comes in contact with a liquid having a lower concentration of that substance, diffusion of substance from a high concentration region takes place spontaneously and it spreads out. However, when we put a barrier between these liquids like a plastic or metal sheet, diffusion should not happen! However, in nature, we have certain special barriers that can stop the diffusion of some substances and allow other

substances to pass through them. An example is peels of some vegetables, or membranes in our body cells. Such special barriers are known as semi-permeable membranes and can lead to special kinds of diffusions. Now, we will perform a small experiment using raisins (produced by drying grapes) to study a special kind of diffusion.

Materials: (Requirements for 3-4 groups)

- ☐ 100 g Raisins (dry)
- ☐ 200 g Sugar or Sucrose
- ☐ Food colour (green/blue/red – any one)
- ☐ 1 weight balance (pocket scale)
- ☐ 500 mL Water (Clean tap water)
- ☐ [Per group] 5 Glass or plastic containers of 50 mL capacity, 2 beakers of 100 mL capacity, 1 Measuring cylinder (10 mL capacity), forceps without sharp point
- ☐ [Optional] 1 Insulin syringe (It has a fine needle to make very small prick in raisins)

Note: Raisins are readily available in any grocery store. While buying, please check that they are intact, medium or large-sized (around 1 cm or above in length) with greenish yellow or light brown coloured. While selecting for the experiment, do not use very dark brown, small, deformed fruits. Preferably choose fruits with undamaged stalks.

Task 1. Preparing for the experiment

Prepare the following solution (the quantities mentioned are sufficient for 3-4 groups of students, each group doing a set of experiments).

- 40% Sucrose solution: Dissolve 20 g sugar in 25-30 mL of water. When all the sugar dissolves, make up the volume to 50 mL.
- Saturated Sucrose solution: Take 50 mL water in a beaker or container and add ~40-50 g of sugar. Try to dissolve it as much as possible. This is closer to a saturated solution of sucrose.
- Food colour solution: Dissolve a pinch of food colour in around 5 mL water to make a concentrated solution.

Task 2. Fun with raisins

- Take 3 containers of 50 mL capacity or 50 mL beakers. Label them with numbers 1 to 3.
- Weigh about 7-8 raisins (use entire ones without breaking their stalks) and record the weight in Table 2. Put them in container no. 1. Similarly add weighed raisins in containers no. 2 and 3.
- Add 10 mL of water in container no. 1. All raisins should get completely immersed. If not, add another 5 mL of water but remember to keep amount of solution constant in all the 3 containers.
- Add 10 mL of 40% sucrose solution in container no. 2 and 10 mL of saturated sucrose solution in container no. 3.
- Now put 2-3 drops of food colour in container no. 1, 2 and 3. Mix it well by gently swirling.
- Summarize the constituents of your containers in Table 1.
- Cover all the containers to avoid evaporative loss of liquid. Note the time and keep them undisturbed for 45 minutes. In the meantime, try answering the following questions.

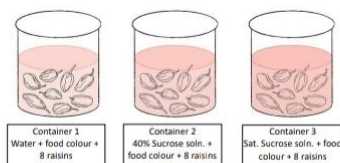


Figure: Containers with their constituents

Table 1: Summarize the contents of each container in the table below (+ represents added and – represents not added):

Container no.	Raisins (Dry)	10 mL Water (+/-)	10 mL Sucrose Solution (+/-)	Food colour in water (+/-)
1				
2				
3				

Q1. What do you think is the role of dye (food colour) in this experiment?

Q2. What do you expect will happen in each of the containers?

- After about 45 minutes, carefully remove raisins from container no.1 using forceps having blunt ends. Do not prick/damage the raisin while holding it with the forceps. Gently tap it to the side wall of the container side to drain off excess liquid. Observe any change in shape/ colour of raisins, and note in Table 2.
- Gently blot the raisins (dry their surface) on tissue paper and weigh them together.
- Measure the amount of water in container no.1 using measuring cylinder. Note down your observation in Table 2.
- Repeat it for the rest of the containers.

Table 2: Write about the shape before and after and also the volume of liquid from each container. The shape can be categorised as 'more shrunken', 'no change' or 'swollen'. (the original shape while starting the activity should be considered as 'Shrunken')

Container No.	Shape of raisins		Mass of raisins (mg)			Approximate Volume of liquid in container (mL)		
	Initial	Final	Initial	Final	Difference	Initial*	Final	Difference
1.						10		
2.						10		
3.						10		

*Can be 15 or 20 mL as per the requirement. But should be constant in all containers.

Q1. Now that you have recorded all the details and done all calculations, can you tell if the mass difference is same in all containers? If the initial mass of raisins is different in different containers, then calculate the mass difference per gram of raisins to compare.

Q2. Why did the raisins change in shape?

Q3. What according to you was going inside the raisin?

Q4. Why were different concentrations of sucrose used?

Q5. What happens in container no. 3?

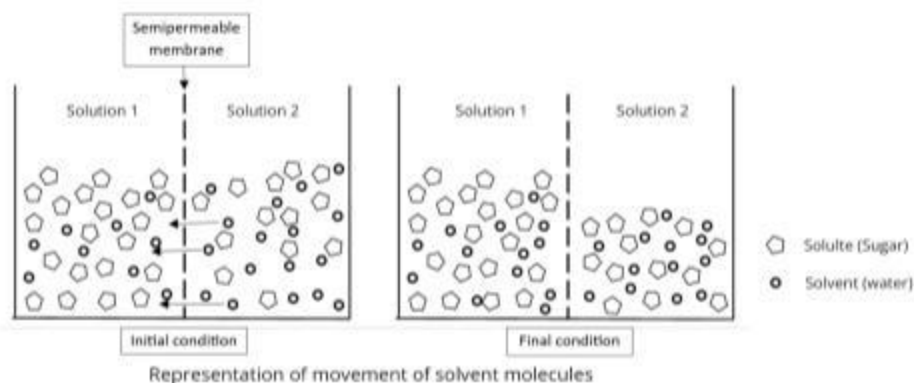
Q6. Why is this not a simple diffusion? Which container can be used to demonstrate?

Q7. Was the change in the mass of raisins in each container related to the change in the water volume you observed for that container?

Q8. Was any semi-permeable membrane present in the above experimental setup? If yes, what did it allow to pass through and what did it stop from passing through?

Task 3. A look at osmosis

Net movement of water across a semipermeable membrane from a solution of lesser to one of greater solute concentration is known as osmosis. The membrane must be permeable to water but not to solute molecules. One should not confuse it with imbibition, which is a diffusion of water in colloidal solids (mostly proteins in biological systems) which results into swelling of latter. Eg. Pulses soaked in water. Imbibition never takes place between two liquids of differing concentrations.



The figure above is given for representative purposes. Pentagons represent sugar or any molecule that cannot pass through the middle membrane while circles represent water molecules which can readily cross the membrane. Initially two sugar solutions of different concentration are added on two sides of semipermeable membrane. As it can be seen, left compartment has higher sugar concentration than right. But membrane does not allow sugar molecules to diffuse towards right compartment of lower solute



(sugar) concentration. Water molecules being in higher concentration on right side can cross the membrane and move towards its lower concentration. The net movement stops when water molecules OR solvent concentration becomes equal on both sides. It is shown in 'final condition.' *(For ease of understanding, pressure difference is not considered here.)*

Q1. Table below presents a few situations. These situations may involve one or more of the processes (diffusion, osmosis, or imbibition). Indicate the predominant process (diffusion or osmosis). If the process is osmosis, identify the semi-permeable membrane in the example.

	Situations	Diffusion / osmosis	Semi-permeable membrane (if osmosis)
i	Gulab jamun dipped in sugar syrup after frying.		
ii	Whole raw mango stored in salt solution becomes salty from inside.		
iii	Potato slices sprinkled with salt become wet		
iv	Adding sabza (sweet basil) seeds in water.		
v	Intake of water from soil in plants		
vi	Dipping tea bag in hot water for making tea		

Q2. Certain membranes allow water to pass through but not sugar. Can you give examples of such membranes?

Opening and closing of leaf stomata also involves swelling and shrinking of guard cells. Is it likely that this process may be happening due to osmosis? Discuss among your friends.

Q3. These days we hear a lot about RO filters in water purification units. RO stands for reverse osmosis process. RO filters are used to get rid of excess salts and minerals dissolved in water. Can you find out why it is called 'reverse' osmosis?

Q4. There are some factors mentioned in the following table that may or may not affect both the processes, and some factors play a key role in these processes, i.e. diffusion and osmosis in aqueous solutions. Put a tick (✓) in the appropriate boxes as per your understanding:

	Factors involved/affecting	Diffusion	Osmosis
A	Solute movement		
B	Water movement		
C	Semi-permeable membrane		
D	Concentration difference		
E	External heating		

Q5. There are many fishes that live in marine water. How do you think they survive in such salty water (without losing their body water or without absorbing outside water)?

Q6. Can you think of any examples in the human body/environment where osmosis plays an important role?

SUBJECT: MATHEMATICS

Chapters: Relations and Functions, Matrices, Determinants

General Instructions:

- All questions are compulsory.
- Maintain a separate thin notebook for holiday homework.
- Show detailed steps for every calculation/derivation.
- Label all diagrams and matrices clearly.

Section A: Relations and Functions

1. Check whether the relation R in the set R of real numbers, defined by $R = \{(a, b) : a \leq b^3\}$ is reflexive, symmetric or transitive.
2. Let $f: N \rightarrow R$ be a function defined as $f(x) = 4x^2 + 12x + 15$. Show that $f: N \rightarrow S$, where S is the range of f , is invertible. Find the inverse of f .
3. Show that the relation R in the set $A = \{1, 2, 3, 4, 5\}$ given by $R = \{(a, b) : |a - b| \text{ is even}\}$, is an equivalence relation.
4. Define an Onto function. If $f: A \rightarrow B$ is a bijection, what can you say about the cardinality of A and B ?
5. Let R be a relation on the set of natural numbers N defined by nRm if n is a divisor of m . Is R an equivalence relation? Justify.

Section B: Matrices

1. If $A = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$, then prove by Principle of Mathematical Induction that $A^n = \begin{bmatrix} \cos n\theta & \sin n\theta \\ -\sin n\theta & \cos n\theta \end{bmatrix}$ for all $n \in N$.
2. Express the matrix $A = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ as the sum of a symmetric and a skew-symmetric matrix.
3. Find the values of x, y, z if the matrix $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A'A = I$.
4. If A and B are symmetric matrices of the same order, then show that AB is symmetric if and only if A and B commute (i.e., $AB = BA$).
5. Obtain the inverse of the matrix $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$ using elementary row transformations.

Section C: Determinants

1. Solve the following system of equations using matrix method:
$$\begin{aligned} 2x + 3y + 3z &= 5 \\ x - 2y + z &= -4 \\ 3x - y - 2z &= 3 \end{aligned}$$
2. If $A = \begin{bmatrix} 2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2 \end{bmatrix}$, find A^{-1} . Using A^{-1} , solve the system of linear equations:
$$\begin{aligned} 2x - 3y + 5z &= 11; \\ 3x + 2y - 4z &= -5; \\ x + y - 2z &= -3 \end{aligned}$$
3. Find the area of the triangle with vertices $(a, b+c)$, $(b, c+a)$, and $(c, a+b)$ using determinants.

4. If x, y, z are different and $|x^2 1+x^3; y^2 1+y^3; z^2 1+z^3| = 0$, then show that $1 + xyz = 0$.

Section D: Project Work

Prepare a report on the application of Matrices and Determinants in real-life scenarios (e.g., Cryptography, Computer Graphics, or Economics). The report should be 5-7 pages long and include examples of solving linear equations using Cramer's rule or Matrix Inversion Method.

SUBJECT: HINDI

निम्नलिखित विषयों पर रचनात्मक लेख लिखिए-

- | | |
|-------------------------------------|---------------------------------|
| 1 काश! मैं उड़ पाता | |
| 2 जहाँ न पहुँचे रवि वहाँ पहुँचे कवि | 3 अचानक जब हमारी मेट्रो रुक गई |
| 4 मंसूरी के रास्ते बस का खराब होना | 5 नदी किनारे बरसात में धिर जाना |

अभिव्यक्ति और माध्यम-

निम्नलिखित पाठों का अध्ययन करना है-

पाठ संख्या 03- विभिन्न माध्यमों के लिए लेखन

पाठ संख्या 04- पत्रकारीय लेखन के विभिन्न रूप और लेखन प्रक्रिया

पाठ संख्या 05- विशेष लेखन- स्वरूप और प्रकार

अपठित गद्यांश- कोई पाँचा

अपठित पद्यांश- कोई पाँचा

परियोजना कार्य- छायावादी कवियों के जीवन, रचना एवं योगदान पर एक परियोजना तैयार कीजिए।

(प्रमुख छायावादी कवि- महादेवी वर्मा, जयशंकर प्रसाद, सूर्यकांत त्रिपाठी 'निराला' और सुमित्रानंदन पंत)

SUBJECT: ENGLISH

The Third Level (TO BE DONE IN THE NOTEBOOK)

- Do you think that the third level was a medium of escape for Charley? Why?
- What do you infer from Sam's letter to Charley?
- 'The modern world is full of insecurity, fear, war, worry and stress.' What are the ways in which we attempt to overcome them?(6mark)
- Do you see an intersection of time and space in the story?(6mark)

v. Apparent illogicality sometimes turns out to be a futuristic projection? Discuss.(6mark)

vi. Philately helps keep the past alive. Discuss other ways in which this is done. What do you think of the human tendency to constantly move between the past, the present and the future? (6mark)

vii. You have read ‘Adventure’ by Jayant Narlikar in Hornbill Class XI. Compare the interweaving of fantasy and reality in the two stories. (6 mark)

Lost Spring By Anees Jung

i. What are the dreams of the poor like ‘Saheb-e-Alam’ and Mukesh? Could these be realised? What is the reality of the situation?

ii. Firozabad presents a strange paradox. Contrast the beauty of the glass bangles of Firozabad with the misery of the people who produce them.

iii.(a) “Survival in Seemapuri means rag-picking.”

(b) “Garbage to them is gold.”

(c) “For the children it (garbage) is wrapped in wonder, for the elders it is a means of survival.”

In the light of the above remarks write an account of the life and activities of the Give a brief account of the life and activities of the Bangladeshi squatters like Saheb-e-Alam settled in Seemapuri.

iv. “The cry of not having money to do anything except carry on the business of making bangles, not even enough to eat, rings in every home. The young men echo the lament of their elders. Little has moved with time, it seems, in Firozabad.” Comment on the hardships of the banglemakers of Firozabad with special emphasis on the forces that conspire against them and obstruct their progress.

V. Compare and contrast the two families of bangle-sellers portrayed in ‘Lost Spring.’ Comment on the roles of individuals in highlighting the issues raised by the author.

Part B – Writing Skills Practice

1. Notice Writing:

1. Your school is organizing a workshop on Cyber Safety for students. Draft a notice inviting students to attend the workshop.

2. You have lost your library card on the school premises. Write a notice for the school notice board.

3. As the Secretary of the Music Club of your school, draft a notice inviting students to audition for the Annual Music Competition.

4. Your school is organizing a tree plantation drive on the occasion of World Environment Day. Write a notice informing students about the event.

SUBJECT: BIOLOGY

GENERAL INSTRUCTIONS

1. Complete the given questions in your fair notebook.
2. Complete the investigatory project on the given topic.(maximum 30 pages)
- 3) Complete your fair notebook.
- 4) Read chapter PRINCIPLES OF INHERITANCE AND VARIATION, EVOLUTION , HUMAN HEALTH AND DISEASE AND MICROBES IN HUMAN WELFARE.(MOST SCORING CHAPTERS IN CBSE BOARD EXAMS)
- 5) Solve the previous year questions of Unit Reproduction.

LESSON- SEXUAL REPRODUCTION IN FLOWERING PLANTS

1. Define pollination.
2. Name the male reproductive part of a flower.
3. State the function of the ovary in a flower.
4. List the types of pollination.
5. Describe the structure of a typical stamen.
6. Explain the term "double fertilization."
7. What is the role of pollen tube in fertilization?
8. Identify the parts of a carpel.
9. Distinguish between self-pollination and cross-pollination.
10. What is the role of the stigma in reproduction?
11. Given a diagram of a flower, label the reproductive parts.
12. Predict what would happen if a flower's anthers were removed.
13. Suggest why brightly colored petals are common in insect-pollinated flowers.
14. If a plant is wind-pollinated, what floral adaptations would you expect?
15. Apply your understanding to explain why seedless fruits are produced in some plants.
16. A plant species depends on bees for pollination. What might happen if bee populations decline?
17. How can artificial pollination be useful in agriculture?
18. Use your knowledge of plant reproduction to suggest a method of producing hybrid seeds.
19. Identify the reason why some flowers produce nectar.
20. Compare the process of pollination in wind vs. insect-pollinated flowers.
21. Analyze the advantages and disadvantages of self-pollination.
22. Why is cross-pollination considered to promote genetic diversity?
23. Differentiate between the structures of monocot and dicot flowers.
24. Analyze the importance of synchrony in pollen release and stigma receptivity.
25. Examine the role of synergids during fertilization.
26. Why might a plant evolve mechanisms to avoid self-pollination?
27. Interpret the evolutionary significance of double fertilization in angiosperms.
28. Compare the reproductive structures of gymnosperms and angiosperms.
29. Evaluate the efficiency of artificial pollination in comparison to natural pollination.
30. Develop a flowchart of the steps involved in sexual reproduction in flowering plants.
31. A plant has sticky pollen and large colorful petals. Suggest its likely pollinator.
32. You observe a flower with both reproductive parts but still relies on cross-pollination. Explain why.
33. While dissecting a flower, you see a large, sticky stigma. What does this indicate about the mode of pollination?
34. A botanist wants to produce a hybrid plant. Which part should be removed and why?
35. Why are seed banks important in conserving plant biodiversity?
36. In a lab setup, a pollen tube doesn't reach the ovule. What factors could be responsible?
37. A fruit has no seeds. What type of reproduction might have taken place?

38. Draw Transverse section of Young anther with all layers, Mature pollen grain, Typical ovule, Mature embryo sac, Pistill showing path of pollen tube growth, Typical Dicot and Monoct embryo, structure of Castor seed and Maize grain?

LESSON – HUMAN REPRODUCTION

1. Define fertilization.
2. Name the primary male and female reproductive organs.
3. What is the function of the uterus?
4. Identify the hormone responsible for ovulation.
5. Draw and Label the parts of the male reproductive system.
6. List the stages of the menstrual cycle.
7. What is the role of the placenta?
8. State the site of sperm production.
9. Mention two secondary sexual characteristics in males.
10. Which structure in females receives the fertilized egg?
11. Explain how the menstrual cycle is regulated by hormones.
12. Describe the process of implantation.
13. Differentiate between identical and fraternal twins.
14. Describe the function of the fallopian tube.
15. Why is the scrotum located outside the body?
16. How does puberty affect males and females differently?
17. Explain the importance of amniotic fluid.
18. Describe the changes in hormone levels during pregnancy.
19. Interpret the role of FSH and LH in reproduction.
20. Why does menstruation occur?
21. Predict the outcome if the fallopian tubes are blocked.
22. Suggest ways to maintain reproductive health.
23. A woman has irregular periods; what might be the causes?
24. Explain how birth control pills prevent pregnancy.
25. Use a diagram to trace the path of sperm from formation to ejaculation.
26. Apply knowledge of fertilization to explain how IVF works.
27. How would an imbalance in estrogen affect the menstrual cycle?
28. Explain how understanding of human reproduction helps in family planning.
29. Apply the stages of labor to identify the correct birth phase in a scenario.
30. Analyze a hormonal chart to identify when ovulation occurs.
31. Analyze the menstrual cycle to determine the fertile period.
32. Distinguish between ovulation and menstruation using a flowchart.
33. Examine the effects of reproductive diseases like STIs.
34. Compare human reproductive strategies with those of mammals
35. Analyze the roles of progesterone and estrogen during pregnancy.
36. How does the structure of sperm aid in fertilization?
- 37.. Interpret a diagram showing hormone levels across the menstrual cycle.
38. Evaluate pros and cons of various contraceptive methods.
39. Defend the role of hormones in maintaining pregnancy.
40. Draw Diagrammatic representation of Spermatogenesis and Oogenesis, Sectional view of somniferous tubules(enlarged), Sectional view of ovary, Diagrammatic representation of various events during menstrual cycle,

CHAPTER3:- REPRODUCTIVE HEALTH

1. Our government has intentionally imposed strict conditions for MTP in our country. Justify giving a reason.
2. Name an IUD that you would recommend to promote the cervix hostility to sperms.
3. State one reason, why breastfeeding the baby acts as a natural contraceptive for the mother.
4. Mention one positive and one negative application of amniocentesis
5. What do oral pills contain and how do they act as effective contraceptives?
6. Why is Cu-T considered a good contraceptive device to space children?
7. Describe the lactational amenorrhea method of birth control.
8. After a brief medical examination a healthy couple came to know that both of them are unable to produce functional gametes and should look for an 'ART' (Assisted Reproductive Technique). Name the 'ART' and the procedure involved that you can suggest to them to help them bear a child
9. An infertile couple is advised to adopt test tube baby programme. Describe two principal procedures adopted for such technologies.
10. A childless couple has agreed for a test tube baby programme. List only the basic steps the procedure would involve to conceive the baby.

SUBJECT: PHYSICAL ACTIVITY TRAINER

Yoga & Flexibility Master 5 basic Asanas (e.g., Tadasana, Bhujangasana). Write a brief note on the benefits of each.

6 - 10 First Aid & Safety Create a "First Aid Cheat Sheet" for common sports injuries like sprains, strains, and heat exhaustion.

11 - 15 Game Rules Select two major sports (e.g., Football, Badminton). Draw the court/field dimensions and list 5 major fouls.

16 - 20 Session Planning Design a 40-minute lesson plan for a primary school class, including Warm-up, Main Activity, and Cool-down.

SUBJECT- CS

Write Chapter -3 Text Files handling in notebook and learn it.

Also attempt Question Answers from the Chapter -3 Text Files handling

Learn Chapter-1 functions and Chapter2- Exception handling

*****END OF HOMEWORK*****