KENDRIYA VIDYALAYA CCL, RANCHI

Summer Holidays Homework (2025-26)

<u>Class-l</u>

Subject- Mathematics

1. Fill the missing numbers-

1	2	3	4			7	8		10
11			14		16			19	
21	22					27			30
31			34				38	39	
	42	43		45			48		50

2. Write the numbers in word from 1 to 20.

3. My Shape Collage- (A-4 sheet)

Cut out different shapes (Circle, Square, Triangle, Rectangle) from colour

paper. Paste them on a A-4 size paper and label them.

4. My Family's Age Chart- (Chart Paper)

Draw a tree and write the ages of your family members. Collect their pictures

and paste the pictures on a chart paper in ascending order (youngest to oldest).

5. Create a number train- (A-4 sheet)

Draw a train with 10 coaches. Write a number from 1 to 10 on each coach.

Colour all the coaches with different colour.

6. Make a Puppet/ Mask.

Make a Puppet or Mask of our favourite animal using colourful paper and icecream stick.

<u>विषय: हिन्दी</u>

- १. अ से अ: तक वर्णमाला लिखो और याद करो।
- २. क से ज्ञ तक वर्णमाला लिखो और याद करो।

३. अपने पसंदीदा पाँच फल या सब्जी का चित्र बनाएं और उसका नाम हिन्दी में लिखो। (A-4 sheet)

४. अपना और अपने परिवार के सदस्यों का नाम हिन्दी में सरल वाक्य में लिखो।

उदाहरण: पापा: मेरे पापा का नाम श्री दिनेश कुमार है।

५. 2-अक्षर, 3-अक्षर, 4-अक्षर, वाले शब्द पाँच पाँच शब्द लिखो।

उदाहरण: 2-अक्षर: बाल। 3-अक्षर: कमल। 4-अक्षर: अजगर।

६. अपनी हिन्दी की किताब की कविता " दादा-दादी" का चित्र बनाओ और सुंदर लेख में चार्ट पेपर पर लिखो और याद करो। (Chart Paper)

सभी बच्चे इस कविता को गाते हुए एक मिनट की वीडियो बनाकर मेरे वॉट्सएप पर भेजें।

- ७. अपने दादा-दादी/ नाना-नानी के साथ फोटो खिंचवाएं और कॉपी में चिपकाएं।
 - हिन्दी का गृहकार्य अलग कॉपी में लिखें और एक प्लास्टिक का फोल्डर में A-4 sheet रखेंगे।

Subject- English

1. Take 3 copies of print out of English Letters given below.



2. Paste the pictures of five wild animals and five domestic animals on A-4 size paper.

- Write five words each from letter A -Z on A-4 size paper.
 Example A apple; A ant; A- Aeroplane; A ape; A Axe
- 4. Read the Reading cards provided below.



5. Read the Sight words below.

а	I	an	in	is
the	to	up	and	for
me	we	my	you	not
go	one	two	for	red
come	look	said	down	hers

6. Draw two fruits and two vegetables on A-4 size paper you like the most and colour them also.

KENDRIYA VIDYALAYA CCL, RANCHI Summer Holidays Homework(2025-26) Class-II

SUBJECT: ENGLISH

- Make a model of bicycle and paste the name of the different part of bicycle. (Project - 10 marks)
- Learn the poem <u>'My Bicycle'</u> with action and make a video of it in school uniform and send it to my WhatsApp number.
- 3. Write English handwriting from your English Text book in small size four-line copy every day.



- 4. Prepare a thing from the waste materials: Pencil stand (material required plastic bottle, colour paper, black marker, a pair of scissors and fevicol etc.)
- 5. Draw or paste your favourite one indoor game and one outdoor game. Write five lines about the games on A-4 size paper.
- 6. Reading cards are given below, print the Reading Cards and learn to read.

4. A strange Hen

Once there was a farmer. He lived in a village. He had a strange hen. It laid a golden egg every day. He sold the golden egg and got high price. He was very greedy and could not wait to become rich. He wanted to be wealthy at once. One day he killed the hen to get all the golden eggs. But he was very disappointed to see that there was only one egg. He felt sorry but it was of no use.

Moral

It is no use crying over spilt milk.

10. A thirsty Crow

Once there was a crow. It was very thirsty. It flew in search of water but found no water. At last, it saw a jug of water in the garden. It reached to the jug but water was very low. It could not drink it. It looked here and there and saw few pebbles nearby. It thought of a plan. It put pebbles into the jug. The water rose up. It drank water and flew away.

Moral

Necessity is the mother of invention.

SUBJECT: MATHS

- 1. Write number names from 1 to 100 on A -4 size paper. (Project 10 marks)
- 2. Learn the table from 2 to 12 daily.
- 3. Calendar Challenge (Do this activity on A-4 size paper.)
 - a) Choose any month from the calendar and find out the following
 - i) Write the name of the month.
 - ii) How many days there in a month?
 - iii) How many Sundays are there in a month?
 - iv) How many Mondays are there in a month?
 - v) Are there any holidays or festivals in that month? Write the name of festivals or holidays.
- 4. Take print out of this worksheet and solve.



5. Take print out this worksheet and solve.

Arranging numbers.								
Arrange the following n	Arrange the following numbers in ascending order.							
1. 17, 75, 19, 28								
2. 40, 54, 24, 83								
3. 84, 66, 92, 100								
4. 48, 87, 12, 21								
5. 81, 55, 90, 27								
6. 73, 51, 91, 09								
Arrange the following n	umbers in descending order.							
1. 63, 85, 17, 99								
2. 30, 34, 82, 53								
3. 14, 43, 22, 75								
4. 53, 97, 62, 98								
5. 69, 48, 91, 72								
6. 27, 63, 81, 40								

विषय: हिन्दी

अपने परिवार के सभी सदस्यों का नाम लिखो और हर सदस्य के बारे में २-३ वाक्य लिखो।
 उदाहरण: पापा- मेरे पापा का नाम महेश कुमार है। वह मेरे साथ खेलते है।

२. अपनी हिन्दी की किताब की कविता "घर" और "मां" को याद करो और किसी एक कविता का चित्र बनाओ तथा उसे सुंदर लेख में चार्ट पेपर पर लिखो। (Chart paper) सभी बच्चे एक्शन के साथ कविता को गाते हुए एक वीडियो बनाकर मेरे वॉट्सएप पर अवश्य भेजेंगे।

३. ध्वनि उत्पन्न करने वाली चीज़ों की सूची बनाएं और उनके चित्र चिपकाएं या बनाएं। (A-4 sheet) जैसे: **घंटी, पायल, शंख, घुघरू, डमरू, सीटी, मंजिरा, ढोलक** आदि।

४. अ से अ: तक प्रत्येक स्वर की मात्रा लिखो और हर मात्रा से पाँच-पाँच अक्षर लिखो। उदाहरण: अ " " की मात्रा वाले शब्द- नल, कल

५. हिन्दी में १ से ५० तक गिनती याद करें और १ से २० तक गिनती हिन्दी में लिखकर लाएं। (A-4 sheet)

६. अपने दादा-दादी/ नाना-नानी के साथ फ़ोटो खिंचवाएं और कॉपी में चिपकाएं।

• हिंदी के गृहकार्य के लिए अलग कॉपी बनाएं और A4 शीट को प्लास्टिक फोल्डर में रखेंगे।

KENDRIYA VIDYALAYA CCL, RANCHI Summer Holidays Homework (2025-26)

Class-III

SUBJECT- English

Note:

1. Do all the homework on A4 paper and put them in a file.

- 2. Submit your homework on reopening day.
- 1. Write 10 action words and paste pictures.
- 2. Write 5-10 compound words and paste pictures.

Eg SUN + FLOWER = SUNFLOWER

- 3. Write a paragraph about your favorite cartoon character.
- 4. Buy any story book and read it thoroughly.
- 5. Read one page daily from your notebook.
- 6. Write one page cursive writing daily.
- 7. Memorize the poem ' Out in the garden', by heart.

<u>SUBJECT – HINDI</u>

1. **पठन**

सभी बच्चे एक कहानी की किताब(चम्पक, अकबर-बीरबल, तेनालीराम, पंचतंत्र या अपनी पसंद का कोई भी) खरीदेंगे। रोज एक कहानी पढ़े तथा इसे अपने शब्दों में घर के सदस्यों को सुनाएँ।

2. वाचन

अपनी हिंदी पाठ्य-पुस्तिका से कविता,"सीखो" तथा "चींटी" का वाचन अभ्यास करो।

- 3. **लेखन**
 - सुलेख एक पतली सुलेख कॉपी बनाओ तथा साफ़ एवं सुंदर अक्षरों में अपनी हिंदी पाठ्य-पुस्तिका से कविता ("सीखो", "चींटी", तथा "बया हमारी चिड़िया रानी") को दो-दो बार लिखो।
 - वर्तनी अपनी हिंदी पाठ्य-पुस्तिका के पाठों से 'स' और 'प' वर्ण वाले 20-20 शब्द ढूँढ़कर लिखो(हिंदी कॉपी में)।
 - रचनात्मक लेखन दिए गए चित्र को देखकर दस वाक्य लिखो (हिंदी कॉपी में)।



<u>SUBJECT – EVS</u>

- 1. **"A family that eats together stays together"**. Make a poster of this quote and hang it in your home.
- If you have to draw a family tree who will be at the top? And whose picture will be at the bottom? Try to make one family tree for your family. (On A4 Sheet)
- **3.** What games do you play with your elders and other members of your family? Write the names of these games. **(In your Notebook)**

SUBJECT: MATHS

Instructions to the Parents

- a. Help your ward in learning.
- b. Provide learning materials.
- c. Provide the print out of this worksheet
- d. Monitor your ward's study.
 - > MDP should be prepare separately in a file.
 - > It should cover all Scholastic and Co-scholastic areas like English, Hindi,

Maths, EVS, Art etc

- > Each and every student prepares the MDP according to their group.
- ➢ Group leader will compile them.
- > Time to time teacher will guide you
- 1. Read, write and learn tables from 2 to 12
- 2. Write numbers from 100 to 1.(Backward numbers)
- 3. Make model of Toys with different shapes as given in the book.(page no.10)
- 4. Worksheet

1. Fill in the k	olanks:			
a. A cube is a	a special typ	e of	(cylinder/cuboid)	
b. A	has a poin	ted top. (c	cone/sphere)	
2. True or Fal	se:			
a. A cylinder	has curved	edges. (Tru	ue/False)	
b. A sphere ł	has flat faces	s. (True/Fal	lse)	
3. Which sha	pe has no e	dges?		
a. Cube	e b) Cone	c) Sphe	ere d) Cuboid	
4. How many	v cylinders a	re used in	Devika's toy engine?	
a. 1	b) 2	c) 3	d) 4	
5. Match the	following s	hapes with	n their characteristics:	
a. Cube		i) Has a	a circular base	
b. Cylin	der	ii)	Has all sides equal	
c. Cone	5	iii) Has	rectangular faces	
d. Cubo	oid	iv) Has a	a pointed top	
6. Match the	following o	bjects wit	h their shapes:	
a. Dice		i) Cylinc	der	
b. Ice cr	ream cone	ii)	Sphere	
c. Can		ii	i) Cube	
d. Ball		iv) Cone	5	
7. What are t	the three ma	ain parts o	of a 3D shape? Name them.	
Ans				
8. True or Fal	se:			
a. A cube has	s 6 faces, 8 d	corners, an	d 12 edges. (True/False)	
b. A cylinder	has both fla	t and curve	ed surfaces. (True/False)	
c. A cone has	s a circular b	ase and a	pointed top. (True/False)	
d. A sphere h	as flat faces	. (True/Fals	se)	
9. If Jaya's ro	cket has 2 c	ubes, 3 cu	boids, 1 cone, and 2 cylinders, how man	y
shapes are us	sed in total	?		
a. 6	b) 7	c) 8	d) 9	

10. Draw the objects and name the following 3D shapes: a. Cube b. Cylinder c. Cone

11. Draw the picture of a boat, kite, flower etc. with the help of basic 2 D shapes.

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SUBJECT: ART

- 1. A Painting on the Topics.-
 - -Yoga for all.
 - ➢ Size of paper- A3
 - Colour- Any colour you can use. (water colour, Dry colour, pencil colour etc.)
- 2. Card making
 - A. Welcome card
 - B. Birthday card

Material required-

- Ivory sheet -1
- Colour A4 sheet- 2 different colours
- Sketch pen
- ➤ Fabric glue
- 8 cards to make- (4 welcome card & 4 birthday card)

-The best will be awarded with prize.

SUBJECT: PERFORMIMG ART (MUSIC)

1.राष्ट गान में किन किन प्रदेशों का वर्णन है ?

2. कौन सा एक प्रदेश अब हमारे देश में नहीं है ?

3.A 4 size चार्ट पेपर में भारत का मानचित्र बनाकर उसमें इन प्रदेशों को दिखाएं

KENDRIYA VIDYALAYA CCL, RANCHI Summer Holidays Homework(2025-26) Class-IV

SUBJECT- – HINDI

1. **पठन**

सभी बच्चे एक कहानी की किताब(**चम्पक, अकबर-बीरबल, तेनालीराम, पंचतंत्र या अपनी** पसंद का कोई भी) खरीदेंगे। रोज एक कहानी पढ़े तथा इसे अपने शब्दों में घर के सदस्यों को सुनाएँ।

2. वाचन

अपनी हिंदी पाठ्य-पुस्तिका से कविता**,"चिड़िया का गीत "** तथा **"नीम"** का वाचन अभ्यास करो।

3. **लेखन**

सुलेख - एक पतली सुलेख कॉपी बनाओ तथा साफ़ एवं सुंदर अक्षरों में अपनी हिंदी पाठ्य-पुस्तिका से कविता (**"चिड़िया का गीत " तथा "नीम"**) को दो-दो बार लिखो| **वर्तनी -** अपनी हिंदी पाठ्य-पुस्तिका के पाठों से **'उ**' और **'ऊ'** की मात्रा वाले 20-20 शब्द ढूँढ़कर लिखो(**हिंदी कॉपी में**)|

रचनात्मक लेखन - दिए गए चित्र को देखकर दस वाक्य लिखो (हिंदी कॉपी में)|



SUBJECT- ENGLISH

Instructions to the Parents

- a. Help your ward in learning.
- b. Provide a story book and other learning materials.
- c. Provide the print out of this worksheet
- d. Monitor your ward's study.
 - > MDP should be prepare separately in a file.
 - > It should cover all Scholastic and Co-scholastic areas like English, Hindi, Maths, EVS, Art etc
 - > Each and every student prepares the MDP according to their group.
 - > Group leader will compile them.
 - > Time to time teacher will guide you

1. Read a story from the story book and record your voice. Practice daily. And send the best recording to the teacher.

2. Learn a new skill and write a paragraph about it.

3. Learn 5 new words daily

4. Picture reading

Compare these two pictures and find 5 to 7 differences between them.

<u> PICTURE – A</u>

<u> PICTURE – B</u>





6. Colour the words that have short I sound in the picture in orange and colour any word that does not have the short i sound in blue



7. Complete the story and colour the picture.

STORY COMPLETION

SOUR GRAPES					
hot	forest	thirsty	bunch	hanging	
риск	nign	grapes	sour	walked	

One day, Bholu, the fox, was walking through the He was and hungry. Suddenly, he looked up and saw a of juicy grapes from a tree. Bholu jumped up to them, but he could not reach the bunch. He tried again and again. The grapes were too...... for him. Bholu looked at the for the last time and said, "These grapes are" He away without looking back.



8. Circle the name of flower from each row.

- (a) Fig Coconut Tulsi Jasmine
- (b) Rose Olive Mango Pineapple
- (c) Pine Deodar Grapes Mogra
- (d) Lily Banyan Brinjal Eucalyptus

9. Look at the picture and complete the text with the words given.

My bedroom



Look at the picture. Complete the text with the missing words.

ls	are	blue	next to	isn't
		between	big	
This is r	ny bedro	om.		
lt's		The walls a	ire	·
There _	a	bed. The bed is	the	window.
There _	1	wo mats.		
There's	a mat		_ the car and t	he bed.
There _		a lamp or a	۲V. But there is	a basketball.
Look at	the pictu	ire and answer		
Is there	a TV?		_	
Is there	a mirror	?		
Is there	a wardr	obe?		
Are the	re toys?			
Where'	s the gre	y car?		

 10. Make two words from each sound.

 a. st

 b. ch

 c. gl

 d. pl

 e. pr

 f. cr

 g. fr

 h. sh

 i. br

 j. ou

11. Separate the following words.

(a) Courtyard =	+
(b) Bridegroom =	
(c) Cupcake =	+
(d) Keyboard =	+
(e) Homework =	+
(f) Goldfish =	+

12. Use the compound words given below to complete the following sentences.

GrasshopperupstreamraindropsbackpacksFootballhomeworkforecastunderground(i) The mountaineers carriedfull of foodstuff.(ii) Thehid in the grass when it saw a frog coming.(iii) Thetoday is that it will be sunny.(iv) The student went to play without finishing his(v) The trouts swimin the rushing waters.(vi) The moles had dug their holes(vii) Our team won thematch.

13. List any three advantages of teamwork.	
(i)	
(ii)	
(iii)	

14. List the name of the games played in a team and paste their picture.

SUBJECT- MATH'S

1. Draw two colourful wall and floor pattern.

2. Find the height of your family members with measuring tape and write their heights. Find the difference between the tallest and shortest person's height in your family.

- 3. Learn and write Tables from 2 to 20.
- 4. Make a 3D shapes model.
- 5. Make 3 Designs with the help of different 2D shapes using colorful papers.
- 6. Write the names of the angles:
 - a. 15º
 - b. 65°
 - c. 95°
 - d. 180°
 - e. 105°
 - f. 67°
 - g. 35°
 - h. 90°

Sub-EVS (TWAU)

- 1. Locate **10 countries** in the world Political Map.
- 2. Make a drawing/Poster on Water Conservation.
- 3. Write names of some persons around your neighborhood who help you.
- 4. Write names of 5 plants and 5 animals which are useful to us.
- 5. Collect different types of leaves and paste it in your copy; write the names of the leaves.

Note- Make separate notebooks for holiday homework.

SUBJECT: ART

- 1. A Painting on the Topics.-
 - -Yoga for all.
 - ➢ Size of paper- A3
 - > Colour- Any colour you can use. (water colour, Dry colour, pencil colour etc.)
- 2. Card making
 - A. Welcome card
 - B. Birthday card

Material required-

- Ivory sheet -1
- Colour A4 sheet- 2 different colours
- Sketch pen
- ➢ Fabric glue
- 8 cards to make- (4 welcome card & 4 birthday card)

-The best will be awarded with prize.

SUBJECT: PERFORMIMG ART (MUSIC)

- 1. राजस्थानी गीत 'चला चला रे डलबरिया"....गीत का स्वर अभ्यास करें.
- 2. राजस्थान में किन किन वाद्य यंत्रों का उपयोग किया जाता है ? उनके नाम लिखें.
- 3..किसी एक वाद्य यंत्र का चित्र बना कर(A-4 size चार्ट पेपर) उसकी दो विशेषताएं बताएं.

KENDRIYA VIDYALAYA CCL, RANCHI Summer Holidays Homework(2025-26) Class-IV

SUBJECT- – HINDI

1. **पठन**

सभी बच्चे एक कहानी की किताब(**चम्पक, अकबर-बीरबल, तेनालीराम, पंचतंत्र या अपनी** पसंद का कोई भी) खरीदेंगे। रोज एक कहानी पढ़े तथा इसे अपने शब्दों में घर के सदस्यों को सुनाएँ।

2. वाचन

अपनी हिंदी पाठ्य-पुस्तिका से कविता**,"चिड़िया का गीत "** तथा **"नीम"** का वाचन अभ्यास करो।

3. **लेखन**

सुलेख - एक पतली सुलेख कॉपी बनाओ तथा साफ़ एवं सुंदर अक्षरों में अपनी हिंदी पाठ्य-पुस्तिका से कविता (**"चिड़िया का गीत " तथा "नीम"**) को दो-दो बार लिखो| **वर्तनी -** अपनी हिंदी पाठ्य-पुस्तिका के पाठों से **'उ**' और **'ऊ'** की मात्रा वाले 20-20 शब्द ढूँढ़कर लिखो(**हिंदी कॉपी में**)|

रचनात्मक लेखन - दिए गए चित्र को देखकर दस वाक्य लिखो (हिंदी कॉपी में)|



SUBJECT- ENGLISH

Instructions to the Parents

- a. Help your ward in learning.
- b. Provide a story book and other learning materials.
- c. Provide the print out of this worksheet
- d. Monitor your ward's study.
 - > MDP should be prepare separately in a file.
 - > It should cover all Scholastic and Co-scholastic areas like English, Hindi, Maths, EVS, Art etc
 - > Each and every student prepares the MDP according to their group.
 - > Group leader will compile them.
 - > Time to time teacher will guide you

1. Read a story from the story book and record your voice. Practice daily. And send the best recording to the teacher.

2. Learn a new skill and write a paragraph about it.

3. Learn 5 new words daily

4. Picture reading

Compare these two pictures and find 5 to 7 differences between them.

<u> PICTURE – A</u>

<u> PICTURE – B</u>





6. Colour the words that have short I sound in the picture in orange and colour any word that does not have the short i sound in blue



7. Complete the story and colour the picture.

STORY COMPLETION

SOUR GRAPES					
hot	forest	thirsty	bunch	hanging	
риск	nign	grapes	sour	walked	

One day, Bholu, the fox, was walking through the He was and hungry. Suddenly, he looked up and saw a of juicy grapes from a tree. Bholu jumped up to them, but he could not reach the bunch. He tried again and again. The grapes were too...... for him. Bholu looked at the for the last time and said, "These grapes are" He away without looking back.



8. Circle the name of flower from each row.

- (a) Fig Coconut Tulsi Jasmine
- (b) Rose Olive Mango Pineapple
- (c) Pine Deodar Grapes Mogra
- (d) Lily Banyan Brinjal Eucalyptus

9. Look at the picture and complete the text with the words given.

My bedroom



Look at the picture. Complete the text with the missing words.

ls	are	blue	next to	isn't
		between	big	
This is r	ny bedro	om.		
lt's		The walls a	ire	·
There _	a	bed. The bed is	the	window.
There _	1	wo mats.		
There's	a mat		_ the car and t	he bed.
There _		a lamp or a	۲V. But there is	a basketball.
Look at	the pictu	ire and answer		
Is there	a TV?		_	
Is there	a mirror	?		
Is there	a wardr	obe?		
Are the	re toys?			
Where'	s the gre	y car?		

 10. Make two words from each sound.

 a. st

 b. ch

 c. gl

 d. pl

 e. pr

 f. cr

 g. fr

 h. sh

 i. br

 j. ou

11. Separate the following words.

(a) Courtyard =	+
(b) Bridegroom =	
(c) Cupcake =	+
(d) Keyboard =	+
(e) Homework =	+
(f) Goldfish =	+

12. Use the compound words given below to complete the following sentences.

GrasshopperupstreamraindropsbackpacksFootballhomeworkforecastunderground(i) The mountaineers carriedfull of foodstuff.(ii) Thehid in the grass when it saw a frog coming.(iii) Thetoday is that it will be sunny.(iv) The student went to play without finishing his(v) The trouts swimin the rushing waters.(vi) The moles had dug their holes(vii) Our team won thematch.

13. List any three advantages of teamwork.	
(i)	
(ii)	
(iii)	

14. List the name of the games played in a team and paste their picture.

SUBJECT- MATH'S

1. Draw two colourful wall and floor pattern.

2. Find the height of your family members with measuring tape and write their heights. Find the difference between the tallest and shortest person's height in your family.

- 3. Learn and write Tables from 2 to 20.
- 4. Make a 3D shapes model.
- 5. Make 3 Designs with the help of different 2D shapes using colorful papers.
- 6. Write the names of the angles:
 - a. 15º
 - b. 65°
 - c. 95°
 - d. 180°
 - e. 105°
 - f. 67°
 - g. 35°
 - h. 90°

Sub-EVS (TWAU)

- 1. Locate **10 countries** in the world Political Map.
- 2. Make a drawing/Poster on Water Conservation.
- 3. Write names of some persons around your neighborhood who help you.
- 4. Write names of 5 plants and 5 animals which are useful to us.
- 5. Collect different types of leaves and paste it in your copy; write the names of the leaves.

Note- Make separate notebooks for holiday homework.

SUBJECT: ART

- 1. A Painting on the Topics.-
 - -Yoga for all.
 - ➢ Size of paper- A3
 - > Colour- Any colour you can use. (water colour, Dry colour, pencil colour etc.)
- 2. Card making
 - A. Welcome card
 - B. Birthday card

Material required-

- Ivory sheet -1
- Colour A4 sheet- 2 different colours
- Sketch pen
- ➢ Fabric glue
- 8 cards to make- (4 welcome card & 4 birthday card)

-The best will be awarded with prize.

SUBJECT: PERFORMIMG ART (MUSIC)

- 1. राजस्थानी गीत 'चला चला रे डलबरिया"....गीत का स्वर अभ्यास करें.
- 2. राजस्थान में किन किन वाद्य यंत्रों का उपयोग किया जाता है ? उनके नाम लिखें.
- 3..किसी एक वाद्य यंत्र का चित्र बना कर(A-4 size चार्ट पेपर) उसकी दो विशेषताएं बताएं.

CLASS VI

KENDRIYA VIDYALAYA CCL RANCHI

Session 2025-26 (May 09 to June 17)

CLASS VI SUMMER VACATION HW :

- 1. What is the moral of the story ? (A Bottle of Dew)
- 2. How did Rama Natha collect five litres of milk ?
- 3. What did the sage tell about the magic potion ?
- 4. How did Rama Natha and Madhumati create wealth ?
- 5. What did Rama Natha do to the fields ?
- 6. Vocabulary : Write 10 difficult words with meaning from Chapter 1.
- 7. What attracted the Fox towards Raven ?
- 8. How did the Fox snatch a morsel of food ?
- 9. What made the Raven open his mouth ?
- 10. What is the lesson that we get from the poem ?
- 11. You are the principal of Happy Learning School ? Write a notice informing all students about the upcoming summer vacation ?
- 12. Write five sentences of simple present tense.
- 13. Write 30 verbs in V1, V2 and V3 form.
- 14. What is alliteration ? Give some examples from text-book.NB : All work will be done in class notebook.Date of correction : 18-20 June, 2025

केंद्रीय विद्यालय (सीसीएल) राँची

छठी कक्षा के लिए हिंदी का ग्रीष्मकालीन गृहकार्य

1.व्याकरण अभ्यास

- संज्ञा और विशेषण:
 - 5 वाक्य लिखें और उनमें संज्ञा तथा विशेषण को पहचानें।
 उदाहरण: यह संदर फूल है। (फूल संज्ञा, संदर विशेषण)
- क्रिया:
 - पाँच वाक्य लिखें जिनमें अलग-अलग प्रकार की क्रियाएँ हों।
 उदाहरण: बच्चा खेल रहा है। (खेलना क्रिया)
- पर्यायवाची और विलोम शब्द:
 - 10 पर्यायवाची और 10 विलोम शब्द लिखें।

2.कहानी लेखन

- "मेरी छुट्टियों का अनुभव" या "एक दिन का हीरो" विषय पर एक कहानी (100-150 शब्दों में) लिखें।
- कहानी में चित्र बनाकर रंग भरें।

3.कविता पाठ

- निम्नलिखित में से किसी एक कविता को याद करें और उसे अपनी कॉपी में लिखें:
- मातृभूमि , चेतक की वीरता , मैया मैं नहीं माखन खायो (पद)

4. रचनात्मक गतिविधियाँ

- स्लोगन लिखें:
 - पर्यावरण बचाओ, जल बचाओ, या स्वच्छ भारत पर 2-3 स्लोगन बनाएं।
- चित्र वर्णन:
 - एक सुंदर चित्र बनाएं और उसका वर्णन (50 शब्दों में) करें।
- पत्र लेखनः
 - अपने मित्र को छुट्टियों में बिताए समय के बारे में पत्र लिखें।

7.सांस्कृतिक ज्ञान

- निम्नलिखित विषयों में से किसी एक पर 5-6 वाक्य लिखें:
 - हिंदी दिवस का महत्व।
 - प्रेमचंद जी के बारे में।
 - 。 एक भारतीय त्योहार (जैसे दीपावली या होली)।
KENDRIYA VIDYALAYA C.C.L, RANCHI

HOLIDAY HOMEWORK(2025-26)

STANDARD:VI

SUBJECT: MATHEMATICS

- Learn table till 19 (Dodging table)
- Make any figure with three acute angles, one right angle and two obtuse angles.
- Draw the letter 'M' such that the angles on the sides are 40° each and the angle in the middle is 60°.
- Draw the letter 'Y' such that the three angles formed are 150 $^\circ$, 60 $^\circ$ and 150 $^\circ$.
- The Ashoka Chakra has 24 spokes. What is the degree measure of the angle between two spokes next to each other? What is the largest acute angle formed between two spokes?



• <u>Puzzle</u>: I am an acute angle. If you double my measure, you get an acute angle. If you triple my measure, you will get an acute angle again. If you quadruple (four times) my measure, you will get an acute angle yet again! But if you multiply my measure by 5, you will get an obtuse angle measure. What are the possibilities

for my measure?

CARTOON MAKING(ART INTEGRATED)

Take A-4 Size coloured sheet. Make cartoons of first 10 whole numbers. Colour Yellow - Smallest Number Colour Red - Greatest Numbers Colour Blue - Number Divisible by 2 and 3 Colour Green - First odd number Colour Pink - Number multiple of 4

- Make a maths working model
- Multi Disciplinary Project : Complete your MDP work which is assigned in the class.
- Practice chapter 1 and 2

SUMMER VACATION HOLIDAY HOMEWORK CURIOSITY

	CHAPTER :1. THE WONDERFUL WORLD OF SCIENCE				
S. NO.	QUESTION	POINT VALUE			
	SECTION- A MCQ				
1.	Which of the following is not a part of water cycle?	1			
	a. Evaporation b. Condensation				
	c. Photosynthesis d. Precipitation				
2.	What do plants primarily use to make their food?	1			
	a. Soil b. Water c. Sunlight d. Air				
3.	What is science?	1			
	a. A type of art b. A way to study the natural world				
	c. A form of entertainment d. A language				
4.	What is the primary purpose of the roots of a plant?	1			
	a. To absorb water and nutrients.				
	b. To produce food through photosynthesis.				
	c. To attract insects				
5	d. To support the plant's structure	1			
5	which process involves making observations and forming a hypothesis?	1			
	a. Experimentation D. Engineering	•			
6	Le which port of the plant is known as kitchen of the plant?	1			
0	a Poots b Stem c Flowers d Leaves	1			
7	a. Roots b. Stelli c. Flowers d. Leaves What happens during condensation in the water cycle?	1			
/	a. Water turns into vapour				
	b. Water vapour turns into liquid				
	c. Liquid water turns into ice				
	d. Ice turns into water				
8	What is the primary source of energy for plants?	1			
	a. Water b. Soil c. Sunlight d. Air				
9	Which of the following processes involves the changing of water into	1			
	water vapour?				
	a. Condensation b. Evaporation				
	c. Precipitation d. Collection				
10	Which of these is a property of liquids?	1			
	a. They have a fixed shape				
	b. They take the shape of their container				
	d They cannot flow				
	ASSERTION AND REASON (1MARK)				
	Ouestion No. 11 to 15 consist of two statements – Assertion (A) and				
	Reason (R). Answer these questions selecting the appropriate option				
	given below:				
	(a) Both the Assertion and the Reason are correct and the Reason is				
	the correct explanation of the Assertion				
	(b) Assertion and the Reason are correct but the reason is not the				
	correct explanation of Assertion				
	(c) Assertion is true but the Reason is false				
1	(u) The statement of the Assertion is faise but the Keason is true.				

11	Assertion : All living things need air to survive. Reason : Air provides oxygen, which is essential for respiration in most	1
	living organisms.	
12	Assertion: Water is a good solvent.	1
	Reason: Water can dissolve a wide variety of substances. Both assertion	
	and reasoning are correct, and the reasoning is the correct explanation for	
	the assertion.	
13	Assertion: The earth orbits around the sun	1
	Reason : The sun's gravitational pull keeps the earth in its orbit.	
14	Assertion: Plants use sunlight to make food.	1
	Reason : Sunlight provides the energy needed for photosynthesis in plants.	
15	Assertion: The moon has its own light.	1
	Reason : The moon is made of shiny material that reflects sunlight.	

CHAPTER:2. DIVERSITY IN THE LIVING WORLD

S. NO .	QUESTION		
	MCO (1 mark)	VALUE	
1	Which type of the plant is known for its ability to survive in very dry conditions?	1	
2	a. Aquatic plants b. Cactus c. Algae d.Kose Which of the following is not a green plant? a. Cactus b. Rose c. Mushroom d.Hibiscus	1	
3	What is the main characteristic of flowering plants?a. They have seeds but no flowers.b. They produce flowers and seeds.c. They have only leaves.d. They do not have roots.	1	
4	Which type of plant has a woody stem and can grow to be very tall?a. Herbb. Shrubc. Treed. Creeper	1	
5	 Why might an increase in herbivore populations affect plant communities in an area? a. It would decrease the number of predators b. It would reduce the competition among plant species c. It would lead to overgrazing and reduced plant growth d. It would improve soil fertility 	1	
6	If you are designing a habitat for lion in a zoo, what kind of environment should you provide to match its natural habitat? a. A densely forested area with grass and few trees b. A dry, open area with grass and few trees c. A wetland area with lots of mud d. A cold, snowy environment	1	
7	You are observing a frog in a pond. Which of the following behaviours would indicate that it is an amphibian? a. It only stays in the water and does not leave b. It alternates between swimming in the pond and basking on rocks near the water c. It primarily lives I burrow underground d. It flies from tree to tree	1	
8	Which plant type usually grows along the ground a. Herb b. Creeper c. Tree d. Shrub	1	

9	Which of the following animals is an example of an omnivore?	1		
10	a. Cow b. Lion c. Bear d. Eagle			
10	Which organ helps the fish to breathe in water?	1		
	a. Gills b. tail c. bone d. fins			
	ASSERTION AND REASON (1 mark)			
	Question No. 11 to 15 consist of two statements – Assertion (A) and			
	Reason (R). Answer these questions selecting the appropriate			
	option given below:			
	(a) Both the Assertion and the Reason are correct and the Reason is			
	the correct explanation of the Assertion			
	(b) Assertion and the Reason are correct but the reason is not the			
	correct explanation of Assertion			
	(c) Assertion is true but the Reason is false			
	(d) The statement of the Assertion is false but the Reason is true.			
	(a) Hihiscus leaf with (b) Banana leaf with (c) Grass leaf with			
	reticulate venation parallel venation parallel venation			
11	Assortion: The pattern of voing in a loof is called venction	1		
11	Reson: Different types of venation help plants to transport water and	1		
	nutrients efficiently			
12	Assertion: Venation refers to the arrangement of veins in a leaf	1		
	Reason : Venation patterns are important for the leaf's ability to perform	-		
	photosynthesis. Which of the following option is correct?			
13	Assertion: Parallel venation is common in monocot plants like grasses 1			
	and lilies.			
	Reason: In parallel venation, all the veins run parallel to each other from			
	the base to the tip of the leaf.			
14	Assertion: Reticulate venation is typically found in dicot plants.	1		
	Reason: In reticulate venation, the veins from a network-like pattern			
15	Accortion. In percellal venetion, accordant visite and not present in a	1		
13	Assertion: in paramet venation, secondary veins are not present in a well defined pattern	1		
	Reason: Parallel venation is characterised by veins that run parallel to			
	each other without forming a network.			
	CHAPTER:3. MINDFUL EATING: A PATH TO A HEALTHY BOD	Y		
S No	QUESTION	POINT		
		VALUE		
	SECTION- A (MULTIPLE CHOICE QUESTIONS)			
1	Which one of the following is not a source of fat	1		
	a) Nuts b) walnuts c) Rice d) Rutter	1		
2	Test used to identify the presence of carbohydrates in food is called	1		
	a) Sulphur test, b) Iodine test, c) Oxygen test, d) Rice test	1		
3	Identify the correct statement from the following	1		
	a) Junk food is healthy	•		
	b) People across India eat same kind of food			
	c) Carbohydrates and fats provide energy.			
	d) Culinary practices are same throughout the timeline.			

4	Deficiency of vitamin A causes the following disease				
	a) Loss of vision. b) Rickets. c) Scurvy. d) Anaemia				
5	Which one of the following diseases is caused due to mineral	1			
	deficiency				
	a) Beri-Beri. b) Goitre. c)Malaria. d) Scurvy				
6	Which of the following statements is not correct	1			
	a) Choice of food vary according to cultivation of crops, climate, taste				
	preference, culture and tradition of the region				
	b) Balance diet provides all nutrients in equal quantities				
	c) we should never waste food.				
	d) Deficiency of one or more nutrients in our diet for long period leads				
	to deficiency diseases.				
7	Swollen neck is a symptom for which of the following disease	1			
	a) Scurvy. b) Anaemia. c) Goitre. d) Beri-Beri				
8	During protein test, if protein is present in the food sample it will	1			
	change into the following colour.				
	a) Blue. b) blue-black. c) violet. d) purple				
9.	Which one of the following statements is not true	1			
	a) Vitamin A helps body to fight diseases				
	b) Calcium keeps bones and teeth healthy				
	c) Iron is an important component of the blood				
	d) Deficiency of vitamin D cause Rickets				
10	0 Which one of the following is a source of fat				
	a) Rice. b) wheat c) Ghee. d) Soyabean				
11	Assertion: carbohydrates give energy to the body	1			
	Reason: All starches are carbohydrates				
12	Assertion: we obtain minerals from plants and animals only.	1			
	Reason, Minerals help in maintaining various bodily functions				
13.	Assertion: Millets are good source of vitamins, minerals like iron and	1			
	calcium and dietary fibre as well.				
	Reason: Millets are called Nutri-cereals.				
14	Assertion: Deficiency of one or more nutrients in our diet causes	1			
	deficiency diseases				
	Reason: Deficiency diseases can be prevented by taking balanced diet				
15	Assertion: Swelling of neck is a symptom of goitre	1			
	Reason: Consumption of Iodised salt causes Goitre.				

Kendriya Vidyalaya C. C. L Ranchi Summer Vacation Homework Social Science Class VI 2025-26

- 1. Explain the Following terms-
 - (i) Island
 - (ii) Longitude
 - (iii) Montane Forest
 - (iv) Latitude
- 2. Explain the Role of community in keeping our Environment clean.
- 3. Locate the following on the map of India.
 - (I) Lothal
 - (II) The Ganga River
 - (III) Kolkata
 - (iv) New Delhi
 - (v) Tinsukia
- 4. Locate the following on the map of the World.
 - (i) India
 - (II) Indian ocean
 - (III) Africa
 - (iv) Australia
 - (v) Ganga & Brahmaputra River Plain
- 5. Explain different Landorms.
- 6. Make 3-3 MCQ questions with Answer from the chapters-
- (a) Locating Places on the Earth
- (b) Oceans and Continents
- (d) Landforms and life
- 7. EBSB Activity- Make a project on Goa (Pairing state for Ranchi Region) about history ,Climate, Location , Social , Economic and Cultural life. (Note Minimum 12 Pages)

केंद्रीय विद्यालय (सीसीएल) राँची

संस्कृत गृहकार्यम् (Sanskrit Homework)

कक्षा: ६ (Class 6)

ग्रीष्मावकाशगृहकार्यम् (Summer Holiday Homework)

- 1. शब्दकोशः (Vocabulary)
 - 50 संस्कृतशब्दान् लिखत तेषां अर्थं च हिन्दी/आङ्ग्लभाषायां लिखत।
 (Write 50 Sanskrit words and their meanings in Hindi/English.)
- 2. अनुच्छेदलेखनम् (Paragraph Writing)
 - "मम ग्रीष्मावकाशः" इति विषये संस्कृते पञ्चवाक्यानि लिखत। (Write 5 sentences in Sanskrit on "My Summer Vacation.")

3. श्लोकः अभ्यासः (Shloka Practice)

• निम्नलिखित श्लोकं कण्ठस्थं कुरुत तथा अर्थ लिखत -

"अयं निजः परो वेति गणना लघुचेतसाम्।

उदारचरितानां तु वसुधैव कुटुम्बकम्॥"

4. क्रियापदानि (Verbs)

पञ्च क्रियापदानि (धातवः) लिखत तेषां लट्-लृट्-लङ् लकारेषु रूपाणि लिखत। (Write 5 verbs and their forms in present, future, and past tenses.)



5. संस्कृत गणना

पञ्चाशत् (50) पर्यन्तं लिखित्वा स्मरणं कुर्यु: ।

संस्कृत में गिनती (Sanskrit Counting): 1 to 100

1. एकः	26. षड्विंशतिः	51. एकपञ्चाशत्	76. षट्सप्ततिः
2. द्वौ	27. सप्तविंशति:	52. द्विपञ्चाशत्	77. सप्तसप्ततिः
3. त्रयः	28. अष्टाविंशति:	53. त्रिपञ्चाशत्	78. अष्टसप्ततिः
4. चत्वारः	29. नवविंशति:	54. चतुःपञ्चाशत्	79. एकोनाशीतिः
5. पञ्च	30. त्रिंशत्	55. पञ्चपञ्चाशत्,	80. अशीतिः
6. षट्	31. एकत्रिंशत्	56. षट्पञ्चाशत्	81. एकाशीतिः
7. सप्त	32. द्वात्रिंशत्	57. सप्तपञ्चाशत्	82. द्वशीतिः
8. अष्ट	33. त्रयत्रिंशत्	58. अष्टपञ्चाशत्	83. त्र्यशीतिः
9. नव	34. चतुस्त्रिंशत्	59. एकोनषष्ठिः	84. चतुरशीतिः
10. दश	35. पञ्चत्रिंशत्	60. षष्ठिः	85. पञ्चाशीतिः
11. एकादश	36. षट्त्रिंशत्	61. एकषष्ठिः	86. षडशीतिः
12. द्वादश	37. सप्तत्रिंशत्	62. द्विषष्ठिः	87. सप्ताशीतिः
13. त्रयोदश	38. अष्टात्रिंशत्	63. त्रिषष्ठिः	88. अष्टाशीतिः
14. चतुर्दश	39. एकोनचत्वारिंशत्	64. चतुःषष्ठिः	89. एकोननवतिः
15. पञ्चदश	40. चत्वारिंशत्	65. पञ्चषष्ठिः	90. नवतिः
16. षोडश	41. एकचत्वारिंशत्	66. षट्षष्ठिः	91. एकनवतिः
17. सप्तदश	42. द्विचत्वारिंशत्	67. सप्तषष्ठिः	92. द्विनवतिः
18. अष्टादश	43. त्रिचत्वारिंशत्	68. अष्टषष्ठिः	93. त्रिनवतिः
19. नवदश	44. चतुश्चत्वारिंशत्,	69. एकोनसप्ततिः	94. चतुर्नवतिः
20. विंशति:	45. पञ्चचत्वारिंशत्	70. सप्ततिः	95. पञ्चनवतिः
21. एकाविंशति:	46. षट्चत्वारिंशत्	71. एकसप्ततिः	96. षण्णवतिः
22. द्वाविंशतिः	47. सप्तचत्वारिंशत्	72. द्विसप्ततिः	97. सप्तनवतिः
23. त्रयोविंशतिः	48. अष्टचत्वारिंशत्,	73. त्रिसप्ततिः	98. अष्टनवतिः
24. चतुर्विंशतिः	49. एकोनपञ्चाशत्	74. चतुःसप्ततिः	99. नवनवतिः
25. पञ्चविंशति:	50. पञ्चाशत् 🛛	75. पञ्चसप्ततिः	100. शतम्

KV CCL RANCHI

LIVRARY HOLIDAY HOME WORK

FOR CLASS VI TO VIII

- 1.WRITE STATE AND CAPITAL OF INDIA
- 2. WRITE 20 BOOKS AND AUTHORS
- 3.WRITE 20 COUNTRIES AND THEIRS CUURENCY
- 4 WRTITE NEW WORDS (100) AND THEIRS MEANING
- NOTE. ALL ABOVE ASSIGNMENTS WRITE IN LIBRARY COPY ONLY

KENDRIYA VIDYALAYA CCL RANCHI

HOLIDAY HOMEWORK (SUMMER VACATION)

Subject: Vocational Education (Class 6)

ACTIVITY NO. 1

Theme: My Mini Kitchen Garden Project

1. Set Up a Mini Kitchen Garden:

- Use any 3–5 recycled containers like old bottles, cans, pots, or trays.
- Fill them with soil and select easy-to-grow plants such as:
 - Coriander (dhania)
 - Fenugreek (methi)
 - Mint (pudina)
 - Tomato
 - Chili
 - Spinach (palak)

2. Plant the Seeds or Saplings:

- Sow the seeds and water them regularly.
- Place the containers in a sunny spot (balcony, window, rooftop, etc.).

3. Maintain a Weekly Garden Journal:

- For 4–6 weeks, students will write or draw:
 - Date of planting
 - Daily watering and sunlight record
 - Germination progress
 - Changes in plant size or leaves
 - Any insects or birds observed

4. Take Photographs (optional):

• Take weekly photos of your plants and stick them in the journal.

5. Eco-friendly Tips:

- Use kitchen waste as compost (banana peels, tea leaves, etc.).
- Avoid plastic containers where possible.

Submission Format:

- A handwritten/drawn garden journal or diary.
- 4–5 photos or drawings of the plants.
- 1 paragraph on "What I learned from my Kitchen Garden".

KENDRIYA VIDYALAYA, CCL, RAJENDRA NAGAR, RANCHI CLASS VI SUBJECT- PHYSICAL & HEALTH EDUCATION SUMMER VACATION HOME WORK

- 1. Aerobics Exercise practice and note down in home work copy.
- 2. Follow me , note down in home work copy.
- 3. Practice Rope skipping regular Morning and Evening.

CLASS VII

KENDRIYA VIDYALAYA CCL RANCHI SUMMER HOLIDAY HOME WORK CLASS VII SCIENCE (2025-2026)

Chapter 2 – Acids, Bases and Salt

Perform the following activities at home under supervision of elders and report them on activity notebook.

- 1. Red rose as an indicator.
- 2. Turmeric as an indicator.
- 3. Onion as olfactory indicator.
- 4. Collect a soil sample of your area and fi nd out whether it is acidic, basic, or neutral in nature.

Very Short Answer Questions:

- 1. Fill in the blanks:
- i. are sour in taste.Ans:
- ii. Bases are _____in taste.Ans:
- iii. _____ are soapy to touch.
- iv. ______ are used to determine if a solution is acid or base.
- **v.** Ant bite contains _____.
- vi. Vinegar contains
- vii. Lactic acid is present in _____.
- viii. Solution which does not change colour in presence of any indicator is considered to be
- ix. Oxalic acid is present in _____.
- **x.** Phenolphthalein turns pink in _____.
- Short Answer Questions:

- **2.** What is litmus? Explain its action.
- **3.** Explain the action of turmeric as an indicator.
- **4.** Explain the use of China rose as an indicator.

5. Explain the use of phenolphthalein as an indicator.

- **6.** What is neutralization?
- 7. Explain the uses of neutralization in daily life.
- **8.** What is acid rain?
- **9.** There are few solutions given. Compare the reactions to the use of litmus, turmeric and phenolphthalein as an indicator.

Lemon juice, Lime water, Milk of magnesia, Milk, Toothpaste Ans:

Solution	Litmus	Turmeric	Phenolphthale
			in
Lemon juice	Red	Yellow	Colourless
Lime water	Blue	Red	Pink
Milk magnesia of	Blue	Red	Pink
Milk	Red	Yellow	Colourless
Toothpaste	Blue	Red	Pink

10. Complete exercise questions of second chapter and be ready for test.

KENDRIYA VIDYALAYA CCL RANCHI

Session 2025-26 (May 09 to June 17)

CLASS VII SUMMER VACATION HW :

- 1. Vocabulary : Write 10 difficult words with meaning from Chapter 1.
- 2. You are the principal of Happy Learning School ? Write a notice informing all students about the upcoming summer vacation ?
- 3. Write five sentences of simple present tense.
- 4. Write 30 verbs in V1, V2 and V3 form.
- 5. What is alliteration ? Give some examples from text-book.
- 6. What is simile ? Give some examples.
- 7. Describe Jahnvi's struggle to get education.
- 8. How did the River help Jahnvi overcome her fear ?
- 9. Why did the teacher play an important role in Jahnvi's life?
- 10. What does the story teach us about gender equality in education ?
- 11. The poem teaches us that failures are stepping stones to success. Explain.
- 12. Write the opposite of the following words taken from the poem.
 - (a) Up
 (b) fast
 (c) glad
 (d) win
 (e) succeed
 NB : All work will be done in class notebook.
 Date of correction : 18-20 June, 2025

केंद्रीय विद्यालय (सीसीएल) राँची

कक्षा 7 के लिए हिंदी का ग्रीष्मकालीन गृहकार्य

1. शब्दावली अभ्यास

- पर्यायवाची शब्द: 10 शब्द लिखें (जैसे: सूर्य रवि, भान्)।
- विलोम शब्द: 10 शब्द लिखें (जैसे: अंधकार प्रकाश)।
- मुहावरे और उनके वाक्यः
 - 5 मुहावरे लिखें और उनका वाक्यों में प्रयोग करें।
 उदाहरण: नाक कटना (इज्जत जाना) परीक्षा में फेल होकर उसकी नाक कट गई।

3. रचनात्मक लेखन

- निम्नलिखित में से किसी एक विषय पर निबंध (150-200 शब्दों में) लिखें:
 - 。 मेरे सपनों का भारत।
 - पुस्तकें हमारी सच्ची मित्र।
 - 。 जल ही जीवन है।
- अपनी कहानी को सुंदर चित्रों से सजाएं।

4. पठन और लेखन

- कहानी लेखन:
 - "अगर मैं पक्षी होता" या "एक अद्भुत यात्रा" पर कहानी लिखें।
- कविता:
 - एक छोटी कविता लिखें जिसमें प्रकृति का वर्णन हो।

5. पाठ्यपुस्तक अभ्यास

- अपनी पाठ्यपुस्तक से एक पाठ पढ़ें और:
 - 。 पाठ का सारांश लिखें।
 - 。 5 कठिन शब्दों के अर्थ ढूंढें।

पाठ में आए प्रमुख पात्रों के बारे में लिखें।

6. रचनात्मक गतिविधियाँ

- चित्र वर्णन:
 - 。 एक सुंदर चित्र बनाएं और उसका वर्णन (50 शब्दों में) करें।
- संदेश लेखन:
 - पर्यावरण संरक्षण या स्वच्छता पर 2-3 स्लोगन लिखें।
- पात्र लेखन:
 - अपने माता-पिता को एक पत्र लिखें, जिसमें छुट्टियों में अपने अनुभवों का वर्णन करें।
- 7. सांस्कृतिक ज्ञान
 - निम्नलिखित में से किसी एक पर 5-6 वाक्य लिखें:
 - 。 "हिंदी भाषा का महत्व।"
 - 。 "महात्मा गांधी और उनकी सादगी।"
 - 。 "एक ऐसा त्योहार जो मुझे पसंद है।"

निर्देश

- सभी कार्य अपनी हिंदी कॉपी में करें।
- लेखन साफ-स्थरा और व्यवस्थित होना चाहिए।
- अपनी कॉपी को सजाने और आकर्षक बनाने की कोशिश करें।
- विद्यालय खुलने पर गृहकार्य प्रस्तृत करें।

KENDRIYA VIDYALAYA C.C.L, RANCHI

HOLIDAY HOMEWORK (2025-26)

STANDARD: VII

SUBJECT: MATHEMATICS

- Using all digits from 0 9 exactly once (the first digit cannot be 0) to create a 10-digit number, write the (a) Largest multiple of 5
 (b) Smallest even number
- A calculator has only '+10,000' and '+100' buttons. Write an expression describing the number of button clicks to be made for the following numbers:
- (a) 20,800 (b) 92,100 (c) 1,20,500 (d) 65,30,000 (e) 70,25,700

1. Read the following numbers in Indian place value notation and write their number names in both the Indian and American systems:

(a) 4050678 (b) 20022002 (c) 345000543 (d) 1020304050

- 2. Write the following numbers in place value notation:
- (a) One crore one lakh one thousand ten
- (b) One billion one million one thousand one
- (c) Ten crore twenty lakh thirty thousand forty
- (d) Nine billion eighty million seven hundred thousand six hundred
- 3. Compare and write '<', '>' or '=':
- (a) 30 thousand _____ 3 lakhs
- (b) 500 lakhs _____ 5 million
- (c) 800 thousand _____ 8 million
- (d) 640 crore _____ 60 billion
 - Make a math working model
 - Learn table till 19 .(Dodging Table)
 - Multi Disciplinary Project : Complete your MDP work which is assigned in the class.
 - <u>Activity</u>: To verify the sum of angles of a quadrilateral is 360°.

केंद्रीय विद्यालय (सीसीएल) राँची

सप्तमकक्षा: संस्कृत-गृहकार्य

- शब्दरूपाणि अभ्यासः (Practice Declensions):
 निम्नलिखित शब्दानां शब्दरूपाणि लिखत -
 - 。 बालकः , पुस्तकम् ,नदी , रामः
- 2. धातुरूपाणि अभ्यासः (Practice Verb Conjugations):

निम्नलिखित धातूनां रूपाणि लृट, लङ्ग, लट्लकारे लिखत -

- 。 पठ् (पठति) ,गम् (गच्छति) , खाद् (खादति) , लिख् (लिखति)
- लघु-कथा लेखनम् (Short Story Writing): संस्कृतभाषायां एकां लघु-कथाम् लिखत। विषयः - "मित्रस्य साहाय्यम्"। (संस्कृत भाषा में एक लघुकथा लिखें)
- चित्रं वर्णयत (Picture Description):
 एकं सरलचित्रं अवलोक्य संस्कृतभाषायां वर्णनं लिखत। (उदा. गृहे, उद्याने, विद्यालये वा।)

(एक चित्र बनाकर संस्कृत भाषा में उसका वर्णन करें)

- मंवादलेखनम् (Dialogue Writing):
 मित्रयोः वा शिक्षक-छात्रयोः संवादं संस्कृतभाषायां लिखत।
- 6. पठनकार्यं (Reading Assignment):
 - "पञ्चतन्त्रस्य" एकां कथाम् पठत।
 - कथायाः सारं संस्कृतभाषायां लिखत।

Kendriya Vidyalaya C. C. L Ranchi Summer Vacation Homework Class VII 2025-26

1. Make 4-4 MCQ questions with Answer from the chapters-

(a)Geographical Diversity of India - (Chapter 1)

(b) New Beginnings - Cities and States- (Chapter- 4)

(c)From the Rulers to the Ruled : Types of Government (Chapter -9)

2. What do you mean by Regional Language ? Explain its importance.

- 3. Explain the life in Desert. How it different from life in the plain area?
- 4. Locate the following on the map of India.
 - (I) The Cold Desert Ladakh
 - (II) Odisha
 - (III) The Great Indian Desert Thar
 - (IV) Pune
 - (v) Ranchi

5. Locate the following on the map of the World.

(i) Atlantic Ocean

- (II) Indian ocean
- (III) Africa
- (iv) Australia
- (v) Ganga & Brahmaputra River Plain

6. EBSB Activity- Make a project on Goa (Pairing state for Ranchi Region) about history ,Climate, Location , Social , Economic and Cultural life. (Note Minimum 12 Pages)

KENDRIYA VIDYALAYA CCL RANCHI

HOLIDAY HOMEWORK (SUMMER VACATION)

Subject: Vocational Education (Class 7)

ACTIVITY NO. 1

Theme: My Mini Kitchen Garden (plant nursery)Project

1. Set Up a Mini Kitchen Garden:

- Use any 3–5 recycled containers like old bottles, cans, pots, or trays.
- Fill them with soil and select easy-to-grow plants such as:
 - Coriander (dhania)
 - Fenugreek (methi)
 - Mint (pudina)
 - Tomato
 - Chili
 - Spinach (palak)

2. Plant the Seeds or Saplings:

- Sow the seeds and water them regularly.
- Place the containers in a sunny spot (balcony, window, rooftop, etc.).

3. Maintain a Weekly Garden Journal:

- For 4–6 weeks, students will write or draw:
 - Date of planting
 - Daily watering and sunlight record
 - Germination progress
 - Changes in plant size or leaves
 - Any insects or birds observed

4. Take Photographs (optional):

• Take weekly photos of your plants and stick them in the journal.

5. Eco-friendly Tips:

- Use kitchen waste as compost (banana peels, tea leaves, etc.).
- Avoid plastic containers where possible.

Submission Format:

- A handwritten/drawn garden journal or diary.
- 4–5 photos or drawings of the plants.
- 1 paragraph on "What I learned from my Kitchen Garden".

KV CCL RANCHI

LIVRARY HOLIDAY HOME WORK

FOR CLASS VI TO VIII

- 1.WRITE STATE AND CAPITAL OF INDIA
- 2. WRITE 20 BOOKS AND AUTHORS
- 3.WRITE 20 COUNTRIES AND THEIRS CUURENCY
- 4 WRTITE NEW WORDS (100) AND THEIRS MEANING
- NOTE. ALL ABOVE ASSIGNMENTS WRITE IN LIBRARY COPY ONLY

KENDRIYA VIDYALAYA, CCL, RAJENDRA NAGAR, RANCHI CLASS VII SUBJECT- PHYSICAL & HEALTH EDUCATION SUMMER VACATION HOME WORK

1. KABADDI , HISTORY , RULE, FUNDAMENTAL SKILLS, AWARDS IN HOME WORK COPY

CLASS VIII

केंद्रीय विद्यालय (सीसीएल) राँची

कक्षा 8: हिंदी ग्रीष्मकालीन अवकाश गृहकार्य

- 1. कहानी लेखन
- एक काल्पनिक कहानी लिखें जिसमें "दोस्ती की ताकत" मुख्य विषय हो। कहानी में कम से कम 200
 शब्द होने चाहिए।
- अपनी कहानी में संवाद (डायलॉग्स) का उपयोग करें।

2. निबंध लेखन

- निम्नलिखित में से किसी एक विषय पर 250-300 शब्दों का निबंध लिखें:
 - 。 "ग्रीष्मकालीन अवकाश का महत्व"
 - "पर्यावरण संरक्षण की आवश्यकता"

3. कविताएँ पढ़ें और लिखें

- किसी प्रसिद्ध हिंदी कवि की एक कविता पढ़ें और उस पर 100-150 शब्दों में अपनी राय लिखें।
- खुद की एक छोटी कविता (4-6 पंक्तियाँ) लिखें, जिसका विषय "प्रकृति" हो।
- 4 दो मुहावरे और उनके अर्थ लिखें। उन मुहावरों का वाक्यों में प्रयोग करें।

5. संवाद लेखन

"मित्र के साथ छुट्टियों की योजना" पर एक संवाद (संवाद शैली में) लिखें।

6. पठन और समीक्षा

"पंचतंत्र" की कोई एक कहानी पढ़ें और उसका सारांश 150 शब्दों में लिखें।

7. पोस्टर बनाना

"स्वच्छ भारत" या "जल संरक्षण" पर एक पोस्टर बनाएं। आप इसे अपनी कला पुस्तिका में बना सकते
 हैं।

निर्देश

- 1. साफ-स्थरी लिखावट में अपना काम पूरा करें।
- 2. सभी कार्य को एक फोल्डर में संकलित करें और इसे स्कूल में समय पर जमा करें।
- 3. रचनात्मकता और मौलिकता को प्राथमिकता दें।

KENDRIYA VIDYALAYA C.C.L, RANCHI

HOLIDAY HOMEWORK (2025-26)

STANDARD: VIII

SUBJECT: MATHEMATICS

1.Percentages

- Find 15% of 480.
- A shirt is marked at R_s800 and is sold at a 25% discount. Find the selling price.
- A student scored 72 out of 90 marks. What percentage did the student score?
- A population increased by 10% from 12,000. What is the new population?
- A boy spends 40% of his pocket money on books, 30% on snacks, and saves the rest. If he gets ₹500, how much does he save?

2. Integers

- Simplify: (-15) + 8 (-12) 7
- What is the additive inverse of -23?
- Find the value of: (-6) × (-4) + (-9)
- A submarine is at a depth of 350 meters below sea level. It rises 120 meters. What is its new depth?
- On a number line, if you move 8 steps left from –3, where do you land?

3. Decimals

- Add: 4.56 + 3.79
- Subtract: 8.9 2.67
- Multiply: 3.2 × 1.5
- Divide: 9.36 ÷ 3.2
- Express 25% as a decimal.
- Make a math working model
- Learn table till 19 .(Dodging Table) <u>ACTIVITY:</u>
 - To verify the sum of exterior angles of a triangle and quadrilateral taken in order is 360° or 4 right angles

<u>Multi Disciplinary Project :</u> Complete your MDP work_which is assigned in the class.

केंद्रीय विद्यालय (सीसीएल) राँची

कक्षा ८: संस्कृत ग्रीष्मकालीन अवकाश गृहकार्य

1. संस्कृत-पत्रिका निर्माणम् (Sanskrit Magazine Creation)

- Create a 4-page Sanskrit magazine (handmade/digital) with:
 - A short story (कथा) or poem (कविता) in Sanskrit.
 - Fun facts about Sanskrit (e.g., oldest language, NASA's interest in it).
 - Puzzles like crosswords (शब्द-पहेली) or word searches with Sanskrit words.
- 2. श्लोक-अभ्यासः (Shloka Practice)
 - Learn and write 5 moral-based Sanskrit shlokas (e.g., from Chanakya Neeti or Bhagavad Gita).
 - Illustrate one shloka and explain its meaning in English/Hindi.
- 3. संस्कृत-भाषणम् (Speech Preparation)
 - Prepare a 1-minute Sanskrit speech on topics like:

。 "वृक्षाः जीवनस्य आधाराः" (Trees are the basis of life).

"संस्कृतस्य महत्त्वम्" (Importance of Sanskrit).

4. संस्कृते दिनचर्या (Daily Routine in Sanskrit)

b Write 5 sentences about your daily routine in Sanskrit (e.g., "अहं प्रातः 6 वादने उत्तिष्ठामि।").

Add drawings or a comic strip to depict it.

- 5. शोध-कार्यम् (Research Project)
 - Write 5 sentences about a famous Sanskrit scholar (e.g., Kalidasa, Patanjali) or an ancient Indian text (e.g., Rigveda, Ramayana).

Kendriya Vidyalaya C. C. L Ranchi Summer Vacation Homework Social Science Class VIII 2025-26

- 1. Make 10 MCQ questions along with Answer on the Topic The Indian Constitution.
- 2. Explain the Causes of Battle Plassey and Battle of Buxar.
- 3. What do you mean Three sectors of Indian Economy ?
- 4. Locate the following on the map of India.
 - (I) The Ganga River
 - (II) Meerut
 - (III) Kolkata
 - (IV) Kanpur
 - (v) Ranchi
- 5. Locate the following on the map of the World.
 - (i) India
 - (II) Japan
 - (III) Germany
 - (IV) USA
 - (v) Ganga & Brahmaputra River Plain
- 6. What do you understand by Sustainable Development ? Explain the role of people to achieve Sustainable Development.
- 7. EBSB Activity- Make a project on Goa (Pairing state for Ranchi Region) about history ,Climate, Location , Social , Economic and Cultural life. (Note- Minimum 12 Pages)

KENDRIYA VIDYALAYA CCL RANCHI

HOLIDAY HOMEWORK (SUMMER VACATION)

Subject: Vocational Education (Class 8)

ACTIVITY NO. 1

Theme: My Mini Kitchen Garden Project

1. Set Up a Mini Kitchen Garden:

- Use any 3–5 recycled containers like old bottles, cans, pots, or trays.
- Fill them with soil and select easy-to-grow plants such as:
 - Coriander (dhania)
 - Fenugreek (methi)
 - Mint (pudina)
 - Tomato
 - Chili
 - Spinach (palak)

2. Plant the Seeds or Saplings:

- Sow the seeds and water them regularly.
- Place the containers in a sunny spot (balcony, window, rooftop, etc.).

3. Maintain a Weekly Garden Journal:

- For 4–6 weeks, students will write or draw:
 - Date of planting
 - Daily watering and sunlight record
 - Germination progress
 - Changes in plant size or leaves
 - Any insects or birds observed

4. Take Photographs (optional):

• Take weekly photos of your plants and stick them in the journal.

5. Eco-friendly Tips:

- Use kitchen waste as compost (banana peels, tea leaves, etc.).
- Avoid plastic containers where possible.

Submission Format:

- A handwritten/drawn garden journal or diary.
- 4–5 photos or drawings of the plants.
- 1 paragraph on "What I learned from my Kitchen Garden".

2. Learn atomic number upto 50.

KV CCL RANCHI

LIVRARY HOLIDAY HOME WORK

FOR CLASS VI TO VIII

- 1.WRITE STATE AND CAPITAL OF INDIA
- 2. WRITE 20 BOOKS AND AUTHORS
- 3.WRITE 20 COUNTRIES AND THEIRS CUURENCY
- 4 WRTITE NEW WORDS (100) AND THEIRS MEANING
- NOTE. ALL ABOVE ASSIGNMENTS WRITE IN LIBRARY COPY ONLY

CLASS IX

KENDRIYA VIDYALAYA CCL RANCHI

Summer Vacation Homework - Class IX (MATHEMATICS)

Session: 2025-26

GENERAL INSTRUCTIONS

All work must be done in a single notebook dedicated to Holiday Homework. Use clean handwriting, decorate where applicable, and show creativity. Homework must be submitted on the first day after summer vacation.

Section A: Concept Revision (Solve in your math notebook)

Solve the following problems from your textbook or similar worksheets:

Number Systems

- 1. Create a table showing five irrational numbers and explain how each is identified as irrational.
 - 1. Express the following as a rational number in $\frac{p}{q}$ form:
 - (a) 0.666...
 (b) 1.272727...
 (c) 0.818181...
 - 2. Insert three irrational numbers between $\sqrt{2}$ and $\sqrt{3}$
 - 3.

Give an example for each, if two irrational numbers, whose

- (i) difference is a rational number.
- (ii) difference is a irrational number.
- (iii) sum is a rational number.
- (iv) sum is an irrational number.
- (v) product is an irrational number,
- (vi) product is an irrational number.
- (vii) quotient is a rational number.
- (viii) quotient is an irrational number.

Polynomials

1) The area of a rectangular plot is given by the polynomial $3x^2 + 11x - 4$. If the length is (3x + 1), find the breadth.

2) A rectangular garden has length 2x + 3 and width x + 2. If the cost of fencing the garden is ₹50 per meter, find the total cost of fencing.

3). Factorize: 8x³ + 125y³.

4). x⁴ - 16.

5). If $p(x) = x^3 - 3x^2 + 5$, find p(x+1).

6). If both (x + 1) and (x - 1) are factors of $ax^3 + x^2 - 2x + b$, find a and b.

Linear Equations in Two Variables

- 1) Find 3 solutions of the linear equation 2x+3y=6.
- 2) Cost of a pen is two and half times the cost of a pencil. Express this situation as a
 - linear equation in two variables
- 3) Write the equation of a line which is parallel to x-axis and is at a distance of 2 units from the origin.
- In some countries temperature is measured in Fahrenheit, whereas in countries like India it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: F=[9/5] c+32

If the temperature is – 40°C, then what is the temperature in Fahrenheit ?

5) The cost of two pizzas and 1 burger is Rs 450. Represent this situation algebraically and also, draw the graph.

Section B: Real-Life Application Project

Present it on A4 sheets:

- How polynomials are used in our daily life.
- How linear equations are useful in our day to day life.

Section C: Fun with Math

- 1. Solve the Sudoku puzzle
- 2. Try these riddles:
 - I am a number. I am more than 20 but less than 30. The sum of my digits is 9. What am I?
 - What 3-digit number has the digits that add up to 6 and is divisible by 3?

Section D: Creative Math

Choose ONE:

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• Create a math comic strip or cartoon showing a concept (e.g.,Number System,Polynomials,linear equations in two variable).

R

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- Compose a short rap/poem on any math topic.
- Complete the maths activity work assigne to do in summer vacation.

KENDRIYA VIDYALAYA CCL RANCHI

Session 2025-26 (May 09 to June 17)

CLASS IX SUMMER VACATION HW:

1. Story Writing : Write a story in 150 words with the following beginning and give a suitable title to it .

Yesterday I went for an evening walk. On the way I noticed an old woman sitting under a tree. She was reading a letter . Her hands were trembling and there were tears in her eyes. I went slowly near her.

- 2. You are Rakesh Mahto. Write an article in 100-150 words on "International Day of Yoga' describing how events are organised all over the world and the impact it is creating on people.
- 3. Write a short biography of Bismillah khan.
- 4. Write Wind poem in your copy.
- 5. Bring out the symbolism in the poem 'The Road Not taken.'
- 6. Descriptive paragraph : Taking the information given below in the input, develop it into a paragraph (100-150 words). You can invent your own details. Hints : story 'The fun they had- year 2157- no separate buildings- no human teacher- no printed books-e-books- TV screen – mechanical teacher – slot to put homework- no fun & romance of old schools-not same leanings
- 7. Vocabulary Exercise : confess, overwhelmed, ethnic, static, inadequate, eternally, erudition, pursuit, epoch, endeavor, condemned, spurious, myths, adherence. Diverse. (write meaning of these words in your notebook)
- 8. You always suffered from the stage fright. *Describe how you overcame that weakness and ultimately won the first prize in the Inter-school Debate Competition. Record that experience in your diary.*
- 9. What is oxymoron. Give some examples. (Page No 18, Words and expressions)
- 10. Write a paragraph on ' Being Human in the age of 'Artificial Intelligence'

KV CCL RANCHI SUMMER VACATION HOLIDAY HOME WORK CHAPTER MOTION

CLASS: IX

SECTION – A

- 1. Rita was enjoying a ride on a Ferris wheel which is revolving at a constant speed of 5 m/s. This shows that Rita is:
 - (a) at rest

- (b) moving with no acceleration
- (c) in accelerated motion
- (d) moving with uniform velocity
- 2. The horizontal straight line on distance-time graph indicates: (a) increasing velocity (b) decreasing velocity (c) zero velocity (d) constant velocity
- 3. For a moving object, the numerical ratio of displacement to distance is: (a) always less than 1 (b) always equal to 1
 - (c) always greater than 1 (d) equal or less than 1
- 4. The slope of the Distance-Time graph and Velocity-Time graph represents:
 - (a) both represent acceleration (b) speed and acceleration respectively
 - (c) acceleration and speed respectively
- (d) both represent speed
- 5. Which of the following figures represents the uniform motion of a moving object correctly?



- 6. Name the instrument which is used to measure the instantaneous speed of a vehicle. (a) Multimeter (b) Ammeter (c) Speedometer (d) Accelerator
- 7. Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs is shown in figure. Choose the correct statement.



(a) Car A is faster than car D

(b) Car B is the slowest

(c) Car D is faster than car C

- (d) Car C is the slowest.
- 8. Suppose a boy is enjoying a ride on a merry-goround which is moving with a constant speed of 10 m/s. It implies that the boy is :
 - (a) At rest
 - (c) In accelerated motion

- (b) Moving with no acceleration
- (d) Moving with uniform velocity.

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.
(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

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

- (c) Assertion is true but the Reason is false.
- (d) Assertion is false but the Reason is true.
- 9. Assertion (A): The displacement-time graph of a body moving uniformly is a straight line.Reason (R): A body travelling with uniform velocity covers equal distances in equal intervals of time with changing direction.
- **10.** Assertion (A): If the velocity of a body in uniform motion changes, its acceleration cannot remain constant.

Reason (R): If a body is thrown vertically upward, the relationship between initial velocity (u) and acceleration (a) at any moment is $v^2 - u^2 = 2as$.

<u>SECTION – B</u>

- **11.** A train starting from a railway station and moving with uniform acceleration attains a speed 90 km h^{-1} in 2 minutes. Find its acceleration.
- 12. A bus decreases its speed from 80 km h^{-1} to 60 km h^{-1} in 5 s. Find the acceleration of the bus.
- 13. A body is thrown vertically upwards with a velocity and caught back.
 - (a) What is its displacement and distance travelled?
 - (b) How do the displacement and distance change if its velocity of projection is halved?
- 14. Distinguish between uniform and non-uniform acceleration.

<u>SECTION – C</u>

- **15.** A bus starting from rest moves with a uniform acceleration of 0.1 m s^{-2} for 2 minutes. Find (a) the speed acquired, (b) the distance travelled.
- 16. What type of motion is represented by following displacement-time graph:



17. A stone is thrown in a vertically upward direction with a velocity of 5 m s⁻¹. If the acceleration of the stone during its motion is 10 m s⁻² in the downward direction, what will be the height attained by the stone and how much time will it take to reach there?

<u>SECTION – D</u>

18. (a) Draw a velocity-time graph for an object in uniform motion. Show that the slope of velocity time-graph gives acceleration of the body.

(b) An aeroplane starts from rest with an acceleration of 3 ms–2 and takes a run for 35 s before taking off. What is the minimum length of runway and with what velocity the plane took off?

SECTION – E (Case Study Based Questions)

19. Read the following information and answer the questions based on information and related studied concepts.

Ritesh was driving car to his office. When suddenly a boy came in between the road, he applied brakes suddenly to save the child and the car came to the rest. The whole scenario was observed by Sita and she draws the velocity-time graph regarding the situation.



- (a) Calculate the displacement of the car after 20 seconds?
- (b) After deceleration, how far does the car go?
- (c) Describe the motion of the car from 0 s to 30 s.

20. Read the given passage and answer the questions that follow based on the passage and related studied concepts.

A bus is moving with a velocity of 50 km/h. The driver sees a child running across the road and he pressed the brakes. The time taken by him to stop the bus in this emergency was 1/10 th of a second. In a second case, another bus was coming on the same road at the same 50 km/h and the driver saw another child crossing the road. He applied the brakes and time taken by him to the emergency was 0.5 sec. Both the buses started moving to their destination after 10 minutes. Bus A moved at 45 km/h while bus B moved at 60 km/h.



(a) What is the distance between buses A and B?

(b) How much distance did the bus move in the 1st case before the driver could press the brakes? How much is the distance between bus A and bus B after 1.5 hours?

(c) How much distance did the bus move in the 2nd case before the driver could press the brakes?

केन्द्रीय विद्यालय सी.सी.एल.राँची ग्रीष्मकालीन अवकाश गृहकार्य 2025-26 विषय हिंदी कक्षा नवमी

1.निम्नलिखित विषयों पर निबंध लिखिए क. मेरे सपनों का भारत ख.भारतीय खेलों का वर्तमान और भविष्य ग. जीवन में कंप्यूटर का महत्व

घ. मेरे जीवन का लक्ष्य या उद्देश्य

2. पत्र लेखन

क. आपका मित्र विदेश में रहता है। उसे ग्रीष्मावकाश के दौरान भारत के किसी पर्वतीय क्षेत्र में भ्रमण हेतु आमंत्रित करते हुए पत्र लिखिए।

ख.मित्र को पत्र लिखकर वार्षिक परीक्षा की तैयारी हेतु सुझाव माँगिए।

ग. दिन-प्रतिदिन बढ़ती महँगाई के प्रति चिंता व्यक्त करते हुए 'नवभारत टाइम्स' के संपादक को पत्र लिखिए।

3 व्याकरण

क. निम्नलिखित शब्दों का पर्यायवाची या समानार्थी शब्द लिखिए

अतिथि ,अनुचर, जंगल , आंख ,आकाश, इंद्र ,उपवन, कमल, किरण, गंगा, घर ,घोड़ा, जल, तालाब, दिन, नदी, झंडा, पक्षी, पर्वत, पवन, पृथ्वी, बिजली, माता, हाथी ,स्त्री, सूरज, समुद्र ,वृक्ष, राजा, मेघ ।

ख. 'समास ' के कितने भेद है ? कौन-कौन ?.

परिभाषा लिखकर कर प्रत्येक समास का दो-दो उदाहरण लिखिए।

KENDRIYA VIDYALAYA CCL RANCHI SUMMER HOLIDAY HOME WORK CLASS X CHEMISTRY (2025-2026)

- 1. Cooking gas is known as LPG (Liquified Petroleum Gas). How can a gas be liquified?
 - (a) when pressure is applied to the gas.
 - (b) when temperature of the gas is increased.
 - (c) when gas is mixed with a liquid substitute.
 - (d) when the force of attraction between particle is reduced.
- 2. The melting points of four solid A, B, C and D are 380K, 54K, 290K and 1600K. The forces of attraction are in order of

(a) A < B < C < D (b) B < C < D < A (c) B < C < A < D (d) C < B < A < D

- **3.** During summer, water kept in earthen pot becomes cool due to phenomenon of (a) Diffusion (b) Transpiration (c) Distillation (d) Evaporation
- 4. Choose the correct statement out of the following.
 - (a) Conversion of solid into vapours without passing through the liquid state is called vapourization.
 - (b) Conversion of solid into vapours without passing through the liquid state is called sublimation.
 - (c) Conversion of vapours into solid without passing through the liquid state is called freezing.
 - (d) Conversion of solid into liquid is called sublimation.
- 5. Which of the following conditions will increase the rate of evaporation? (a) Increase in temperature of water.(b) Decrease in wind speed.
 - (c) Decrease in surface area of water. (d) Adding sugar to water.
- 6. Latent heat of fusion is amount of
 - (a) heat energy required to change 1 kg solid into liquid completely at its melting point.
 - (b) heat energy required to convert 1 kg solid into liquid at room temperature.
 - (c) heat energy required to change 1 g of solid into liquid completely.
 - (d) heat energy required to change 1 kg of solid into liquid at any temperature.
- 7. The temperature at which vapour pressure of liquid becomes equal to atmospheric pressure is called
 - (a) melting point. (b) boiling point.
 - (c) ignition temperature. (d) sublimation temperature.
- 8. Which of the following is not correct about evaporation?
 - (a) It is surface phenomenon.
 - (b) It takes place at all temperatures.
 - (c) It causes cooling as it takes heat from surroundings.
 - (d) Its rate decreases with decrease in humidity.

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.
- (d) Assertion is false but the Reason is true.
- **9.** Assertion: In pressure cooker temperature of water becomes more than 100°C. Reason: Boiling point is directly proportional to pressure acting on liquid.
- 10. Assertion: We feel more cold after taking bath with hot water.Reason: Evaporation of hot water takes place faster which causes cooling.
- 11. What is matter? Write two properties of solids and two properties of liquids.
- 12. "Evaporation causes cooling". Explain the reason for this effect.
- 13. (a) Why does the water kept in an earthen pot become cool in summer? (b) Convert: 340 K to degree Celsius.
- **14.** (a) CO₂ is a gas. Write its two gaseous properties to justify it. (b) How can we liquefy a gas?
- **15.** Give reasons for the following:
 - (i) A liquid generally flows easily.
 - (ii) Ice at 0°C appears colder to the mouth than water at 0°C. Why?
 - (iii) Doctors advise to put strips of wet cloth on the forehead of a person having high temperature.
- **16.** Give reasons for the following:
 - (a) Camphor disappears if kept in open air for a few days.
 - (b) Wet clothes do not dry easily on a rainy day.
 - (c) We sweat more on humid days.
- **17.** Give reasons for the following:
 - (a) Why does Ice float on water?
 - (b) Why does a gas fill completely the vessel in which it is kept?
 - (c) Latent heat of evaporation of two liquids A and B is 100 J/kg and 150 J/kg respectively. Which one can produce more cooling effect and why?
- **18.** Explain the different processes involved in the flowchart given below.



19. Read the following information and answer the questions based on information and related studied concepts.

- Substance 1. is brittle.
- Substance -2. melts at 5 °C and boils at 150 °C.
- Substance -3. has high melting point of 800 °C.
- Substance 4. has melting point –169 °C and boiling point 104 °C.



- (a) What is physical state of substance -4 at -150 °C and -100 °C?
- (b) What is physical state of substance –1 and 3 at room temperature?
- (c) What is physical state of substance -2 at 100° and why?

OR

(c) Arrange substances -2, 3, 4 in increasing order of force of attraction. Give reason.

20. Read the given passage and answer the questions that follow based on the passage and related studied concepts.

Matter is anything that occupies space and has mass. Matter is classified into solid, liquid and gas. In solid state particles are closely packed and have very strong force of attraction, particles can only vibrate and rotate around fixed positions. In liquid state, particles are less closely packed and have strong force of attraction but less than solids, particles can move throughout the liquid. In Gaseous state, particles are far apart with weak force of attraction and are in state of constant random motion. Gases can be easily compressed where as solids and liquids are incompressible.

- (a) An inflated balloon with He gas goes to upper atmosphere, what will happen?
- (b) When solid changes into vapours directly predict the strength of forces?
- (c) Why do we feel colder after taking bath with hot water?

OR

- (d) Why does sea water boils above 100° C?
- 21 . Which of the following are matter?

Chair, air, love, smell, hate, almonds, thought, cold, cold drink, smell of perfume.

22.Convert the following temperature to Celsius scale:

- i) The temperature is 300 K.
- ii) The temperature is 573 K
- 23. What is the physical state of water at:
 - (a) A temperature of 250°C
 - (b) A temperature of 100°C

- 24. For any substance, why does the temperature remain constant during the change of state?
- **25.** Suggest a method to liquefy atmospheric gases.
- **26.** Arrange the following substances in increasing order of forces of attraction between the particles— water, sugar, oxygen.
- 27. What is the physical state of water at- (a) A temperature of 25°C?
 - (b) A temperature of 0° C?
 - (c) A temperature of 100° C?

28. If the humidity in the air increase then the rate of evaporation:

- (a) decrease
- (b) increase
- (c) remain same
- (d) both (b) and (a) depending upon the temperature
- 29. Which of the following statements is correct?
 - (a) boiling is a bulk phenomenon and evaporation is a surface phenomenon
 - (b) boiling is a surface phenomenon and evaporation is a bulk phenomenon

(c)boiling and evaporation both are surface phenomenon

(d) boiling and surface both are bulk phenomenon

30. If the temperature of a place is increase then evaporation:

- (a) decrease
- (b) increase

(c)remain same

- (d) none of the above
- 31. Which of the following have least inter atomic spacing?
 - (a) solid
 - (b) liquid

(c)gases

(d) plasma

32. If you decrease the surface area and increase the temperature, then the rate of evaporation

(a) increase b) decrease c) remain same d) may increase or decrease depending upon other factors

33. What will be the corresponding temperature in degree centigrade for 300 K:

- (a) 30°C
- **(b)** 300°C
- (c) 27°C
- (d) 673°C

34. Liquid to gas and gas to liquid changes are called:

(a) vaporization and condensation

(b) condensation and vaporization

(c)sublimation and condensation

- (d) condensation and sublimation
- **35.** Give reasons for the following observation:

The smell of hot sizzling food reaches you several meters away, but to get the smell from cold food you have to go close.

36 . The mass per unit volume of a substance is called density.

(density = mass/volume).

Arrange the following in order of increasing density – air, exhaust from chimneys, honey, water, chalk, cotton and iron.

- 36. Liquids generally have lower density as compared to solids. But you must have observed that ice floats on water. Find out why.
- 37. Why does a desert cooler cool better on a hot dry day?

38. How does the water kept in an earthen pot (matka) become cool during summer?

39. Why does our palm feel cold when we put some acetone or petrol or perfume on it?

40. Why are we able to sip hot tea or milk faster from a saucer rather than a cup?

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Kendriya Vidyalaya C. C. L Ranchi Summer Vacation Homework Social Science Class IX 2025-26

- 1. Make 4-4 MCQ questions with Answer from all the chapters(17 Chapters) of History, Geography, Civics and Economics.
- 2. Explain the needs of constitution.
- 3. Explain the causes of French Revolution.
- 4. Locate the following on the map of India.
 - (I) Delhi
 - (II) Sundarban Delta
 - (III) Dehradun
 - (iv) Kaziranga National Parks
 - (v) The Ganga River
- 5. Locate the following on the map of the World.
 - (i) Paris
 - (II) Nantes
 - (III) Germany
 - (IV) Italy
 - (v) England
- 6. What do you understand by Sustainable Development ? Explain the role of people to achieve Sustainable Development.
- 7. EBSB Activity- Make a project on Goa (Pairing state for Ranchi Region) about history ,Climate, Location , Social , Economic and Cultural life. (Note- Minimum 18-20 Pages)

8.Prepare Portfolio in which you mainly mention Classwork, Work done (activities/ assignments) Achievements of the student in the Social Science subject .

CLASS X

KENDRIYA VIDYALAYA CCL RANCHI SUMMER VACATION HOMEWORK Artificial Intelligence CLASS: X

Part A: Communication Skills-II

- 1. Make a poster on "The 7 Cs of Effective Communication" with examples.
- 2. Write a conversation between two friends demonstrating the use of:
 - Polite language
 - Active listening
 - Clear communication
- 3. Identify **any two communication barriers** in your daily life and suggest how you can overcome them.
- 4. **Practice Task**: Record a 1-minute audio of yourself giving a short motivational speech (can be done using your phone). Write the transcript of your speech in your notebook.

Part B: Communication Skills-II

- 1. Define communication and explain its key elements with an example.
- 2. Differentiate between verbal, non-verbal, and visual communication.
- 3. What are the 7 Cs of effective communication? Explain any three.
- 4. Write a dialogue between two friends using polite expressions and active listening.
- 5. List and explain any **four barriers to communication**.
- 6. Explain the **communication cycle** with a neat diagram.
- 7. Why is feedback important in communication?
- 8. What is non-verbal communication? List five types of non-verbal cues.
- 9. Describe how good communication skills help in group work and teamwork.
- 10. Write a short paragraph on the **importance of active listening** in school.

Part A: Self-Management Skills-II

- 1. Create a **weekly time table** for your daily routine (include study time, play time, meals, etc.).
- 2. Write a paragraph about a time when you:
 - Set a goal
 - Faced a challenge
 - Stayed motivated and achieved it
- 3. Prepare a **personal hygiene checklist** for teenagers.

- 4. Make a **mind map** showing components of self-management and their benefits.
- 5. Practice 3 stress-relief techniques (like deep breathing or time-blocking) and write about your experience.

Part B : Self-Management Skills-II

- 1. Define self-management. List its main components.
- 2. What is self-awareness? How does it help in self-improvement?
- 3. List **four qualities of a self-confident person**. What are the qualities you want to inculcate in yourself.
- 4. What is self-motivation? How can students stay motivated during exams?
- 5. Write a paragraph on the **importance of personal hygiene and grooming**. What are the things that you do for your personal hygiene?
- 6. Create a checklist of daily personal hygiene practices for students.
- 7. Explain the concept of **time management** and list five tips to manage time effectively that you use.
- 8. What is a SMART goal? Write one personal SMART goal for yourself.
- 9. Describe any two **stress management techniques** that you use and how they have helped you .
- 10. Write a personal experience where self-confidence helped you succeed.

KENDRIYA VIDYALAYA CCL RANCHI SUMMER HOLIDAY HOME WORK CLASS X CHEMISTRY (2025-2026)

1. Which of the following is correct observation of the reaction shown in below set up?



- (a) Brown powder of magnesium oxide is formed.
- (b) Colourless gas which turns lime water milky is evolved.
- (c) Magnesium ribbon burns with brilliant white light.
- (d) Reddish brown gas with a smell of burning sulphur has evolved.
- (e)
- 2. A student took sodium sulphate solution in a test tube and added barium chloride solution to it. He observed that an insoluble substance has formed.

The colour and molecular formula of the insoluble substance is:

(a) Grey, Ba_2SO_4 (b) Yellow, $Ba(SO_4)_2$ (c) White, $BaSO_4$ (d) Pink, $BaSO_4$

3. $C_6H_{12}O_6(aq) + 6O_2(aq) \rightarrow 6CO_2(aq) + 6H_2O(l)$

The above reaction is a/an

- (a) displacement reaction (b) endothermic reaction (c) exothermic reaction (d) neutralisation reaction
- **4.** It is important to balance the chemical equations to satisfy the law of conservation of mass. Which of the following statements of the law is incorrect?
 - (a) Total total mass of the elements present in the reactants is equal to the total mass of the elements presents in the products.
 - (b) The number of atoms of each element remains the same, before and after a chemical reaction.
 - (c) The chemical composition of the reactants is the same before and after the reaction.
 - (d) Mass can neither be created nor can it be destroyed in a chemical reaction.
- 5. Which one of the following reactions is categorised as thermal decomposition reaction?
 (a) 2H₂O(l) → 2H₂(g) + O₂(g)
 (b) 2AgBr(s) → 2Ag(s) + Br₂(g)
 (c) 2AgCl(s) → 2Ag(s) + Cl₂(g)
 (d) CaCO₃(s) → CaO(s) + CO₂(g)
- 6. When hydrogen sulphide gas is passed through a blue solution of copper sulphate, a black precipitate of copper sulphide is obtained and the sulphuric acid so formed remains in the solution. The reaction is an example of a:
 - (a) Combination reaction (b) Displacement reaction
 - (c) Decomposition reaction (d) Double displacement reaction

- 7. Calcium oxide reacts vigorously with water to produce slaked lime. CaO(s) + H₂O(l) → Ca(OH)₂(aq)
 This reaction can be classified as:
 (A) Combination reaction
 (B) Exothermic reaction
 (C) Endothermic reaction
 (D) Oxidation reaction
 Which of the following is a correct option? [CBSE 2020]
 (a) (A) and (C)
 (b) (C) and (D)
 (c) (A), (C) and (D)
 (d) (A) and (B)
- 8. Which of the following statements about the reaction given below are correct? $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$
 - (i) HCl is oxidised to Cl₂
 - (ii) MnO₂ is reduced to MnCl₂
 - (iii) MnCl₂ acts as an oxidising agent
 - (iv) HCl acts as an oxidising agent
 - (a) (ii), (iii) and (iv) (b) (i), (ii) and (iii)
 - (c) (i) and (ii) only (d) (iii) and (iv) only

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.
- Assertion (A): MnO₂ + 4HCl → MnCl₂ + Cl₂ + 2H₂O is redox reaction.
 Reason (R): MnO₂ oxidises HCl to Cl₂ and gets reduced to MnCl₂.
- **10.** Assertion (A): After white washing the walls, a shiny white finish on the walls is obtained after two to three days.

Reason (R): Calcium oxide reacts with carbon dioxide to form calcium hydrogen carbonate which gives shiny finish.

- **11.** A clear solution of slaked lime is made by dissolving Ca(OH)₂ in an excess of water. This solution is left exposed to air. The solution slowly goes milky as a faint white precipitate forms. Explain why a faint white precipitate forms. Support your response with the help of a chemical equation.
- **12.** Give the chemical name of the reactants as well as the products of the following chemical equation:

 $2HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + 2H_2O$

- 13. Why is respiration considered an exothermic reaction?
- 14. A zinc plate was put into a solution of copper sulphate kept in a glass container. It was found that blue colour of the solution gets fader and fader with the passage of time. After a few days when zinc plate was taken out of the solution, a number of holes were observed on it.
 - (a) State the reason for changes observed on the zinc plate.

- (b) Write the chemical equation for the reaction involved.
- **15.** The following diagram displays a chemical reaction. Observe carefully and answer the following questions:
 - (a) Identify the type of chemical reaction that will take place and define it. How will the colour of the salt change?
 - (b) Write the chemical equation of the reaction that takes place. (c) Mention one commercial use of this salt.



- 16. (a) Classify the following reactions into different types:
 - (i) $\operatorname{AgNO}_3(aq) + \operatorname{NaCl}(aq) \rightarrow \operatorname{AgCl}(s) + \operatorname{NaNO}_3(aq)$
 - (ii) $CaO(s) + H_2O(l) \rightarrow Ca(OH)_2(aq)$
 - (iii) $2\text{KClO}_3(s) \xrightarrow{\Delta} 2\text{KCl}(aq) + 3\text{O}_2(g)$

(b) Which of the above reaction(s) is/are precipitation reaction(s)? Why is a reaction called precipitation reaction?

- **17.** What is redox reaction? Identify the substance oxidised and the substance reduced in the following reactions:
 - (a) $2PbO + C \rightarrow Pb + CO_2$
 - (b) $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$
- 18. (a) Define a balanced chemical equation. Why should an equation be balanced?
 - (b) Write the balanced chemical equation for the following reaction:
 - (i) phosphorus burns in presence of chlorine to form phosphorus pentachloride.
 - (ii) burning of natural gas.
 - (iii) the process of respiration.
- 19. Read the given passage and answer the questions based on passage and related studied concepts. The reaction between MnO_2 with HCl is depicted in the following diagram. It was observed that a gas with bleaching abilities was released.



- (a) What type of reaction is between MnO₂ and conc. HCl?
- (b) Which compound reacts with Cl₂ to form bleaching powder?

(c) Identify oxidising agent, reducing agent, substance oxidised and substance reduced in reaction of MnO₂ and HCl.

OR

- (c) What will happen if we take dry HCl instead of aqueous HCl? What is colour of MnO_2 ? Ans:
- (a) It is redox reaction.
- (b) Dry Ca(OH)₂ (slaked lime) (c)
- (i) MnO₂ is oxidising agent
- (ii) HCl is reducing agent
- (iii) HCl is getting oxidised
- (iv) MnO₂ is getting reduced

OR

(c) Reaction will not take place because MnO_2 solid will not react with HCl gas. MnO_2 is black in colour.

20. Two students decided to investigate the effect of water and air on iron object under identical experimental conditions. They measured the mass of each object before placing it partially immersed in 10 ml of water. After a few days, the object were removed, dried and their masses were measured. The table shows their results.

		Mass of Object	Mass of the
Student	Object		
		before Rusting in g	coated object in g
А	Nail	3.0 3.15	
В	Thin pla	te 6.0 6.33	

- (a) What might be the reason for the varied observations of the two students?
- (b) In another set up the students coated iron nails with zinc metal and noted that, iron nails coated with zinc prevents rusting. They also observed that zinc initially acts as a physical barrier, but an extra advantage of using zinc is that it continues to prevent rusting even if the layer of zinc is damaged. Name this process of rust prevention and give any two other methods to prevent rusting.

Or

(b) In which of the following applications of Iron, rusting will occur most? Support your answer with valid reason.



- A Iron Bucket electroplated with Zinc
- B Electricity cables having iron wires covered with aluminium
- C Iron hinges on a gate
- D Painted iron fence

21. What happens chemically when quicklime is added to water filled in a bucket?

22. On what basis is a chemical equation balanced? Answer. A chemical reaction is balanced on the basis of law of conservation of mass.

23. What change in colour is observed when white silver chloride is left exposed to sunlight? State the type of chemical reaction in this change.

24. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the chemical reaction involved and also mention the type of the chemical reaction?

25. Translate the following statement into chemical equation and then balance it Barium Chloride reacts with aluminium sulphate to give Aluminium Chloride and a precipitate of Barium Sulphate. State the two types in which this reaction can be classified.

26. Why decomposition reactions are called the opposite of combination reactions? Write equations for these reactions.

27. What is redox reaction? Identify the substance oxidised and the substance reduced in the following reactions.

(i) $2PbO + C \longrightarrow 2Pb + CO_2$ (ii) $MnO2 + 4HCl \longrightarrow MnCl_2 + 2H_2O + Cl_2$

28. Using a suitable chemical equation, justify that some chemical reactions are determined by: (i) change in colour, (ii) change in temperature.

29. Write balanced equations for the following mentioning the type of reaction involved.

- (i) Aluminium + Bromine —> Aluminium bromide
- (ii) Calcium carbonate—> Calcium oxide + Carbon dioxide
- (iii) Silver chloride—>Silver + Chlorine

30 Name the natural source of each of the following acid (i) Citric acid (ii) Oxalic acid (iii) Lactic acid (iv) Tartaric acid

CLASS X SUMMER VACATION HW :

- 1. Give the character sketch of Lencho in the light of his attitude towards God and man.
- 2. How did Lencho react when he received money from his God ?
- 3. What is meant by apartheid ?
- 4. What changed Nelson Mandela as a young man into a bold one?
- 5. Write a letter to the Principal of your school bringing to his notice the need for cleanliness in the school toilets and the classrooms.
- 6. Fire and Ice are symbols of human vices and these can cause the end and destruction of the world.
- 7. The oppressor and the oppressed alike are robbed of their humanity, says Nelson Mandela. What does he mean to say ?
- 8. Rivers are considered sacred in our country, but they have been reduced to drains in the cities. You are deeply concerned about the plight of the rivers. As Nikhil/ Neha write a letter to the editor of a national daily voicing your concern regarding the plight of a river near your city.

(150 words)

KV CCL RANCHI SUMMER VACATION HOLIDAY HOME WORK CHAPTER MOTION

CLASS: X

<u>SECTION – A</u>

1. A student wants to obtain magnified image of an object AB on a screen. Which one of the following arrangements shows the correct position of AB for him/her to be successful?



- 2. If a man's face is 25 cm in front of concave shaving mirror producing erect image 1.5 times the size of face, focal length of the mirror would be
 (a) 75 cm
 (b) 25 cm
 (c) 15 cm
 (d) 60 cm
- 3. An object at a distance of 30 cm from a concave mirror gets its image at the same point. The focal length of the mirror is
 (a) 30 cm
 (b) 30 cm
 (c) 15 cm
 (d) +15 cm
- 4. Beams of light are incident through the holes A and B and emerge out of box through the holes C and D respectively as shown in the figure. Which of the following could be inside the box?(a) A rectangular glass slab(b) A convex lens



- (c) A concave lens
- 5. A beam of light is incident through the holes on side A and emerges out of the hole on the other face of the box as shown in the figure. Which of the following could be inside the box?



- (a) Concave lens(c) Prism
- 6. A student carries out the experiment of tracing the path of a ray of light through a rectangular glass slab for two different values of angle of incidence ∠i = 30° and ∠i = 45°. In the two cases the student is likely to observe the set of values of angle of refraction and angle of emergence as:
 (a) ∠r = 30°, ∠e = 20° and ∠r = 45°, ∠e = 28°
 - (b) $\angle r = 30^\circ$, $\angle e = 30^\circ$ and $\angle r = 45^\circ$, $\angle e = 45^\circ$

(c) $\angle r = 20^\circ$, $\angle e = 30^\circ$ and $\angle r = 28^\circ$, $\angle e = 45^\circ$

- (d) $\angle r = 20^{\circ}$, $\angle e = 20^{\circ}$ and $\angle r = 28^{\circ}$, $\angle e = 28^{\circ}$
- 7. The nature of the image formed by concave mirror when the object is placed between the focus (F) and centre of curvature (C) of the mirror observed by us is
 - (a) real, inverted and diminished
- (b) real, inverted and enlarged
- (c) virtual, erect and smaller in size
- (d) virtual, upright and enlarged
- 8. The path of a ray of light coming from air passing through a rectangular glass slab traced by four students are shown as A, B, C and D in figure. Which one of them is correct?



In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.
- 9. Assertion (A): Incident light is reflected in only one direction from a smooth surface. **Reason** (**R**): Since the angle of incidence and the angle of reflection are same, a beam of parallel rays of light falling on a smooth surface is reflected as a beam of parallel light rays in one direction only.
- **10.** Assertion (A): Refractive index has no units. **Reason** (**R**): The refractive index is ratio of two similar quantities.

SECTION – B

- **11.** A spherical mirror produces an image of magnification –1 on a screen placed at a distance of 50 cm from the mirror.
 - (a) Write the type of mirror.
 - (b) Find the distance of the image from the object.
 - (c) What is the focal length of the mirror?
- 12. A student wants to obtain an erect image of an object using a concave mirror of 12 cm focal length. What should be the range of distance of the object from the mirror? State the nature and size of the image he is likely to observe.
- 13. What is understood by lateral displacement of light? Illustrate it with the help of a diagram. List any two factors on which the lateral displacement of a particular substance depends.
- 14. If the speed of light in vacuum is 3×10^8 m/s, find the absolute refractive index of a medium in which light travels with a speed of 1.4×10^8 m/s.

SECTION - C

15. Draw a ray diagram to show the path of the refracted ray in each of the following cases: A ray of light incident on a concave lens is

(i) passing through its optical centre.

- (ii) parallel to its principal axis.
- (iii) directed towards its principal focus.
- **16.** A 6 cm tall object is placed perpendicular to the principal axis of a concave mirror of focal length 15 cm. The distance of the object from the lens is 10 cm. Find the position, size and nature of the image formed, using the mirror formula.

<u>SECTION – D</u>

17. A student has focussed the image of a candle flame on a white screen using a concave mirror. The situation is as given below:

Length of the flame = 1.5 cm

Focal length of the mirror = 12 cm

Distance of flame from the mirror = 18 cm

If the flame is perpendicular to the principal axis of the mirror, then calculate the following:

- (a) Distance of the image from the mirror
- (b) Length of the image.

If the distance between the mirror and the flame is reduced to 10 cm, then what would be observed on the screen? Draw ray diagram to justify your answer for this situation.

SECTION – E (Case Study Based Questions)

18. Read the given passage and answer the questions based on passage and related studied concepts.

Hold a concave mirror in your hand and direct its reflecting surface towards the sun. Direct the light reflected by the mirror on to a white card-board held close to the mirror. Move the card-board back and forth gradually until you find a bright, sharp spot of light on the board. This spot of light is the image of the sun on the sheet of paper; which is also termed as "Principal Focus" of the concave mirror.



(a) List two applications of concave mirror.

(b) If the distance between the mirror and the principal focus is 15 cm, find the radius of curvature of the mirror.

(c) Draw a ray diagram to show the type of image formed when an object is placed between pole and focus of a concave mirror.

(d) An object 10 cm in size is placed at 100 cm in front of a concave mirror. If its image is formed at the same point where the object is located, find:

(i) focal length of the mirror, and

(ii) magnification of the image formed with sign as per Cartesian sign convention.

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केंद्रीय विद्यालय सी.सी.एल.राँची ग्रीष्मकालीन अवकाश गृह कार्य 2025 विषय - हिंदी

कक्षा दसवीं

1.निम्नलिखित विषयों पर संकेत बिंदुओं के आधार पर लगभग 150 शब्दों में अन्च्छेद लिखिए

क. सोशल मीडिया: जागरूकता आवश्यक

संकेत बिन्दु -भूमिका, वर्तमान स्थिति, जागरूकता की आवश्यकता क्यों, प्रभाव

ख. मध्र वचन हैं औषधि

संकेत बिन्दु- शांति देने वाले, उदाहरण(प्रकृति और आस-पास से),भाईचारा और प्रेम,, व्यक्तित्व में निखार ग. जीवन संषर्ध का दूसरा नाम है

संकेत बिन्दु- जीवन और संषर्घ क्या है?, संषर्घ:सफलता का मूलमंत्र, असफलता से उत्पन्न निराशा और उत्कट जिजीविषा,

जीवन का मूलमंत्र

2.पत्रलेखन

क. किसी प्रसिद्ध समाचार पत्र के संपादक को 100 शब्दों में पत्र लिखिए जिसमें बढ़ती ट्रैफिक दुर्व्यवस्था के बारे में जनता और प्रशासन को उनके दायित्व का निर्वाह करने के लिए प्रेरित किया गया हो।

ख छात्रावास में रहने वाले अपने छोटे भाई को एक पत्र लिखकर प्रातः काल नियमित रूप से योग एवं प्राणायाम का अभ्यास करने के लिए प्रेरित कीजिए।

ग. पुस्तकालय में हिंदी के प्रसिद्ध लेखकों की पुस्तक मंगवाने के लिए प्राचार्य को प्रार्थना पत्र लिखिए।

3 बिजली विभाग के अधिकारी को बिजली बिल की शिकायत करते हुए पत्र लिखिए।

3. . विज्ञापन लेखन

क. आप अपना पुराना स्मार्टफोन बेचना चाहते हैं उससे संबंधित एक आकर्षक विज्ञापन लगभग 40 शब्दों में लिखिए ।

ख. विद्यालय वार्षिकोत्सव के अवसर पर विद्यार्थियों द्वारा निर्मित हस्तकला वस्तुओं की प्रदर्शनी के प्रचार हेतु विज्ञापन लिखिए ।

ग.आपके विद्यालय के बच्चों में दीपावली के दीए ,मोमबत्ती आदि तैयार किए हैं। उनकी बिक्री के लिए लगभग 40 शब्दों में विज्ञापन तैयार कीजिए।

4. व्याकरण

क. रचना के आधार पर वाक्य के कितने भेद हैं उदाहरण सहित परिभाषा लिखिए।

ख. वाच्य के भेद ,परिभाषा एवं उदाहरण सहित वाच्य परिवर्तन लिखिए।

ग. 10 वाक्य लिखकर रेखांकित पद का परिचय लिखिए।

घ.अलंकार

उपमा, रूपक,उत्प्रेक्षा, अतिशयोक्ति, मानवीकरण ,सभी अलंकार के पाँच पाँच उदाहरण सहित परिभाषा लिखिए।

KENDRIYA VIDYALAYA C.C.L, RANCHI HOLIDAY HOMEWORK (2025-26)

STANDARD: X

SUBJECT: MATHEMATICS

1.LAB ACTIVITY :

(https://ncert.nic.in/pdf/publication/sciencelaboratorymanuals/classIXtoX/mathe matics/lelm404.pdf

2.PORTFOLIO : a) Concept maps of 4 chapters (4 pages) b) mathematics around us ex: honey comb ,flower petal patterns 2 pages (stick 5 pics on each page) c) history of mathematician --- photo, education, contribution towards mathematics d) any puzzle or brain teaser or sudoku or magic square

<u>3. Art integrated project</u> ---- collect data of highest and least temperature in every month of 2024 or collect average temperature of last 5 years of the states Jharkhand, Bihar and West Bengal and draw bar graph of month vs temperature and year vs temperature ,creatively shade the bars in the graph using sketch or paint or collage work .Also stick monuments of <u>the two states and identify mathematical shapes in each figure and write the formula of</u> thegeometrical shape- volume and surface area (pic of 3 monuments)

4. Practice all examples of chapter 1 to 4 from NCERT textbook.

5.Self practice MCQ's, Case Based Questions from provided study material

CBSE PREVIOUS YEAR QUESTIONS (WRITE IN HOME WORK NOTE BOOK)

i)If one zero of the polynomial x^2 - 6x + b is twice the other, find the value of b. Also, find the zeroes of the polynomial so obtained.

ii) Solve for x and y : 23x + 24y = 23 24x + 23y = 24

III)If the system of equations 2x + 3y = 5 and 4x + ky = 10 has infinitely many solutions, then find the value of 'k'

iv)Find a quadratic polynomial each of whose zeroes is respectively twice the zeroes of the polynomial $2x^2 - 5x + 2$.

v)Solve the following system of linear equations graphically : x + 2y = 6 and 3x - 2y = 2 Also, write the coordinates of the vertices of the triangle formed by these lines and y-axis.

vi.) 16 years ago, at the time of marriage, Ajay was 5 years elder to his wife. The present ages of the wife and Ajay are in the ratio 8 : 9. Find their ages at the time of their marriage.

vii) If one zero of the quadratic polynomial $x^2 - 4x + 3 = 0$ is 1, then find the other zero

viii) Solve: x + 2y = 6, 2x + y = 6 and hence find the value of p for which y = px + 2.

ix) Prove that √ 5 is an irrational number

x) The system of equations given by : 2x - 3y = 5, 6x + 9y = 15 (A) has a unique solution (B) has no solution (C) has infinitely many solutions (D) may have infinitely many solutions or no solution •

Kendriya Vidyalaya C. C. L Ranchi Summer Vacation Homework Class X 2025-26

- 1. Make 4-4 MCQ questions with Answer from all the chapters(19 Chapters) of History, Geography, Civics and Economics.
- 2. What do you mean by Unification of Italy ? Explain
- 3. Describe the forms of power sharing in Belgium.
- 4. Map Work History and Geography both as per List i.e. CBSE syllabus of Social Science

History-

Congress sessions:

 1920 Calcutta
 1920 Nagpur
 1927 Madras session
 Kheda
 Champaran
 Ahmedabad mill workers
 Jallianwala Bagh

Geography –

Dams • Salal • Sardar Sarovar • Bhakra Nangal • Hirakund • Tehri • Nagarjun Sagar • Rana Pratap Sagar • Tungabhadra

- Iron Ore Mines Mayurbhanj Durg Bailadila Bellary Kudremukh
- Coal Mines
 Raniganj
 Bokaro
 Talcher
 Neyveli
- Oil Fields
 Digboi Naharkatia
 Mumbai High Bassien
 Kalol
 Ankaleshwa
- Major Sea Ports Kandla Tuticorin Mumbai Chennai Marmagao Visakhapatnam New Mangalore • Paradip • Kochi • Haldia
- International Airports Amritsar (Raja Sansi-Sri Guru Ram Das ji) Delhi (Indira Gandhi) Mumbai (Chhatrapati Shivaji) • Chennai (Meenambakkam) • Kolkata (Netaji Subhash Chandra Bose) • Hyderabad (Rajiv Gandhi)
- 5. Prepare Portfolio in which you mainly mention Classwork, Work done (activities/ assignments) Achievements of the student in the Social Science subject .
- 6. EBSB Activity- Make a project on Goa (Pairing state for Ranchi Region) about history ,Climate, Location , Social , Economic and Cultural life. (Note- Minimum 18-20 Pages)

CLASS XII

KENDRIYA VIDYALAYA CCL RANCHI SUMMER VACATION HOMEWORK COMPUTER SCIENCE(083) CLASS: XII

BASICS of PYTHON

Write short notes on the following

Tokens Character set in Python Data-type Comments Indentation Membership Operators in Python Boolean Runtime error Keywords Identifiers

DICTIONARY

Write 5 dictionary functions and explain them using 2 examples for each.

Python program to find the sum of all items in a dictionary Write a Python script to check if a given key already exists in a dictionary. Write a Python script to concatenate following dictionaries to create a new one.

Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40}

<u>TUPLE</u>

Q1. What do you mean by Tuple in Python?

Q2. Write a statement to create an empty tuple named 'T1'.

Q3. Write a statement to create a tuple 'T1' containing first five even numbers.

Q4. Write the code to convert the given list L1 to tuple. L1 = [1, 2, 3, 4, 5]

Q5. Write a statement to create tuple T1 with single element.

STRING

Write 10 string functions and explain each using 2 examples.

Wap that reads a string and displays the longest substring of the given string Wap to remove vowels from a given string

PROGRAMMING

- Program to print duplicates from a list of integers
- Program to increment the elements of a list by 2
- Python program to interchange first and last elements in a list
- WAP that takes 2 lists and prints true if they have atleast one common member
- Calculate the total number of zeros, positive and negative elements in the list.

LOOPS

Q1. Write the output of the following:

```
for i in "Myblog":
    print (i, '?')
for i in range(5):
    print(i)
for i in range(10,15):
    print(i)
```

Q2. Write a program to print first 10 natural number.

Q3. Write a program to print first 10 even numbers.

Q4. Write a program to print first 10 odd numbers.

Q5. Write a program to print first 10 even numbers in reverse order.

Q6. Write a program to print table of a number accepted from user.

Q7. Write a program to display product of the digits of a number accepted from the user.

Q8. Write a program to find the factorial of a number.

Q9. Write a program to find the sum of the digits of a number accepted from user

Q10. Write a program to check whether a number is prime or not.

LISTS : Output based questions

1. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
print(my_list[2])
```

2. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
my_list[0] = 5
print(my_list)
```

3. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
del my_list[1]
print(my_list)
```

4. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
my_list.append(5)
print(my_list)
```

5. What is the output of the following code?

my_list = [1, 2, 3, 4]
my_list.insert(2, 5)
print(my_list)

6. What is the output of the following code?

my_list = [1, 2, 3, 4]
my_list.remove(2)
print(my_list)

7. What is the output of the following code?

my_list = [1, 2, 3, 4]
print(len(my_list))

8. What is the output of the following code?

my_list = [1, 2, 3, 4]
print(my_list[1:3])

9. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
print(my_list[::-1])
```

10. What is the output of the following code?

```
my_list = [1, 2, 3, 4]
for i in my_list:
    print(i)
```

STRINGS

1. What is the output of the following code?

my_str = "hello"
print(my_str[1])
2. What is the output of the following code?

```
my_str = "hello"
my_str[0] = 'j'
print(my_str)
3. What is the output of the following code?
```

```
my_str = "hello"
print(my_str.capitalize())
4. What is the output of the following code?
```

```
my_str = "hello"
print(my_str.upper())
5. What is the output of the following code?
```

my_str = "hello"
print(my_str.lower())
6. What is the output of the following code?

my_str = "hello"
print(my_str.replace('l', 't'))
7. What is the output of the following code?

```
my_str = "hello"
print(len(my_str))
8. What is the output of the following code?
```

```
my_str = "hello"
print(my_str[1:3])
9. What is the output of the following code?
```

```
my_str = "hello"
print(my_str[::-1])
10. What is the output of the following code?
```

केंद्रीय विद्यालय सी.सी एल. राँची

ग्रीष्मावकाश गृहकार्य 2025-26

कक्षा बारहवीं विषय हिंदी

- 1. निम्नलिखित अप्रत्याशित विषयों पर रचनात्मक लेख लिखिए ।
 - वर्तमान समय में सोशल मीडिया सूचना का सबसे बड़ा साधन है आपके अनुसार सूचना प्राप्ति में यह कैसे सहायक है इसे वरदान या अभिशाप मानने के क्या कारण हो सकते हैं।
 - 2. अपनी किसी यात्रा के दौरान हुई असहजतापूर्ण हुई घटना का वर्णन कीजिए ।
 - किसी ऐसी घटना का वर्णन कीजिए जिसमें आपको लगा हो कि समय अचानक बदल जाता है। आनंदित समय शोक में परिवर्तित होते समय नहीं लगता
- 2. पत्र लेखन
 - प्राथमिक कक्षाओं में शिक्षा का माध्यम मातृभाषा ही होना चाहिए इसके पक्ष या विपक्ष में तर्क देते हुए किसी समाचार पत्र के संपादक को पत्र लिखिए ।
 - कोरोना के बढ़ते मामले को ध्यान में रखते हुए अपने कॉलोनी की सुरक्षा के लिए नियमित सैनेटाइज की मांग करते हुए अपने नगर निगम के अधिकारियों को पत्र लिखिए ।
 - सरकारी बैंक की एक शाखा अपने ग्राम में खोलने के लिए अनुरोध करते हुए जिला मुख्यालय में स्थित बैंक के प्रधान प्रबंधक को पत्र । बैंक खोलने का औचित्य भी लिखिए ।
 - अपने पसंदीदा कार्यक्रम की चर्चा करते हुए टी.वी. चैनल के कार्यक्रम निदेशक को पत्र लिखकर कार्यक्रम को और अधिक आकर्षक बनाने के लिए सुझाव दीजिए ।
- 3. निम्नलिखित प्रश्नों का उत्तर लिखिए
 - 1. पत्रकारिता लेखन से आप क्या समझते हैं पत्रकार कितने प्रकार के होते हैं ?
 - 2. उल्टा पिरामिड शैली से आप क्या समझते हैं ?
 - 3. पेज थ्री पत्रकारिता क्या है?
 - 4. स्तंभ लेखन से आप क्या समझते हैं ?
 - 5. समाचार लेखन में छः ककारों का क्या महत्व है ?

4. निम्नलिखित प्रश्नों का उत्तर लिखिए

क.आत्मपरिचय कविता का परिपाद्य लिखिए।

ख. दिन जल्दी जल्दी ढलता है। कविता का उद्देश्य लिखिए।

ग.पाठ के आधार पर भक्तिन के चरित्र की विशेषताओं पर प्रकाश डालिए। घ बाजारूपन से क्या तात्पर्य है? किस प्रकार के व्यक्ति बाजार को साथर्कता प्रदान करते हैं अथवा बाजार की साथर्कता किसमें है?

KV CCL RANCHI SUMMER VACATION HOLIDAY HOME WORK 2025-26 CLASS XII (PHYSICS)

UNIT – I ELECTROSTATICS

Chapter – 01 Electric charges and Fields

CBSE 2023

Set I

- 1. The magnitude of the electric field due to a point charge object at a distance 4.0 m is 9 N/C. From the same charged object the electric field of magnitude, 16 N/C will be at a distance of
 - (a) 1 m (b) 2 m (c) 3 m (d) 6 m

Set II

- 2. An isolated point charge particle produces an electric field \vec{E} at a point 3 m away from it. The distance of the point at which the field is $\frac{\vec{E}}{4}$ will be
 - (a) 2 m (b) 3 m (c) 4 m (d) 6 m

Set III

3. An electric dipole moment 2 x 10⁻⁸ C m in a uniform electric field experiences a maximum torque of 6 x 10⁻¹ N m. The magnitude of electric field is

(a) 2.2×10^3 Vm⁻¹ (b) 1.2×10^4 Vm⁻¹ (c) 3.0×10^4 Vm⁻¹ (d) 4.2×10^3 Vm⁻¹

4. A point charge q_0 is moving along a circular path of radius a, with a point charge - Q at the centre of the circle. The kinetic energy of q_0 is

(a) $\frac{q_0 Q}{4\pi\varepsilon_0 a}$ (b) $\frac{q_0 Q}{8\pi\varepsilon_0 a}$ (c) $\frac{q_0 Q}{4\pi\varepsilon_0 a^2}$ (d) $\frac{q_0 Q}{8\pi\varepsilon_0 a^2}$

- 5. Assertion (A): Work done in moving b a charge around a closed path, in an electric field is always zero. Reason (R): Electrostatic force is a conservative force.
- 6. (a) (i) Use Gauss's law to obtain an expression for n the electric field due to an infinitely long thin straight wire with uniform linear charge density λ.
 - (ii) An infinitely long positively charged straight wire has a linear charge density λ . An electron is revolving in a circle with a constant speed v such that the wire passes through the centre, and is perpendicular to the plane of the circle. Find the kinetic energy of the electron in terms of magnitudes of its charge and linear charge density λ of the wire.
 - (iii) Draw the graph of kinetic energy as a function of linear charge density λ . (5)
- 7. Consider two identical point charges located at points (0,0) and (a,0). Is there a point on the line joining them at which the electric field is zero? (2)

CBSE 2022

- 1. A negatively charged object X is repelled by another charged object Y. However an object Z is attracted to object Y. which of the following is the most possibility for the object Z?
 - (a) positively charged only
- (b) negatively charged only
- (c) neutral or positively charged
- (d) neutral or negatively charged
- 2. In an experiment three microscopic latex spheres are sprayed into a chamber and become charged with charges +3e, +5e and -3e respectively. All the three spheres come in contact simultaneously for a moment and got separated. Which one of the following are possible values for the final charge on the sphere?

(a) +5e, -4e, +5e (b) +6e, +6e, -7e (c) -4e, +3.5e, +5.5e(d) +5e, -8e, +7e

3. An object has net charge 1 C and gains 5.0 x 1018 electrons. The net charge on the object becomes-

(a) -0.80 C (b) +0.80 C (c) +1.80 C (d) +0.20 C

4. Which of the following diagrams correctly represents the electric field between two charged plates if a neutral conductor is placed in between the plates?



 \mathbf{q}_0 C

Z

5. The magnitude of electric field due to a point charge 2q, at a distance r is E. Then the magnitude of the electric field due to a uniformly charged thin spherical shell of radius R with total charge q at distance r/2 (r >> R) will be

6. A square sheet of side 'a' is lying parallel to XY plane at z = a. The electric field in the region is $\vec{E} = c \ z^2 \ \hat{k}$. The electric flux through the sheet is

(b) $\frac{1}{3}a^3c$ (c) $\frac{1}{3}a^4c$ (**d**) 0 (a) $a^4 c$

7. Three charges q, -q and q₀ are placed as shown in figure. The magnitude of the net force on charge q_0 at point O is

charge q₀ at point O is $\begin{bmatrix} k = \frac{1}{4\pi\epsilon_o} \end{bmatrix}$ (b) $\frac{2 k q q_0}{a^2}$ (c) $\frac{\sqrt{2} k q q_0}{a^2}$ (d) $\frac{1}{\sqrt{2}} \frac{k q q_0}{a^2}$ (a) 0

- 8. Four objects W, X, Y and Z, each with charge +q are held fixed at four points of a square of side d as shown in figure. Objects X and Z are on the midpoints of the side of the square. The electrostatic force exerted by object W on object X is F. Then the magnitude of the force exerted by object W on Z is
 - (c) $\frac{F}{2}$ (a) $\frac{F}{\pi}$ (b) $\frac{F}{r}$ (d) $\frac{F}{2}$
- 9. Assertion (A): A negative charge in an electric field moves along the direction of electric field. Reason (R): On a negative charge a force acts in the direction of the electric field.

CBSE 2020

(SET – 1)

- If the electric flux entering and leaving a closed surface in air are Ø₁ and Ø₂ respectively, the net electric charge enclosed within the surface is ______. (1)
- 2. Two small identical dipoles AB and CD each of dipole moment \vec{p} are kept at angle of 120^0 to each other in an external electric field \vec{E} pointing along the x- axis as shown in the figure. Find the
 - (a) dipole moment of the arrangement, and
 - (b) magnitude and direction of the net torque acting on it.



(3)

(1)

(3)

3. (a) Use Gauss's law to show that due to a uniformly charged spherical shell of radius R, the electric field at any point situated outside the shell at distance r from its centre is equal to the electric field at the same point, when the entire charge on the shell were concentrated at its centre. Also plot the graph showing the

variation of electric field with r, for $r \leq R$ and $r \geq R$.

(b) Two point charges of $+ 1\mu$ C and $+ 4\mu$ C are kept 30 cm apart. How far from the $+ 1\mu$ C charge on the line joining the two charges, will the net electric field be zero? (5)

(SET - 2)

1. Electric flux through a spherical surface shown in the figure, is _____

2. (a) Two electric field lines cannot cross each other. Also they cannot form closed loops. Give reasons.

(b) A particle of charge 2 μ C and mass 1.6 g is moving with a velocity 4 \hat{i} ms⁻¹. At t = 0 the particles enters in a region having an electric field \vec{E} (in NC⁻¹) = 80 \hat{i} + 60 \hat{j} . Find velocity of the particle at t = 5 s. (3)

(SET – 3)

- 1. Two small identical dipoles AB and CD each of dipole moment \vec{p} are kept at angle of 90⁰ to each other in an external electric field \vec{E} pointing along the x- axis as shown in the figure. Find the
 - (a) dipole moment of the arrangement, and
 - (b) magnitude and direction of the net torque acting on it.



Chapter – 02 Electrostatic potential and capacitances

CBSE 2023

1. Two charged conducting spheres of radii a and b are connected to each other by a wire. Find the ratio of the electric fields at their surfaces. (3)

OR

- 2. A parallel plate capacitor (A) of capacitance C is charged by a battery to voltage V. The battery is disconnected and an uncharged capacitor (B) of capacitance 2C is connected across A. Find the ratio of
 - (i) Final charges on A and B.
 - (ii) total electrostatic energy stored in A and B finally and that stored in a initially.

(3)
- 3. (i) Consider two identical point charges located at points (0,0) and (a,0). Is there a point on the line joining them at which the electric potential is zero? Justify your answer.
 - (ii) State the significance of negative value of electrostatic potential energy of a system of charges.

Three charges are placed at the corners of an equilateral triangle ABC of side 2 m as shown in figure. Calculate the electric potential energy of the system of three charges. (5)

<u>CBSE 2022</u>

- 1. The electric potential V at any point (x,y,z) is given by $V = 3 x^2$ Where x is in metres and V in volts. The electric field at the point (1m, 0, 2m) is –
 - (a) $6 V/m a \log x axis$ (b) $6 V/m a \log + x axis$
 - (c) 1.5 V/m along x axis (d) 1.5 V/m along + x axis
- 2. A variable capacitor is connected to a 200 V battery. If its capacitance is changed from 2 μ F to X μ F, the decrease in energy of the capacitor is 2 x 10⁻² J. The value of X is
 - (a) $1 \ \mu F$ (b) $2 \ \mu F$ (c) $3 \ \mu F$ (d) $4 \ \mu F$
- 3. A + 3.0 nC charge Q is initially at rest at a distance of $r_1 = 10$ cm from a + 5.0 nC charge q fixed at the origin. The charge Q is moved away from q to a new position $r_2 = 15$ cm. In this process work done by the field is
 - (a) $1.29 \times 10^{-5} J$ (b) $3.6 \times 10^{5} J$ (c) $-4.5 \times 10^{-7} J$ (d) $4.5 \times 10^{-7} J$
- 4. Two charges 14 μ C and -4μ C are placed at (-12 cm, 0, 0) and (12 cm, 0, 0) in an external electric field $E = B/r^2$, where $B = 1.2 \times 10^6$ N/ (cm)² and r is in metres. The electrostatic potential energy of the configuration is (a) 97.9 J (b) 102.1 J (c) 2.1 J (d) 97.9 J

<u>CBSE 2020</u>

(SET – 1)

- 1. In the figure given below, find the
 - (a) Equivalent capacitance of the network between points A and B. Given : $C_1 = C_5 = 8 \mu F$, $C_2 = C_3 = C_4 = 4 \mu F$.

(b) maximum charge supplied by the battery, and (c) total energy store

2. (a) Two point charges q_1 and q_2 are kept r distance apart in uniform external electric field \vec{E} . Find the work done in assembling this system of charges.

(3)

- (b) A cube of side 20 cm is kept in a region as shown in the figure. An electric field \vec{E} exists in the region such that the potential at a point is given by V = 10 x + 5, where V is in volt and x is in m. Find the
 - (i) Electric field $\vec{\rightarrow}$, and (ii) total electric flux through the cube.

(SET – 2)

- 1. In the figure given below, find the
 - (a) Equivalent capacitance of the network between points A and B. Given : $C_1 = C_5 = 4 \mu F$, $C_2 = C_3 = C_4 = 2 \mu F$.
 - (b) maximum charge supplied by the battery, and
 - (c) total energy stored in the network.



+4.0 µC

BC

-4.0 µC

OA

C

+2.0 µC



(SET – 3)

- 1. The potential difference between two points in vacuum is V₀. If vacuum is replaced by a medium of dielectric constant K, the new value of potential difference will be_____.(1)
- 2. A capacitor of 4 μ F is charged by a battery of 12 V. The battery is disconnected and a dielectric slab of dielectric constant 8 is inserted between the plates of the capacitor to fill the space completely. Find the change in the

(a) charge stored in the capacitor, (b) potential difference between the plates of the capacitor, and

(c) energy stored in the capacitor.

<u>Chapter – 03 CURRENT ELECTRICITY</u> CBSE 2023

- 1. When is more power delivered to a light bulb- just after it is turned on and the glow of the filament is increasing or after the glow becomes steady? Why? (2)
- 2. A battery is connected first across the series combination and then across the parallel combination, of three resistances R, 2R and 3R. In which of the three resistances will power dissipated be maximum in the two cases? Justify your answer.(2)
- 3. (i) Derive the relation between the current and the drift velocity of free electrons in a conductor. Briefly explain the variation of resistances of a conductor with rise in temperature.
 - (ii) An ammeter, together with an unknown resistance in series is connected across to identical batteries, each of emf 1.5 V, connected (i) in series, and (ii) in parallel. If the current recorded in the two cases be $\frac{1}{2} A$ and $\frac{1}{3} A$ respectively, calculate the internal resistance of each battery. (5)
- 4. (i) State Kirchhoff's rules. Use them to obtain the condition of balance for a Wheatstone bridge.
 - (ii) Use Kirchhoff's rule to determine the current flowing through the branches MN, TO and SP in the circuit shown in the figure.

(SET -2)

- 1. Assertion (A) : The temperature coefficient of resistance is positive for metals and negative for semiconductors.
 - Reason (R) : The charge carrier in metals are negatively charged whereas in semiconductors they are positively charged.

<u>CBSE 2023</u>

- 1. A current of 0.8 A flows in a conductor of 40 Ω for 1 minute. The heat produced in the conductor will be (a) 1445 J (b) 1536 J (c) 1569 J (d) 1640 J
- Define current density and relaxation time. Derive an expression for resistivity of a conductor in terms of number density of charge carriers in the conductor and relaxation time. (3)

(SET – 2)

- 1.A steady current of 8 mA flows through the wire. The number of electrons passing through a cross-section of the wire in 10 s is
 - (a) $4.0 \ge 10^{16}$ (b) $5.0 \ge 10^{17}$ (c) $1.6 \ge 10^{16}$ (d) $1.0 \ge 10^{17}$



(3)

- 2. A conductor of 10 Ω is connected across a 6 V ideal source. The power supplied by the source to the conductor is
 - (a) 1.8 W (b) 2.4 W (c) 3.6 W (d) 7.2 W
- 3. Two cells of emf E1 and E2 and internal resistances r1 and r2 are connected in parallel, with their terminals of the same polarity connected together. Obtain an expression for the equivalent emf of the combination. (3) (SET - 3)
- 1. The current in a device varies with time t as I = 6t, where I is in mA and t is in s. The amount of charge that passes through the device during t = 0 s to t = 3 s is
 - 10 mC 18 mC 27 mC (d) 54 mC (a) (b) (c)
- 2. A potential difference V is applied across a conductor of length l and cross-sectional area A. Briefly explain how the current density j in the conductor will be affected if
 - (a) the potential difference V is doubled
 - (b) the conductor were gradually stretched to reduce its cross-sectional area to A/2 and then same potential difference V is applied across it. (3)

CBSE 2022

8. Case

- 1. Kirchhoff's first rule $\Sigma I = 0$ and second rule $\Sigma IR = \Sigma E$ (where the symbols have their usual meanings) are respectively based on -
 - (a) conservation of momentum and conservation of charge.
 - (b) conservation of energy and conservation of charge.
 - (c) conservation of charge and conservation of momentum.
 - (d) conservation of charge and conservation of energy.
- 2. The electric power consumed by a 220 V 100 W bulb when operated at 110 V is
 - 25 W 30 W 35 W 40 W (a) (b) (c) (d)
- 3. Which of the following has negative temperature coefficient of resistivity?
- (a) metal (b) metal and semiconductor (c) semiconductor (d) metal and alloy
- 4. In a DC circuit the direction of current inside the battery and outside the battery respectively are
 - (a) positive to negative terminal and negative to positive terminal.
 - (b) positive to negative terminal and positive to negative terminal.
 - (c) negative to positive terminal and positive to negative terminal.
 - (d) negative to positive terminal and negative to positive terminal.
- 5. A car battery is charged by 12 V supply and energy stored in it is 7.20×10^5 J. The charge passed through the battery is
 - (a) $6.0 \times 10^4 \text{ C}$ (b) $5.8 \times 10^3 \text{ J}$ (c) $8.64 \times 10^6 \text{ J}$ (d) $1.6 \times 10^5 \text{ J}$
- 6. Two sources of equal emf are connected in series. This combination is, in turn connected to an external resistance R. The internal resistance of two sources are r_1 and r_2 ($r_2 > r_1$).

The potential difference across the source of internal resistance r_2 is zero, then R equals to – (r) r2 - r1 $r2 \times r1$ r_{1} r2+ r1

(a)
$$\frac{r^2 - r^1}{r^2 + r^1}$$
 (b) $r_2 - r_1$ (c) $\frac{r^2 \times r^1}{r^2 - r^1}$ (d) $\frac{r^2 + r^1}{r^2 \times r^1}$
7. The equivalent resistance between A and B of the network shown in figure is
(a) $3R \Omega$ (b) $3/2 R \Omega$ (c) $2R \Omega$ (d) $2/3 R \Omega$
8. Case Study : An experiment was set up with the circuit diagram shown in figure. Given that $R_1 = 10 \Omega$, $R_2 = R_3 = 5 \Omega$, $r = 0 \Omega$ and $E = 5 V$
(i) The points with the same potentials are -
(a) b, c, d (b) f, h, j (c) d, e, f (d) a, b, j
(i) The points with the same potentials are -
(a) b, c, d (b) f, h, j (c) d, e, f (d) a, b, j

(ii) The current through the branch bg is –

	(a)	1 A	(b) 1/3 A	(c) 1	1 / 2 A	(d) 2	/ 3 A		
(iii)) The power dissipated in R_1 is –								
	(a) 2 W	(b) 2.5 W	(c)	3 W	(d)	4.5 W		
(iv)	The potential difference across R_3 is –								
	(a) 1.5 V	(b) 2 V	(c)	2.5 V	(d)	3 V		
(SET	'-1)								

CBSE 2020

- 1. A cell of internal resistance r connected across an external resistance R can supply maximum current when R = r/2(A) $\mathbf{R} = \mathbf{r}$ **(B)** $\mathbf{R} > \mathbf{r}$ $\mathbf{R} = \mathbf{0}$ (C) (D) 2. In a current carrying conductor, the ratio of the electric field and the current density at a point is called
- (A) Resistivity (B) Conductivity (C) Resistance (D) Mobility
- 3. Define the term mobility of the charge carriers in a current carrying conductor. Obtain the relation for mobility in term of relaxation time. (2)
- 4. Define the term drift velocity of electrons in a current carrying conductor. Obtain the relationship between the current density and the drift velocity of electrons.
- 5. (a) Derive the condition of balance for Wheatstone bridge.

(SET - 2)

1. Resistivity of a given conductor depends upon

(A) temperature (B) length of conductor (C) area of cross section (D) shape of the conductor 2. The ratio of the current density and the electric field is called

- Resistivity Conductivity (C) (A) (B) Resistance (D) Mobility (SET - 3)
- 1. For a fixed potential difference applied across a conductor, the drift speed of free electrons does notdepend upon
 - Free electron density in the conductor (A)
 - length of the conductor. (C)

2. Ohm's law is obeyed by

- (A) Extrinsic semiconductors.
 - (B) Intrinsic semiconductors. (D) metal at high temperature.

(B) mass of the electron.

(D) temperature of the conductor.

(2)

(C) metal at low temperature.

KENDRIYA VIDYALAYA CCL RANCHI SUMMER HOLIDAY HOME WORK CLASS XII CHEMISTRY (2025-2026)

SOLUTIONS

Q1 What do you understand by colligative properties? Write them.

Q2 (a)Show graphically that the freezing point of a liquid will be depressed when a non volatile solute is dissolved in it.

(b)The freezing point of a solution containing 0.3gm of acetic acid in 30.0gm of benzene is

lowered by 0.45° C. calculate the vant Hoff factor (K_f for benzene = 5.12KKg/mol)

Q3 One litre aqueous solution of sucrose (mm =342gmmol-) weighting 1015gm is found to record

on osmotic pressure of 4.82 atm at 293K. What is the molarity of the sucrose solution? (R=

 $0.0821 \text{ atm mol}^{-1}\text{K}^{-1}$

Q4 (a) Show graphically how the vapour pressure of solvent and a solution in it of a non-volatile

solute change with temperature. Show on this graph the boiling points of the solvent and

solution. Which is higher and why?

(b) A solution containing 3.00g of BaCl₂ in 250g of water boils at 100.083⁰C. Calculate the

value of vant hoff factor and molality of $BaCl_2$ in this solution. (K_b for water =0.52KK/mol molar

mass of $BaCl_2 = 208.3 \text{gmol}^{-1}$)

Q5 Calculate the number of moles of methanol in 5 litre of its 2m solution. If the density of

the solution is 0.981 Kg/l (Molecular mass of methanol = 32.0 gm/mol)

Q6 An aqueous solution containing 1.248g of BaCl₂(mm = 208.34g/mol) in 100 g of water

boils at 100.0832 0 C. Calculate the degree of dissociation of BaCl₂ (K_b for water is 0.52KKg/mol)

Q7 a)What are ideal non ideal solutions. Explain with the suitable diagram the behaviour of ideal solution.

b) Assuming complete dissociation, Calculate the expected freezing point of a solution,

prepared by dissolving 6.00g of Glaubers salt (NaSO₄.10H₂O) in 0.100Kg of water) $K_f = 1.86KKg/mol$

Q8 What is meant by Vant Hoff factor? The osmotic pressure of a 0.0103 molar solution of an electrolyte is found to be 0.70 atm at 27^{0} C. Calculate the Vant Hoff factor (R = 0.082Latm mol⁻¹K⁻¹) What conclusion do you draw about the molecular state of the solute in the solution?

Q9 What is the sum of the molecular fraction of all the components in the 3 component System.

Q10 Define following terms (i)Mole fraction (ii) molarity

Q11 The elements A and B form purely covalent compounds having molecular formulae AB_2 and

AB₄. When dissolved in 20g of benzene 1gm of AB_2 lowers the freezing point by 2.3K whereas

1gm of AB₄ lowers it by 1.3K .The molar depression constant for benzene is 5.1KKg/mol.

Calculate the atomic mass of A and atomic mass of B.

Q12 Calculate the molality of a solution containing 20.7g of K₂CO₃. Dissolved in 500ml of

solution assume density is 1g/ml³

Q13 What would be the value of Vant Hoff factor for a dilute solution of K₂SO₄ in water

Q14 State Henrys law for solubility of a gas in a liquid. Explain the significance of Henrys law

Constant (K_H). at the same temperature, hydrogen is mole soluble in water than helium. Which

will have a higher value of K_H and why?

Q15 (a)Urea forms an ideal solution in water. Determine the vapour pressure of an aqueous

solⁿ containing 10% by mass of urea at 40^oC vapour pressure of water at 40^oC is 55.3 mmHg.

(b)Why is freezing point depression of 0.1 M NaCl solution twice that of 0.1 M glucose solution.

Q16. State the condition resulting in reverse osmosis.

Q17 A 0.1539 molal aqueous solution of cane sugar (M=342 g mol⁻¹) has a freezing point of 271K

while the freezing point of pure water is 273.15K. What will be the freezing point of on aqueous

solution containing 5g of glucose (M=180 g/mol) per 100 g of solution.

Q18 How much of sucrose is to be added to 500 g of water such that it boils at 100°C if the molal elevation constant for water is 0.52 K kg mol⁻¹ and the boiling point of water at 750 mm Hg is 99.63°C?

Q19 Define osmotic pressure and describe how the molecular mass can be determined on the basis of osmotic pressure measurement.

Q20 State Raoults law for Solution of volatile liquid components. Taking a suitable example explain the meaning of (+) deviation.

Q21 A Solution containing 8 gm of a substance in 100 gm of diethyl ether boils at 36.86° C whereas pure ether boils at 35.60° C. Determine the mole mass of solute K_b=2.02 KKg/ mol)

Q22 a) Calculate the temp. at which a solⁿ containing 54 gm of glucose in 250 g of water will freeze

(Kf=1.86kg/mol)

b) 100mg of a protein is dissolved in enough water to make 10ml of a solution. If this solution

has an osmotic pressure of 13.3mm Hg at 250 C. What is the molar mass of the protein?

R=0.0821 Latm mol⁻¹ k^{-1}) and 760 mm Hg=1atm

c) What conc. of nitrogen should be present in a glass of water at room temperature?

Assume a temp of 250C, total pressure is 1 atm and mole fraction of Nitrogen in air is 0.78. KH is

8.42 X10⁻⁷M/mmHg for nitrogen.

Q23 What mass of ethylene glycol (M=62.0g/mol) must be added to 5.50kg of water from 0^{0} C to -10^{0} C (Kf for water = 1.86kg/mol)

Q24 15g of an unknown molecular substance was dissolved in 450g of water. The resulting solution

freezes at -0.34^oC. What is the molar mass of the substance (Kf for water is 2.86KKg/mol)

Q25 What mass of NaCl must be dissolved in 65.0gm of water to lower the freezing point of water by

 $7.50^{0}\mathrm{C.The}$ freezing point depression constant Kf $1.86\mathrm{KKg/mol}.$ Assume vant Hoff factor for NaCl

is 1.87 (M=58.5 gm)

Q26 A solution of glycerol($C_3H_8O_3$)) in water was prepared by dissolving some glycerol in 500g of water. This solution has a boiling point of 100. 42^{0} C.What mass of glycerol was dissolved to make this

solution? (Kb for water is 0.512KKg/mol)

Q27 a) An aqueous solution of 10gm of glucose (C₆H₁₂O₆) in 90gm of water at 303K. If the

vapor pressure of pure water at 303K be 32.8mmHg. What would be the vapour pressure of the

solution.

(b)1.00g of a non-electrolyte solute dissolved in 50g of benzene by 0.40K. Find the molar mass of the

solute (K_f for benzene is 5.12KKg/mol)

c)Define the following terms (i)Ideal solution (ii) Azeotrope (iii) Osmotic pressure

Q28 a) A solution of $glucose(C_6H_{12}O_6)$ in water is labelled as 10% by weight. What would be the

molality of the solution?(molar mass of glucose is 180mol⁻¹)

(b)A solution containing 15g urea (M = 60) per litre of solution in water has the same osmotic pressure (isotonic) as a solution of glucose (M180) in water. Calculate the mass of glucose present in one litre of its solution.

Q29 What type of deviation is shown by a mixture of ethanol ad acetone? Give reason.

Q30 (i)Why are aquatic species more comfortable in cold water than in warm water?

(ii) What happens when we place the blood cell in saline water solution (hypertonic solution)?

Q31 Vapour pressure of water at 20° C is 17.5mmHg. Calculate the vapour pressure of water at 20° C When 15 gm of glucose is dissolved in 150gm of water.

Q32(i)Write the colligative property which is used to find the molecular mass of macromolecules.

(ii)In non ideal solution what type of deviation shows the formation of minimum boiling Azeotropes

Q33 Calculate the boiling point of solution when 2g of Na_2SO_4 was dissolved in 50g of water,

assuming Na₂SO₄ undergoes complete ionization.

Q34 (a)A 10% solution (by mass) of sucrose in water has a freezing point of 269.15K. Calculate

the freezing point of 10% glucose in water if the freeing point of pure water is 273.15K

Given (Molar mass of sucrose = 342gmol⁻¹ and Molar mass of glucose = 180gmol⁻¹)

(b) 30g of urea (M=60gmol⁻¹) is dissolved in 846 g of water. Calculate the vapour pressure

of water for this solution if vapour pressure of pure water at 298K in 23.8 mmHg.

(c) Write two differences between ideal solutions and non-ideal solutions.

Q36 Calculate the freezing point of a solution containing 60 g of in 250 g of water (k_f of water = 1.86 KKg/mol)

Q37 A solution containing 1.9 g per 100 ml of KCl (M = 74.5 g mol-) is isotonic with a solution

containing 3 g per 100 ml of Urea (M = 60). Calculate the degree of dissociation of KCl

solution. Assume that both the solution have same temperature.

Q38What happens when

(i) A pressure greater than osmotic pressure is applied on the solution side separated

from solvent by a semipermeable membrane?

(ii) Acetone is added to pure ethanol?

Q39 The freezing point of a solution containing 5g of benzoic acid (M = 122g mol-1) in 35 g of

benzene is depressed by 2.94 K. What is the percentage association of benzoic acid if it forms a

dimer in solutions? (K_f for benzoic acid = 4.9 Kg mol⁻¹)

Q40 When 2.5g of a non-volatile solute was dissolved in 50ml of water, it gave boiling point

elevation of 0.52° C. The molar mass of the solute is (K_b for water = 0.52 Kkgmol⁻¹)

Electrochemistry

1. Conductivity of 0.00241M acetic acid is 7.896X10⁻⁵ Scm⁻¹. Calculate its molar conductivity

and it the limiting molar conductivity of acetic acid is 390.5 Scm² mol⁻¹. What is its degree

dissociation?

2.Write the Nernst equation for the cell and find the emf of the cell at 298K

Mg(s) /Mg2+(0.001M)llCu2+(0.0001m)/Cu(s)Given that E⁰ $_{Mg2+/Mg}$ = -2.36 V, E⁰ $_{Cu2+/Cu}$ = +0.34 V

3.Represent the cell in which the following reaction takes place

 $Mg(s) + 2Ag^+ (0.0001M) \rightarrow Mg^{2+} (0.130 M) + 2Ag(s)$

Calculate its E_{cell} if $E^o\ \mbox{cell}=3.17\ V$. Calculate Gibb's free energy change and equilibrium constant

4.Can a Nickel spatula be used to stir a solution of copper sulphate? Justify your answer.

 $(E_{Ni+2/Ni} = -0.25V E_{Cu2+/Cu} = 0.34V)$

5. The conductivity of 0.20M KCl solution at 298K is 0.0248 S/cm. Calculate its molar conductivity.

6. Write the Nernst equation for the following cell.

Ni(s) +2Ag⁺ (0.01M)------ Ni $^{2+}$ _(aq) (0.001M) + 2Ag(s)

7. Given that standard electrode potentials, of different metal ion are:

 $K^+/K = -2.93V$, $Ag^+/Ag = 0.80V$, $Hg^{2+}/Hg = 0.79V$, $Mg^{2+}/Mg = 2.37V$, $Cr^{3+}/Cr = -0.74V$

Arrange these metals in their increasing order of reducing power.

8. Why does conductivity of a solution decrease with dilution?

9. The EMF of a cell corresponding to the reaction ($E^{\circ} Z_{n2^+/Z_n} = -0.76V$)

Zn(s) +2H⁺(aq) ------- Zn ²⁺(0.1M) +H₂(g,1atm) is 0.28V at 25^oc

Write the half cell reaction and calculate the PH of the solution at Hydrogen electrode

10. EMF =0.2V at 298K Cd(s) /Cd²⁺(?)llNi²⁺(2.0M)/Ni(s)

Given that $E^0_{Cd2+/Cd}$ = -0.40 V $E^0_{Ni2+/Ni}$ = -0.25V

11. Write the cell reaction of a lead storage battery when it is discharging electrolyte change when the battery is discharged?

12. Why on dilution the Λ_m of CH₃COOH increases drastically while that of CH₃COONa increases gradually?

13. (a) Which type of a metal can be used in cathodic protection of iron against rusting?

(b) Write the name of the electrolyte used in fuel cell.

14. The molar conductivity of sodium acetate, sodium chloride and hydrochloric acid are 83,127 and 426 mho cm²mol⁻¹ at 250°C respectively. Calculate the molar conductivity of acetic acid solution.

15. What will be the sign of ΔG for an electrochemical cell and an electrolytic cell?

16. The resistance of a conductivity cell containing 0.001 M KCl solution at 298 K is 1500 W. What is the cell constant if conductivity of 0.001 M KCl solution at 298 K is 0.146×10^{-3} S cm⁻¹?

17. (i) Define limiting molar conductivity and fuel cell.

(ii) Resistance of a conductivity cell filled with 0.1 mol L^{-1} KCl solution is 100 ohm. If the resistance of the same cell when filled with 0.02 mol L^{-1} KCl solution is 520 ohm, calculate the conductivity and molar conductivity of 0.02 mol L^{-1} KCl solution. The conductivity of 0.1 mol L^{-1} KCl solution is 1.29×10^{-2} ohm⁻¹ cm⁻¹.

18. (i) State two advantages of H₂—O₂ fuel cell over ordinary cell.

(ii) Silver is electrodeposited on a metallic vessel of total surface area 500 cm² by passing a current of 0.5 amp for two hours. Calculate the thickness of silver deposited [Given: Density of silver = 10.5 g cm⁻³, Atomic mass of silver = 108 amu, $F = 96,500 \text{ C mol}^{-1}$]

19. Conductivity of 2.5×10^{-4} M methanoic acid is $5.25 \times 10 - 5$ S cm⁻¹. Calculate its molar conductivity and degree of dissociation.Given: lo (H+) = 349.5 S cm² mol⁻¹ and lo (HCOO-) = 50.5 S cm² mol⁻¹.

20 a.) Assertion (A) : The Daniell cell becomes dead after some time.

Reason (R): Oxidation potential of zinc anode decrease and that of copper cathode increases.

b.) Assertion (A) : Copper liberates hydrogen from a dilute solution of hydrochloric acid.

Reason (R) : Copper is below hydrogen in the electrochemical series.

c.) Assertion (A) : F_2 is stronger oxidising agent than Cl_2 .

Reason (R) : Oxidation potential of F_2 is greater than that of Cl^2 .

d.) Assertion (A) : H2 – O2 fuel cell gives a constant voltage throughout its life.

Reason (R) : In this cell, H2 reacts with OH- ions, yet the overall concentration of OH- ions does not change

6.) Assertion (A) : Molar conductivity of a weak electrolyte at infinite dilution cannot be determined experimentally.

Reason (R) : Kohlrausch law helps to find molar conductivity of a weak electrolyte at infinite dilution.

PROJECTS

Scientific investigations involving laboratory testing and collecting information from other sources. Do it as assigned according to roll numbers.

a) Study of the presence of oxalate ions in guava fruit at different stages of ripening.

b) Study of quantity of casein present in different samples of milk.

c) Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.

d) Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.)

e) Study of digestion of starch by salivary amylase and effect of pH and temperature on it.

f) Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.

g) Extraction of essential oils present in Saunf (aniseed), Ajwain (carom), Illaichi (cardamom).

h) Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chili powder and pepper.

I)Study of acidity of fruit and vegetable juices.

Summer vacation HW

Class xii

Biology

- 1. Complete the assignment given to you from chapter 1 and 2.
- 2. Complete your practical work assigned.
- 3. Make an investigatory project upon any of the following topic.
 - a) Edible parts of fruit and seed
 - b) Seed dormancy
 - c) Pollen diversity and viability
 - d) Causes of infertility in male and female
 - e) Contraceptive measures
 - f) A.R.T. and infertility today
 - g) STDs.

4.Please make two case based and ten CBT qns from first unit.

KENDRIAYA VIDYALAYA CCL RANCHI

HOLIDAY H.W. FOR SUMMER VACATION

CLASS XII SCIENCE, SUBJECT:- MATHS

(2025-26)

GENERAL INSTRUCTIONS:-

- (a) All work must be done in a single notebook dedicated to Holiday Homework
- (b) Homework must be submitted on the first day after summer vacation
- (c) PYQ OF CHAPTER 1, 2 & 3 OF LAST 05 YEARS AISSCE (20 21, 22, 23, 24, 25.) will be shared in your class whatsapp group in pdf format.

Message by Subject Teacher(VIPESH KUMAR SINGH, PGT(MATH)

This break is a well –deserved opportunity to refresh your mind and body. While you enjoy your holidays, remember that class 12 is a crucial year. Make time for both rest and preparation. Read, explore new skills, revise tightly and most importantly take care of your well-being.

<u>CHAPTER – 1(RELATION AND FUNCTION)</u> MCQ QUESTIONS

- (i) Let R be the relation in the set Z of all integers defined by $R = \{(x, y) : x y \text{ is an integer}\}$. Then R is (a)reflexive (b) symmetric (c) transitive (d) an equivalence relation (ii) Let f: $\mathbb{R} \to \mathbb{R}$ be a function defined by $f(x) = x^3 + 4$, then f is (c) Bijective (a) Injective (b) Surjective (d) None of these (iii) Let $A = \{1, 2, 3\}$ and $B = \{a, b, c\}$, then the number of bijective functions from A to B are (b) 8 (c) 6 (d) 4 (a) 2 (iv) The number of surjective functions from A to B where $A = \{1, 2, 3, 4\}$ and $B = \{a, b\}$ is (a) 14 (b) 12 (c) 2(d) 15 (v) Let A = $\{1, 2, 3\}$ and R = $\{(1, 2), (2, 3)\}$ be a relation in A. Then, the minimum number of ordered pairs may be added, so that R becomes an equivalence relation, is
 - (a) 7 (b) 5 (c) 1 (d)4

LONG ANSWER QUESTIONS

(i) Show that the function $f: N \to N$ given by f(x) = 3x-4 is one-one but not onto.

(ii) Show that f:N
$$\rightarrow$$
N defined by f(n)= $\begin{cases} \frac{n+1}{2} & \text{if } n = odd \\ \frac{n}{2}, & \text{if } n = even \end{cases}$ is many onto function

- (iii) Let $A = N \times N$ be the set of ail ordered pairs of natural numbers and R be the relation on the set A defined by (a, b) R (c, d) iff ad = bc. Show that R is an equivalence relation.
- (iv) Check whether the relation R in the set R of real numbers, defined by : $R = \{(a, b): 1 + ab > 0\}$, is reflexive, symmetric or transitive.
- (v) Let N denote the set of all natural numbers and R be the relation on N x N defined by : (a, b) R(c,d) is ad(b + c) = bc(a + d). Show that R is an equivalence relation.

CHAPTER - 2(INVERSE TRIGONOMETRIC FUNCTIONS)

- (i) Prove that $\tan^{-1} \left[2 \sin \left(2 \cos^{-1} \frac{\sqrt{3}}{2} \right) \right] = \frac{\pi}{3}$
- (ii) Express $\tan^{-1}\left(\frac{3x-x^3}{1-3x^2}\right)$ in simplest form.
- (iii) Find the domain of $y = \cos^{-1}(x^2 4)$

(iv) Find the value of
$$\cos^{-1}\left(\cos\frac{2\pi}{3}\right) + \sin^{-1}\left(\sin\frac{2\pi}{3}\right)$$

(v) Prove that: $\sec^2(\tan^{-1} 2) + \csc^2(\cot^{-1} 3) = 15$.

CHAPTER – 3 (Matrices)

(i) If
$$A = \begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$$
, then find the real values of x and y such that $(x I + y A)^2 = A$
(ii) If $A = \begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$, then find the real values of x and y such that $(x I + y A)^2 = A$
(iii) If $F(x) = \begin{bmatrix} \cos x & -\sin x & 0 \\ \sin x & \cos x & 0 \\ 0 & 0 & 1 \end{bmatrix}$, prove that $F(x) F(y) = F(x+y)$
(iv) Let $A = \begin{bmatrix} 0 & -\tan \frac{a}{2} \\ \tan \frac{a}{2} & 0 \end{bmatrix}$ and I be identity matrix of order 2. Show that $I + A = (I-A) \begin{bmatrix} \cos a & -\sin a \\ \sin a & \cos a \end{bmatrix}$

(v) CASE BASED QUESTION (Four marks question)

Q1: Three schools A, B and C organized a mela for collecting funds for helping the rehabilitation of flood victims. They sold handmade fans, mats and plates from recycled material at a cost of Rs. 25, Rs.100 and Rs.50 each. The number of articles sold by schools A, B and C are given below.

¥	Article / School	-	А	В	C
	Fans		40	25	35
	Mats		50	40	50
	Plates		20	30	40

Based on the above information, answer the following questions:

- (i) Write a matrix P be a 3×3 matrix represent the sale of handmade fans, mats and plates by schools.
- (ii) Write a matrix Q of 3×1 represents the sale price of given products.
- (iii) Find the collected funds by all the three schools for all products

ACTIVITIES - (TO BE DONE IN A SEPARATE ACTIVITY NOTE-BOOK)

- TO VERIFY THAT THE RELATION R IN THE SET L OF ALL LINES IN A PLANE, DEFINED BY R = {(L, M) : L || M} IS AN EQUIVALENCE RELATION.
- 2. TO DEMONSTRATE A FUNCTION WHICH IS NOT ONE ONE BUT ONTO.
- 3. TO DRAW THE GRAPH OF SIN⁻¹ X USING THE GRAPH OF SINX AND DEMONSTRATE THE CONCEPT OF MIRROR REFLECTION (ABOUT THE LINE Y = X).
- 4. TO UNDERSTAND THE CONCEPT OF DECREASING AND INCREASING FUNCTIONS.

KENDRIYA VIDYALAYA, CCL, RAJENDRA NAGAR, RANCHI CLASS XII SUBJECT- PHYSICAL ACTIVITY TRAINER SUMMER VACATION HOME WORK

Unit 1

OVERVIEW OF PHYSICAL EDUCATION AND SPORTS SECTOR

Topic: Describe the job profile and career opportunities of a Physical Education Assistan

SHORT ANSWERS OF THE FOLLOWING

Q1. What are the main responsibilities of a Physical Education Assistant?

Q2. What skills are required to be an effective Physical Education Assistant?

Q3. How does a Physical Education Assistant contribute to a school's sports program?

Q4. What career paths can a Physical Education Assistant pursue?

Q5. Why is teaching Physical Education important in schools?

Q6. What is the role of a coach in sports?

Q7. What are the main responsibilities of a Sports Manager?

Q8. What are some essential qualities of a good coach?

Q9. How does sports management contribute to the success of an event?

Q10 What are some career opportunities in the field of Coaching and Sports Management?

Q11. What are the responsibilities of a fitness trainer?

Q12. Who is an Equipment Manager, and what do they do?

Q13. What are some career opportunities in the fitness sector?

Q14. How does proper equipment management benefit athletes?

Q15. What are some common fitness certifications required for a career in the fitness industry?

Q16. What are the responsibilities of a sports journalist?

Q17. What skills are required to be a successful sports photographer?

Q18. How has digital media influenced sports journalism?

Q19. What are some career opportunities in sports photography?

Q20. What is the importance of photography in sports?

Q21. What is sports medicine, and why is it important?

Q22. What role does a sports psychologist play in an athlete's performance?

Q23.What are some common injuries treated by sports medicine specialists?

Q24. How does mental training help athletes improve their game?

Q25. What are some career opportunities in sports medicine and sports psychology?

Q26. What is sports nutrition, and why is it important for athletes?

Q27. How does a sports nutritionist help an athlete?

Q28. What are the key nutrients required for an athlete's diet?

Q29. Why is protein important for athletes?

Q30. What are some career opportunities in the field of sports nutrition?

Q31. What is physical activity?

Q32. How do games differ from sports?

Q33. What are the key characteristics of sports?

Q34. How does recreation contribute to well-being?

Q35. Give two examples of recreational activities.

LONG ANSWER OF FOLLOWING

Q2. Discuss the differences between physical activity, games, sports, and recreation with examples. Q1. Discuss the importance of life skills in sports and how they contribute to overall development

XXXXXXXXXXXXXXXXX