# KENDRIYA VIDYALAYA BIRBHUM 

## Summer Vacation Home Work

Session 2022-2023
Class - VI
SUBJECT: ENGLISH


## ENGLISH

## 1. Lights, Camera, Action!

- Watch any of the MOVIES from the options listed below and write a review.
A) Night at the Museum
B) The Chronicles of Narnia
C) Journey to the Centre of the Earth

Your REVIEW must include the following:

* Character sketch of the central character
* Message of the movie?
*If you had a chance to ask a character in this movie a question, what would it be and to whom?


## 2. READ! READ! READ!

Read any ONE of the BOOKS given below and prepare a COVER PAGE FOR THE BOOK OF YOUR CHOICE.
A) Alice's Adventures in Wonderland.
B) A Christmas Carol.
C) A Book for Every Jack and Gill.
D) The Pied Piper of Hamelin.

Link for the books: http://en.childrenslibrary.org/
3. WRITING MAKES YOU PERFECT!

WRITE 5 PARAGRAPHS ON 5 DIFFERENT THEMES OF YOUR CHOICE.

## 4. Its GRAMMAR TIME!

A. Write 10 Assertive sentences, 10 Interrogative sentences and 10 Exclamatory sentences.
C. 10 SENCENTENCES WITH ADJECTIVES, 10 SENTENCES WITH ADVERB, 10 SENTENCES WITH ARTICLES. UNDERLINE THE ADJECTIVES, ADVERBS AND ARTICLES IN TH ESENTENCES.

## 5. LITERATURE

1. PAGE 10-12 from "Back to Basics" book
2. Prepare 10 MCQs from each of the following lessons:-
A. AN INDIAN AMERICAN WOMAN IN SPACE
B. THE FRIENDLY MONGOOSE
C. TARO'S REWARD
D. BEAUTY (POEM)

## SUBJECT: HINDI

नोट:- सभी प्रश्न अपनी कक्षाकार्य की कॉपी में ही लिखिए। इसके लिए अलग से कोई कॉपी न बनाइये I सभी प्रश्न साफ़ एवं सुन्दर अक्षरों में लिखें I

1- पाठ 1 और 2 के शब्दार्थ लिखकर याद करें I
2- पाठ 1 कविता के भावार्थ को सुन्दर अक्षरों में लिखिए I
3- संज्ञा की परिभाषा और उसके उदाहरण लिखिए I
4- संज्ञा की भेद की परिभाषा लिखिए और उनके उदाहरण भी बताइए I
5- सर्वनाम की परिभाषा एवं उसके भेद लिखकर याद करें I
6- विशेषण की परिभाषा एवं उसके भेद लिखिए तथा सभी भेद के दो-दो उदाहरण लिखिए I

## SUBJECT: SANSKRIT

1. संस्कृत छात्रप्रतिज्ञाया: प्रार्थनाया: च वाचनस्य पुनः पुनः अभ्यासं कुरुत ।
(संस्कृत छात्रप्रतिज्ञा और प्रार्थना को पुनः पुनः बोलने का अभ्यास करें और याद करें)
2. प्रथम, द्वितीय पाठस्य अभ्यासकार्यम् स्वअभ्यासपुस्तिकायां लिखत।
(प्रथम, द्वितीय पाठ के अभ्यासकार्य को अपनी अभ्यास पुस्तिका में लिखिए)
3. संस्कृते त्रीणि लिङ्ञनि ,त्र्य: पुरूषा:, त्रीणि वचनानि च कानि सन्ति , स्वअभ्यासपुस्तिकायां लिखत।
(संस्कृत भाषा के तीन लिङ्ग, तीन पुरूष, तीन वचन कौन कौन हैं उनके नाम अपनीअभ्यासपुस्तिका में लिखो)
4. कर्तृपदै: सह क्रियापदानि योजयित्वा 9 सरलसंस्कृत वाक्यानां रचनां कुरुत ।
(कर्तृपदों के साथ क्रियापदों को मिलाकर के 9 सरलसंस्कृत वाक्यों की रचना करो )

## कर्तृपदानि

स: $\qquad$ तौ - $\qquad$ ते $\qquad$
त्वं - $\qquad$ युवां $\qquad$ यूयं - $\qquad$ अहं - $\qquad$ आवां- $\qquad$ वयं- $\qquad$

## SUBJECT: MATHEMATICS

Q1. On a coloured paper make Eratosthenes sieve for finding prime numbers upto 100 . Q2. Do all the questions from chapter $1 \& 2$ in a separate Notebook.

## SUBJECT: SCIENCE

Q1. Draw the flow chart of types of fibres and paste the fibres/fabric in a4 size paper.
Q2. Name the different city or states and their famous clothes.
Q3. What is rain water harvesting? How rain water harvesting is done in different parts of India?
Q4. What are the different types of wastes? Categorize the waste which can be recycled into new item.
Q5. Write in points how you can keep yourself, home and school clean.
Q6. What is balanced diet? Write its component.
Q7. Write the test of Carbohydrates, Proteins and fat.

## SUBJECT: SOCIAL SCIENCE

## HISTORY (WORKSHEET)

## CHAPTER 1-WHAT, WHERE, HOW AND WHEN?

ANSWER THESE (in one word or one sentence)
Q1. What do we call a person who studies past events?
Q2. What is full forms of BC and AD?
Q3. When did the ancient period end in India?
Q4. What was the ancient Indian name of river Indus?
Q5. Name three types of archaeological source material.

## ANSWER THESE (in not more than 20 words)

Q1. Define the term history.
Q2. Define the term archaeology.
Q3. What kind of information is provided by manuscript?
Q4. What are art effects?
Q5. What is chronology?
(CIVICS)

## WORKSHEET

## ANSWER THESE -

Q1. Name three kinds of social groups.
Q2. Name two things that the people of a nation have in common.
Q3. Name two regions of India where matrilineal families are found.
Q4. Mention some religions that are followed in India
STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FLASE
Q1. Human beings do not need to live in groups.
Q2. Communities depend on each other.
Q3. Different religious communities have different festivals, rituals and places of worship.
Q4. People living in coastal areas eat a lot of fish.
Q5. Diversity divides India as a nation.
(GEOGRAPHY)

## ACTIVITY

Q1. Draw a picture of solar system in chart paper.
Q2. Make a model of globe.
SUBJECT: WORK EDUCATION (W.E.)
Q1. Make a simple torch light.
Q2. Make 02book marker and 06 name slips.
Q3. Prepare wall hanging or attractive decorative item.
SUBJECT: ART EDUCATION (A.E.)
Q1. Draw freehand drawing of 10 human figures.
Q2. Draw the composition of 1.landscape 2.village 3.my school. Use any colour.
Q4. Pencil shade on the subject of vegetable $n$ fronts.

The End
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## Summer Vacation Home Work

Session 2022-2023
Class - VII

## SUBJECT: ENGLISH



ENGLISH

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C) Journey to the Centre of the Earth


## Your REVIEW must include the following:

* Character sketch of the central character
* Message of the movie?
*If you had a chance to ask a character in this movie a question, what would it be and to whom?


## 2. READ! READ! READ!

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B) A Christmas Carol.
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D) The Pied Piper of Hamelin.

Link for the books: http://en.childrenslibrary.org/

## 3. WRITING MAKES YOU PERFECT!

PREPARE A DIGITAL SCRAPBOOK (PPT) of YOUR BEST MOMENTS SPENT IN THE VACATION AND ADD SOME PICTURES TO IT.( AT LEAST 10 ENTRIES SHOULD BE THERE.). You are free to design your scrapbook on your own.

## 4. IT'S GRAMMAR TIME!

A. Write 10 Assertive sentences, 10 Interrogative sentences and 10 Exclamatory sentences.
B. Prepare a worksheet of ARTICLE and 2 Worksheets on ADJECTIVE AND ADVERB.(Include Fill in the blanks, MCQs in the questionnaire)

## 5. LITERATURE

1. PAGE 3-8 from "Back to Basics" book
2. Prepare 10 MCQs from each of the following lessons:-
A. Gopal and the Hilsa Fish
B. Bringing Up Kari
C.The Desert

## SUBJECT: HINDI

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2- पाठ 1 कविता के भावार्थ को सुन्दर अक्षरों में लिखिए।
3- संजा की परिभाषा और उसके उदाहरण लिखिए I
4- संज्ञा की भेद की परिभाषा लिखिए और उनके उदाहरण भी बताइए I
5- सर्वनाम की परिभाषा एवं उसके भेद लिखकर याद करें I
6- विशेषण की परिभाषा एवं उसके भेद लिखिए तथा सभी भेद के दो-दो उदाहरण लिखिए I
7- आम, पानी, आग, कमल, वायु, नदी, जंगल, पुत्र की 3-3 पर्यायवाची शब्द लिखिए I

## SUBJECT: SANSKRIT

1. संस्कृत छात्रप्रतिज्ञाया: प्रार्थनाया: च वाचनस्य पुनः पुनः अभ्यासं कुरुत । (संस्कृत छात्रप्रतिज्ञा और प्रार्थना को पुनः पुनः बोलने का अभ्यास करें और याद करें)
2. किम् शब्दस्य रूपाणि त्रिषु लिड्गेषु लिखत । (किम् शब्द के रूप तीनो लिंगो में लिखिए)
3. निम्नलिखित धातुनां रूपाणि लट्,लृट्, लङ्लकारेषु च लिखत - चर्, कृ (निम्नलिखित धातुओं के रूप लट्, ,लृट् और लङ् लकार में लिखिए)
4. प्रथमपाठस्य श्लोकान् स्मृत्वा स्वअभ्यासपुस्तिकायां अर्थम् लिखत। (प्रथम पाठ के श्लोकों को याद करके अपनी अभ्यास पुस्तिका में अर्थ लिखिए)
5. पज्च सरलसंस्कृत वाक्येषु स्वस्य परिचयं लिखत ।
( पांच सरल संस्कृत वाक्यों में अपना परिचय लिखिए )
6. एतेषां वर्णानाम् उच्चारणस्थानं लिखत-
i. ट् $\qquad$ ओ $\qquad$ य् $\qquad$ ण्. $\qquad$
ii. थ् $\qquad$ ज् $\qquad$ ग् $\qquad$ उ. $\qquad$
iii. ए $\qquad$ न् $\qquad$ ऋ $\qquad$ व्. $\qquad$
7. एतेषु मूर्धन्यवर्णान् गोलाकारं कुरुत -

च्, ल्, ए, म्, आ, ष्, य्, उ
8. प्रदत्तानि उच्चारणस्थानानि अधिकृत्य द्वौ वर्णो लिखत -
$\qquad$ दन्त्य: - $\qquad$
ii. तालव्य: - $\qquad$ कण्ठ्य: - $\qquad$
$\qquad$ नासिक्य:- $\qquad$

## SUBJECT: MATHEMATICS

1) What should be subtracted from -9876 to obtain -9512 ?
2) The temperature of a city is $4^{0} \mathrm{C}$. Next day the temperature falls by $5^{\circ} \mathrm{C}$. What is the temperature of the city next day?
3)A diver descends 20 feet in the water from the boat at the surface of a lake. He then rose 12 feet and descends another 18 feet. At this point what is his depth in water?
3) Verify $a-(-b)=a+b$ for the following values of ' $a$ ' and' $b$ '
a. $a=34 \quad b=-73$
b. $a=45 \quad b=30$
4) Verify the following
a. $\quad(-22) \times((-4)+(-5)]=((-22) \times(-4)]+((-22) \times(-5)]$
b. $\quad(-12) x[(3)+(-9)]=[(-12) x(4)]+[(-12) x(-9)]$
5) The price if a stock decreases Rs. 45 per day for four consecutive days. What was the total change in value of the stock over 4 day period?
6) A group of hikers is descending the mountain at a rate of 600 feet per hour. What is the change in elevation of hiker after 6 hours?
8. Suppose we represent the distance above the ground by a positive integer and that below the ground by a negative integer, then answer the following:
(i) An elevator descends into a mine shaft at the rate of 5 metre per minute.

What will be its position after one hour?
(ii) If it begins to descend from 15 m above the ground, what will be its position after 45 minutes?
9. In a class test containing 15 questions, 4 marks are given for every correct answer and ( -2 ) marks are given for every incorrect answer.
(i) Gurpreet attempts all questions but only 9 of her answers are correct. What is her total score?
(ii) One of her friends gets only 5 answers correct. What will be her score?
10. In a test $(+5)$ marks are given for every correct answer and ( -2 ) marks are given for every Incorrect answer.
(i) Radhika answered all the questions and scored 30 marks though she got 10 correct answers.
(ii) Jay also answered all the questions and scored (-12) marks though he got 4 correct answers. How many incorrect answers had they attempted?
11. A shopkeeper earns a profit of ` 1 by selling one pen and incurs a loss of 40 paisa per pencil while selling pencils of her old stock. (i) In a particular month she incurs a loss of 5 . In this period, she sold 45 pens. How many pencils did she sell
in this period?
(ii) In the next month she earns neither profit nor loss. If she sold 70 pens, how many pencils did she sell?
12. Under addition and multiplication, integers show property called distributive property. That is, $\mathrm{a} \times(\mathrm{b}+\mathrm{c})=\mathrm{a} \times \mathrm{b}+\mathrm{a} \times \mathrm{c}$ for any three integers $\mathrm{a}, \mathrm{b}$ and c . Verify this, using proper numerical example.
13. We studied, how integers could be multiplied, and found that product of a positive and a negative integer is a negative integer, whereas the product of two negative integers is a positive integer. Verify these, using five examples of each.
14. Integers are closed for addition and subtraction both. That is, $(a+b)$ and $(a-b)$ are again integers, where $a$ and $b$ are any integers. Verify this, using suitable numerical examples.
15. (i).Integer 0 is the identity under addition. (True/False)
(ii). the integer 1 is the identity under multiplication. (True/False)
16. (i).When a positive integer is divided by a negative integer, the quotient obtained is negative and vice-versa. Verify this, using proper numerical examples.
(ii). Division of a negative integer by another negative integer gives positive as quotient. Verify this, using suitable numerical examples.
17. In a test $(+5)$ marks are given for every correct answer and ( -2 ) marks are given for every incorrect answer. Find
i. Radhika answered all the questions and scored 30 marks and get 10 correct answers. Numbers of incorrect answers are?
ii. Jay also answered all the questions and scored (-12) marks though he got 4 correct answers. Find Number of incorrect answers.
iii. Ram gets 3 correct and 4 incorrect out of 7 questions he attempted. Find the score.
18. Find solutions for the following problems:
a. Both numbers are greater than (-I5) and less than 5 .One number is 6 greater than the other number.
b. The numbers are opposites.

The distance between the two numbers on the number line is 18 .
c. One number is -35.

The distance between the two numbers on the number line is 20 .
19. Learn table upto 20.

SUBJECT: SCIENCE

## (Biology)

1. Chapter: Nutrition in Animals
a) Complete the Exercise Question No. 1,2,3,4,9,11 in the book. Use pencil to write the answers in the book
b) Write the answers to the question nos. 5,6,7,8,10 in your Science copy.
2. Prepare a separate copy for the activity and project related works
a) Prepare a project on any two insectivorous plants. You can draw or paste pictures of the plants. Mention about their place of occurrence, features, mode of taking food etc.
b) Prepare a project on the different types of human teeth. Draw diagrams or paste pictures. Write about their function.

## SUBJECT: SOCIAL SCIENCE <br> History

Q1. What are the sources used by the historians to study the past?
Q2. What does the word 'Rajputs' stand for?
Q3. What did the decline of the Mughal Empire lead to in the 18th century?
Q4. How do historians divide the history of India into three periods? What are the drawbacks of this division?
Q5. What were 'Prashastis'?
Q6. Who was Mahmud Ghazni? How did he expand his kingdom?
Q7. How did the Cholas rise to power?
Q8. Who was Dantidurga? How did he became a Kashatriya?

## Geography

Q1. What is environment?
Q2. Explain the components of environment with five examples of each.
Q3. Describe lithosphere and hydrosphere.
Q4. What do you understand by the term "Ecosystem"?
Q5. What are fossils?
Q6. What are minerals? How are they useful for mankind?
Q7. What happens when igneous and sedimentary rocks go under great heat and pressure?
Q8. What are the main constituents of the core?

## Civics

Q1. What is Dignity?
Q2. Define the term 'Democracy'.
Q3. What is midday meal programme? List three benefits of the programme.
Q4. What is universal adult franchise? What is the basis of it?
Q5. What do you mean by a public health care system?
Activity/Project- 3: Make a model of Earth's Interior on A4 Page and write details about its layers.
a) Use different colours to show various layers
b) Project should be on A4 size paper only.
c) Write your name, roll no., title of the project, class, and subject.

SUBJECT: WORK EDUCATION (W.E.)
Q1. Prepare gift type envelope using silver paper/Decorative paper.
Q2. Prepare working model using cell, Battery, lamp, switch, wire, etc. or any decorative items/craft model.

Q1. Draw human figure in10 different posture.
Q2. Draw n paint West Bengal folk art.

Q3. Composition. Use any colour. Sub:-garden, city scape.
Q4. Pencil shade of kinds of utensil.
The End
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## Summer Vacation Home Work

Session 2022-2023
Class - VIII

## SUBJECT: ENGLISH



ENGLISH

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## 4. IT'S GRAMMAR TIME!

A. Prepare a questionnaire on "Fill in blanks with correct forms of verb"
B. Prepare a questionnaire on Direct and Indirect Speech.(Include MCQ, Matching the column type questions) with answers.
5. LITERATURE

1. PAGE 140-146 from "Back to Basics" book
2. Prepare 10 MCQs from each of the following lessons:-
A. THE TSUNAMI
B. MACAVITY,THE MYSTERY CAT
C. GLIMPSES OF THE PAST
D. BEPIN CHOWDHURY'S LAPSE OF MEMORY

## SUBJECT: हिंदी

प्रश्न-1 धवनि पाठ का सारांश अपने शब्दों में लिखें?
प्रश्न-2 कवि निराला ने अभी न होगा मेरा अंत क्यों कहा?
प्रश्न-3 हमारा प्रिय त्यौहार विषय पर निबंध लिखो?
प्रश्न-4 लाख की चूड़ियाँ पाठ से आप को क्या सीख मिली?
प्रश्न-5 भारत की खोज में अहमद नगर के किले की घटनाओं के विषय में लिखें।
प्रश्न-6 सर्वनाम ,विशेषण, की परिभाषा एवं प्रकार उदाहरण सहित लिखें?
प्रश्न-7 ब्रिजकोर्स के अंतर्गत हिंदी स्वर एवं व्यंजन लिखें तथा ,पानी, रमेश ,दीपक शब्दों का वर्ण विच्छेद लिखो।
प्रश्न-8 चाक और डस्टर फ़िल्म देखकर प्राप्त ज्ञान अपने शब्दों में लिखो।

## SUBJECT: SANSKRIT

## 1. संस्कृत छात्रप्रतिज्ञाया: प्रार्थनाया: च वाचनस्य पुनः पुनः अभ्यासं कुरुत ।

(संस्कृत छात्रप्रतिज्ञा और प्रार्थना को पुनः पुनः बोलने का अभ्यास करें और याद करें)
2. प्रथमपाठस्य श्लोकान् स्मृत्वा स्वअभ्यासपुस्तिकायां अर्थम् लिखत।
(प्रथम पाठ के श्लोकों को याद करके अपनी अभ्यास पुस्तिका में अर्थ लिखिए)

## 3. अस्मद् शब्दस्य रूपाणि लिखत।

(अस्मद् शब्द के रूप लिखिए)

## 4. खाद् धातुनां रूपाणि पज्चलकारेषु च लिखत ।

(खाद् धातु के रूप पांचों लकारों में लिखिए)
5. दश सरलसंस्कृत वाक्येषु स्वस्य परिचयं लिखत ।
( दश सरल संस्कृत वाक्यों में अपना परिचय लिखिए)

## 6. उदाहरणमनुसृत्य सन्धिं विच्छेदं वा कुरुत -

‘अक: सवर्णे दीर्घ:', इति सूत्रेण समान-स्वरवर्णयो: दीर्घदेश: भवति। एष: ‘दीर्घसन्धि:’ इति कथ्यते।।
(क)
अ, आ + अ, आ $=$ आ
i. सूर्य + आतपे $=$ सूर्यातपे (अ + आ $=$ आ)
ii. लोभ + आविष्टा $=$ $\qquad$ (....................... )
iii. हिमालयः = $\qquad$ $+$ $\qquad$
$\qquad$
iv. एव + अस्य $=$ $\qquad$ (. $\qquad$ .)
v. पूर्वार्द्ध: $\qquad$ $=$ $\qquad$ (. $\qquad$ )
(ख)
इ, ई + इ, ई = ई
i. अति + इव $=$ अतीव (इ+इ=ई)
ii. नदी + इयम् = $\qquad$ (......................)
iii. कपि + ईदश: = $\qquad$
$\qquad$
iv. कपीन्द्र: = $\qquad$ $+$ $\qquad$ (......................)
( ग)
उ, ऊ + उ, ऊ = ऊ
i. गुरु + उचितम् = गुरूचितम् (उ+उ=ऊ)
ii. भानु + उदय: = $\qquad$ (......................)
iii. लघूर्मि: $\qquad$ $+$ $\qquad$ (. $\qquad$
iv. भू + उर्ध्वम् = $\qquad$ (. $\qquad$
v. साधूपदेश: = $\qquad$ $+$ $\qquad$ (......................)
(घ)

i. पितृ + ॠणम् $=$ पितृ णम्(ऋ + ॠ= )
ii. मातृ + ऋद्धि: $=$ $\qquad$ (. $\qquad$
iii. भ्रातृ णम् $\qquad$ $+$ $\qquad$ ( $\qquad$

# SUBJECT: MATHEMATICS <br> SECTION-A 

1. Associative property is not followed by which type of numbers?
2. __Is the identity for the addition of rational numbers?
(a) 1
(b) 0
(c) -1
3. What is the multiplicative identity for rational numbers?
4. What is the additive inverse of $3 / 5$ ?
5. How many reciprocals does zero have?
6. Write true or false.
(i) The rational number that does not have any reciprocal at all.
(ii) The rational numbers those are equal to their reciprocals.
(iii) The rational number that is equal to its negative.
7. Give a rational number which when added to it gives the same number.
8. By what rational number should $22 / 7$ be divided, to get the number $-11 / 24$ ?
9. Represent the following rational numbers on the number line.(i) $3 / 10$ (ii) $8 / 7$ (iii) $21 / 7$
10. If you subtract $1 / 8$ from a number and multiply the result by $1 / 4$, you get $1 / 16$. What is the number?
11. Find two rational numbers between (i)-3 and 3.(ii) 0 and 1.
12. Find six rational numbers between (i)-1/4 and $-2 / 5$ (ii) $21 / 12$ and $12 / 21$.
13. Find two rational and two irrational no between $1 / 8$ and $2 / 9$.

## SECTION-B

1 Write three rational numbers occurring between $1 / 3$ and $4 / 5$.
2. Multiply the negative of $2 / 3$ by the inverse of $9 / 7$.
3. What should be added to- $16 / 3$ to make it $1 / 9$ ?
4. What should be subtracted from $5 / 8$ to make it -1 ?
5. Write different properties of a rational number.
6. Represent $3 / 4$ and $8 / 9$ on a number line.
7. Find the greater of the two $-12 / 5$ and $4 / 9$
8. Multiply the negative of $29 / 2$ by its inverse.
9. Write a rational number equivalent to $9 / 10$ having 90 as numerator.
10.Write a rational number equivalent to18/29 having 87 as denominator.
11.Write $2 / 3,-4 / 9,-8 / 11$ in ascending order.
12.Write $2 / 3,-4 / 9,-8 / 11$ in descending order.

## SECTION-C

1. What are the multiplicative and additive identities of rational numbers?
2. Write the additive inverse of $19 /-6$ and $-2 / 3$
3. Write the multiplicative inverse of-13/19 and -7
4. Mention a rational number which has no reciprocal.
5. Mention any 4 rational numbers which are less than 5.
6. Mention the commutatively, associative and distributive properties of rational numbers. Also, check $a \times b=b \times a$ and $a+b=b+a$ for $a=1 / 2$ and $b=3 / 4$
7. Write any 5 rational numbers between $-2 / 5$ and $1 / 2$.
8. If the product of any two rational numbers is 2 and one of them is $1 / 7$, find the other? Represent $-2 / 11,-5 / 11$, and $-9 / 11$ on the number line

## SECTION-D

1. Solve the following line are equations:
(i) $x-11=7$
(ii) $\mathrm{z}+8=9$
(iii) $11 \mathrm{x}=121$
(iv) $3(2 x-3)=4(2 x+4)$
(v) $3 x / 2-2 x / 3=8$
(vi) $2 x-1 / 6=3$
2. Write and Learn table 1 to 25
3. Identify line are equation in one variable from given equations- (i) $x^{2}+x=2$ (ii) $3 x+5=-8$ (iii) $x+y=5$, (iv) $t+2=3$
A positive number is 5 time another number. If 21 is added to both the numbers, then one of the new numbers become twice of other new numbers. Find the original number.
4. There is a narrow rectangular plot. The length and breadth of the plot are in the ratio of 11:4. At the rate of Rs. 100 perimeter it will cost village panchayat Rs. 75000 to fence the plot. What are the dimensions of the plot?
5. Convert the following statements into equations. (a) 3 added to a number is 11 (b) 2 subtracted from a number is equal to 15 . (c) 3 times a number decreased by 2 is 4 . (d) 2 times the sum of the number $x$ and 7 is 13 .

## SUBJECT: SCIENCE

Q1. Define crops. What are kharif crops and Rabi crops? Give examples.
Q2. Write a short note on types of irrigation system in India.
Q3. Why ploughing and tilling is necessary before sowing of crops?
Q4. What are weeds? How can they be removed?
Q5. How the food grains can be stored?
Q6. Write the differences between fertilizer and manure.
Q7. Write the advantages and disadvantages of manure over fertilizer.
Q8. Explain the role of yeast in making bread.
Q9. What are antibiotics? Give example of antibiotics which are obtained from microbes.
Q10. Define the term micro-organisms. How many types of microorganisms are found in nature?
Q11. Give five examples of water borne disease.
Q12. Why salt is added to make pickle? Why pickle is kept in sunlight before it get stored?
Q13. Write the name of two plant disease caused by microbes.
Q14. Give example of two protozoa borne disease in animals
Q15. Define pasteurization. Who discovered this?
Q16. Define polymer. Give 4 examples of natural polymer.
Q17. Write the differences between thermoplastic and thermosetting polymer.
Q18. Write down some advantages and disadvantages of synthetic fibre over natural fibres.
Q19. Write the uses of the followings: rayon, nylon, acrylic and PET.
Q20. Write the differences between metal and non-metal.
Q21. Can copper sulphate solution be stored in a zinc container? Explain your answer. Q22. Write the reaction between iron and copper sulphate solution.

Q23. When metal reacts with acid, which gas is produced?
Q24. Write the name of a non-metal that is very hard in nature.
Q25. Why sodium metal is stored in kerosene.
Q26. Write few uses of iron and copper.
Q27. When metal reacts with oxygen, which type of oxide do they form? Give example of such reaction


## SUBJECT: SOCIAL SCIENCE

Q1. Project work on resource conservation
Q2. Project work on document keeping in British Period

#  

## SUBJECT: WORK EDUCATION (W.E.)

Q1. Prepare facemask using any suitable cloth.
Q2. Prepare chart about safety rules with image.
Q3. Prepare any decorative model / craft model.
SUBJECT: ART EDUCATION (A.E.)
Q1. Draw and colour folk art of West Bengal.
Q2. Sketch the Animal and Human figures.
Q3. Colour composition of 1.Village scape. 11. My School
Q4. Creative Design in Geometrical form and use poster colour

# Summer Vacation Home Work 

## Session 2022-2023

## Class - IX

## SUBJECT: ENGLISH

GENERAL INSTRUCTIONS:-

1. Assignments are arranged in weeks.
2. Attempt the assignments in a sequence (from 1 to 6 ).
3. Use subject-notebooks to answer the questions.
4. No need to make new notebooks for the assignments of summer vacation.
5. Give a heading for Every Week.

## ASSIGNMENT NO.:-1

1. "The Fun They Had" presents a scenario made known to us during the pandemic. We have experienced how different it is to learn, understand things online. The 'mechanical' teaching-learning process has made us cocooned, confined on one hand and open to the world on the other.
Prepare an ARGUMENT FOR DEBATE (either supporting the motion or opposing the motion) on "Online Education: Technology builds the future" and write it in your notebook

## ASSIGNMENT NO.:- 2

2. Read the story "THE LITTLE GIRL" by Catherine Mansfield


You have already read "The Lost Child" by Mulk Raj Anand. When the little boy lost his parents and his childhood together. The little girl 'found' his father and her childhood. This difference of experience touches the heart of the reader. Being a sensible reader, write a SPEECH on "The best creation of God is parents". In the speech, make frequent references to both the stories mentioned above. Record your speech and attach it to Google Classroom.

## ASSIGNMENT NO.:-3

3. GRAMMAR:- (LINK IS ATTACHED ON GOOGLE CLASSROOM)

## FROM THIS BOOK:- Page 47-48(GAP FILLING-UNSOLVED) Page 48-49(SENTENCE REORDERING-UNSOLVED) Page 53-55(TYPE-IV SENTENCE TRANSFORMATION) ASSIGNMENT NO.:-4

4. WRITING:-
5. BIOGRAPHY:- Write a biography of any of your favorite characters. Your biography should be arranged in 3 paragraphs (INTRODUCTION OF THE CHARACTER+HIS/HER EARLY LIFE AND ACHIEVEMENTS+ THE IMPORTANCE OF THE PERSON IN THE WORLD)

ASSIGNMENT NO.:- 5
READ THE LESSONS GIVEN BELOW:-
A. THE SOUND OF MUSIC(PART I AND II)
B. THE BEGGAR
C. IN THE KINGDOM OF FOOLS
D. THE HAPPY PRINCE

PREPARE A SCRAPBOOK CONTAINTAINING FOLLOWING FEATURES:-
A. Summary of the story.
B. Names of the characters.
C. Their unique characteristics.
D. Had they been different in the story, how would the story be different? Take main characters into consideration.(Choose any one difference and point out the difference in the ending.)

## ASSIGNMENT NO.:-6

Prepare a questionnaire of MCQ from any 5 lessons of your choice (at least 2 lessons have to be taken each from Beehive and Moments) in google form and attach the link on google classroom. At least 5 questions from each selected lesson will be set in the question paper.

## ACKNOWLEDGEMENT:-

GOOGLE.IN
SUPPORT MATERIAL,DELHI NCT
YOUTUBE.COM
www.katherinemansfieldsociety.org/

会

## SUBJECT: HINDI

प्रश्न-1 दो बैलों की कथा पाठ का सारांश अपने शब्दों में लिखें।
प्रश्न- 2 इस पाठ से हमें क्या सीख मिली? हम आगे चलकर अपने जीवन में इसको कहां तक लागू कर सकते हैं ?स्पष्ट करें।
प्रश्न -3 लेकिन औरत जात पर सींघ चलाना मना है।यह ,भूल जाते हो। हीरा के इस कथन के माधयम से स्त्री के प्रति प्रेमचंद्र के दृष्टिकोण को स्पष्ट कीजिए।

प्रश्न -4 ब्रिजकोर्स के अंतर्गत हिंदी के अंक 1 से 100 तक लिखकर उसकी हिंदी लिखो?
प्रश्न -5 कक्षा 8 में त्रिजकोर्स के अंतर्गत जहाँ पहिया है में साइकिल चलाने से महिलाओं के जीवन में क्या परिवर्तन आए?
प्रश्न-6 कबीर की साखियां पाठ का सारांश अपने शब्दों में लिखें?
प्रश्न-7 हिंदी में बनी हुई फिल्म
1- आई एम कलाम
2-,चॉक और डस्टर
3- बागवान देखें और उनसे मिलने वाली सीख का वर्णन अपने शब्दों में करें?
प्रश्न-8 निम्नलिखित विषयों में से किन्ही दो पर अनुच्छेद लिखें?
क-कोरोना महामारी भौगोलिक समस्या।

ख-समाज में बुजुर्गों की स्थिति(पहले/अब)।
3 -प्राकृतिक संपदा की सुरक्षा।
प्रश्न-9 उपसर्ग तथा प्रत्यय की परिभाषा लिखो ?
तथा 5 हिंदी , 5 संस्कृत तथा 5 विदेशी उपसर्गों का प्रयोग करते हुए पांच पांच शब्द बनाएं तथा पांच प्रत्यय- का प्रयोग करते हुए प्रत्येक प्रत्यय से दो दो शब्द बनाए?

प्रश्न 10 - जलभराव की समस्या को समाप्त कराने को ध्यान में रखते हुए अपने शहर के नगर निगम अध्यक्ष को एक पत्र लिखिए?


## SUBJECT: SANSKRIT

7. संस्कृत छात्रप्रतिज्ञाया: प्रार्थनाया: च वाचनस्य पुनः पुनः अभ्यासं कुरुत । (संस्कृत छात्रप्रतिज्ञा और प्रार्थना को पुनः पुनः बोलने का अभ्यास करें और याद करें)
8. प्रथमपाठस्य श्लोकान् स्मृत्वा स्वअभ्यासपुस्तिकायां लिखत।
(प्रथम पाठ के श्लोकों को याद करके अपनी अभ्यास पुस्तिका में लिखिए)

## 9. किम् शब्दस्य रूपाणि त्रिषु लिड्गेषु लिखत ।

(किम् शब्द के रूप तीनो लिंगो में लिखिए)

## 10.गम् , कृ धातुनां रूपाणि पज्चलकारेषु च लिखत । <br> (गम् , कृ के धातु रूप पांचों लकारों में लिखिए)

11. अधोलिखितेषु समुचितं सन्धिपदं चित्वा लिखत-

यथा— चन्द्र + उदय: $=$ चन्द्रोदय:/ चन्द्रौदय: / चन्द्रुदय: उत्तरम्- चन्द्रोदय:
i) मातृ + ऋणम् = मातर्णम् / मातृ णम्/ मातृणम् -
ii) यदि + अपि = यद्यपि / यदपि / यदापि - $\qquad$
iii) मत + ऐक्यम् = मतेक्यम् / मतैक्यम् / मत्येकम् - $\qquad$
iv) भानु + उदय: = भान्तुदय: / भानुदय: / भानूदय: - $\qquad$
v) भौ + उक: = भावक: / भाविक: / भावुक: $\qquad$
vi) विष्णो + इह = विष्णविह / विष्णवेह / विष्णोह - $\qquad$
vii) सर्वे + अत्र = सर्वे अत्र / सर्वेऽत्र / सर्व अत्र - $\qquad$
viii) गगा + इव = गड्సैव / गङ्गेव / गङ्गेव - $\qquad$
प्र. 6. अधोलिखितेषु सन्धिविच्छेदं रूपं पूरयित्वा सन्धे: नाम अपि लिखत-

यथा- अन्वेषणम् अनु + एषणम् - यण् सन्धि-
i) तवैव - $\qquad$ + एव - $\qquad$
ii) नदीव — नदी + $\qquad$
$\qquad$
iii) अत्याचार: — अति + $\qquad$ - $\qquad$
iv) शयनम् — $\qquad$ + अनम् - $\qquad$
v) यथोचितम् - यथा + $\qquad$ - $\qquad$


## SUBJECT: MATHEMATICS

1. Represent geometrically the following numbers on the number line (Write steps too)
(i) $\sqrt{ } 4.5$
(ii) $\sqrt{ } 5.6$
(iii) $\sqrt{ } 8.1$
(iv) $\sqrt{ } 2.3$
2. Solve the following questions of Number System from NCERT Exemplar textbook Page number $10 \& 11-$ Question number $7,8,9,10,11$ and 14 .

Page number 12 - Question number 4 and 7
3. Solve the following questions of Coordinate Geometry from NCERT Exemplar textbook Page number 25 i.e Exercise 3.1 from Exemplar book.
(Since all questions are MCQs so write the question and then answers with justification) Page number 28 i.e Exercise 3.2 from Exemplar book.
(Since all questions are T/F so write the questions also)
Page number 30 - Question number $1,5,6,7,8,11$
4. Activity -1: To obtain the mirror image of a given geometrical figure with respect to x -axis and y -axis.


## SUBJECT: SCIENCE

## Chapter 1 -

Q1. Ice, water and steam are three states of a substance and not different substances. Justify?
Q2.the rate of evaporation of a liquid increases on heating. Explain.
Q3. With the help of a labelled diagram, describe in brief an activity to show sublimation of ammonium chloride?
Q4. (a) The boiling point of water is 100 C under atmospheric pressure. Convert this temperature in SI units.
(b) What temperature in Kelvin scale is equal to 50 O c?
(c) Describe an activity to show that rate of evaporation increases with surface area.
(d) State two differences between evaporation and boiling.

## Chapter 5-

Q1. Write the contribution of the following scientist in the study of the cell:
a) Robert Hooke
b) Purkinje
c) Leeuwenhoek
d) Robert brown
e) Schneider and Schwann

Q2. What are the different types of endoplasmic reticulum? Write the function of each.
Q3. Name
a) An organelle which has its own genetic material
b) An organelle rich in digestive enzymes.
c) Nucleic acid present in nucleus.

Q4. Which kind of plastid is more common in
a) Roots of the plant
b) Leaves of the plant
c) Flowers and fruits

Q5. Draw a labelled diagram of plant cell and animal cell as shown in electron microscope.
Q6. What are the main functions of each of the following components?
a) Plasma membrane
b) Mitochondria
c) Nucleus
d) Ribosomes.

Q7. Write a note on the evolution of Mitochondria and Plastids.

SUBJECT: SOCIAL SCIENCE
(History)
Q1. Project work on French Revolution
Q2. Exercise work of French Revolution

## (Geography)

Q1. Define the term 'Subcontinent'. Why India is called a subcontinent?
Q2. What is Strait?
Q3. How does India occupy an important strategic position in South Asia?
Q4. Why do the days and nights are almost of equal duration at Kanniyakumari?
Q5. How has the long coastline been beneficial to India? Explain in detail.

Activity/Project- 2: Collect information about the "Silk Route" and draw it on world the map.
a) Write importance of silk route.
b) Silk Route should be drawn on world map and this map is to be pasted on A4 size paper.
c) Write your name, roll no, subject, and class on forefront of the page.
(ECONOMICS)

Q1. Differentiation between Traditional Farming Methods and Modern Farming Methods in three points.
Q2. State five reasons to show the Palampur is a developed village.
Q3. Name any four non-farm production activities in Palampur.
Q4. State any four requirements needed for production of goods and services.
Q5. Is it true that foodgrains output in India has increased significantly in last few years because larger areas of land have been brought under cultivation?
Q6. Identify which out of land, seeds, machinery and building is in the category of working capital.

## (CIVICS)

Q1. What is democracy? What are its features?
Q2. General Musharraf conducted elections. However Pakistan is still not called a democratic country. Why?
Q3. What is free and fair electoral competition? Does China have it?
Q4. How is the principle of One Person One Vote denied in Saudi Arabia?
Q5. Why is democratic government called more accountable form of government?
Q6. What is the role of press in a good democratic government?
Q7. Why is it said that democracy enhances the dignity of citizens?
Q8. Why Mexico is not considered an example of democracy?

## Activity

Prepare a chart on the freedom of press in democracy.
NOTE- Prepare Ch-1 the story of village Palampur
Ch-1What democracy why democracy


## SUBJECT: WORK EDUCATION (W.E.)

Q1. Draw the sketch, diagram of different types of fuses and mb on the chart paper.
Q2. Prepare flower pot using waste water bottle having flower design /any decorative item.
Q3. Prepare power point presentation about fuse.
 SUBJECT: ART EDUCATION (A.E.)
Q1. Different gesture of human figure's. Use pencil shade.
Q2. Draw Indian folk art in 3 different states.
Q3. Colourfull poster of Global warming and clean India.
Q4. Design three different motifs. Use colour.

## The End

# Summer Vacation Home Work 

Session 2022-2023
Class - X

## SUBJECT: ENGLISH

## GENERAL INSTRUCTIONS:-

6. Assignments are arranged in weeks.
7. Attempt the assignments in a sequence (from 1 to 6 ).
8. Use subject-notebooks only to answer the questions.
9. Give a heading for every assignment.

ASSIGNMENT NO:-1

1. You have read "A Letter to God". You have seen the irony of 'fate' of and irony of 'faith' in Lencho. Read the lesson "His First Flight". Discover the journey of the seagull from dependence to confidence that ultimately makes him successful. If for Lencho, it is the hailstorm, for the seagull it is hunger for food that compels them to find trust in God and himself respectively.
Prepare a speech on "Disaster is a blessing in disguise". Make frequent references to both the lessons mentioned above. Record your speech and attach it to Google Classroom.

ASSIGNMENT NO.:- 2
Read the story "LONG WALK TO FREEDOM" AND "THE HUNDRED DRESSES" PART I AND II. Both the main characters have suffered because of being 'different, they excelled in life for being 'different'. Prepare an argument for DEBATE on, " Strength lies in difference, not in similarity"(by Stephen Covey)

## Record your argument (supporting the motion/opposing the motion) and attach it to Google Classroom.

ASSIGNMENT NO. :3
Watch the short-film on the topic, "Never Give Up" on the link given below and Write A REVIEW OF IT. YOUR REVIEW SHOULD CONTAIN FOLLOWING POINTS:-
A. * Character sketch of the central character
B. * Message of the movie?
C. *If you had a chance to ask a character in this movie a question, what would it be and to whom?
LINK:- https://youtu.be/jfqi70s-9Is/
ASSIGNMENT NO.:-4
WRITING:- Write an editorial letter and a letter on placing order on the subjects of your choice.(Both the letters should contain at least 3 paragraphs each.)

ASSIGNMENT NO.:- 5
READ THE LESSONS GIVEN BELOW:-
A. THE NECKLACE
B. FOOTPRINTS WITHOUT FEET
C. A LETTER TO GOD

PREPARE A SCRAPBOOK CONTAINTAINING FOLLOWING FEATURES:-
E. Summary of the story
F. Names of the characters
G. Their unique characteristics.
H. Had they been different in the story, how would the story be different? Take main characters into consideration.(Choose any one difference and point out the difference in the ending.)

ASSIGNMENT NO.:-6
Prepare a questionnaire of MCQ from any 5 lessons of your choice (at least 2 lessons have to be taken each from FIRST FLIGHT and FOOTPRINTS WITHOUT FEET). At least 5 questions from each selected lesson will be set in the question paper.

## ACKNOWLEDGEMENT:- <br> GOOGLE.IN <br> SUPPORT MATERIAL, DELHI NCT <br> YOUTUBE.COM

## SUBJECT: HNDI

प्रश्न 1 सूरदास के पद पाठ के आधार पर 4 पदों का सारांश अपने शब्दों में लिखें।
प्रश्न- 2 उधौ द्वारा दिए गए योग के संदेश ने गोपियों की विरह कीअग्रि मे घी का काम कैसे किया है? स्पष्ट करें।
प्रश्न-3 गोपियों ने उद्धव के व्यवहार की तुलना किस किस के द्वारा की है?
प्रश्न -4 नेताजी का चश्मा पाठ का सारांश अपने शब्दों में लिखें।
प्रश्न-5जब तक हालदार साहब ने कैप्टन को साक्षात नहीं देखा था तब तक उनके मन में कैप्टन का कौन सा चेहरा था?अपनी कल्पना से लिखिए।

प्रश्न 5 हिंदी महीनों की सूची बनाएं तथा उनको याद करें।
प्रश्न-6कुछ मार्मिक प्रसंगों के आधार पर यह दिखाई देता है कि बालगोबिन भगत प्रचलित सामाजिक मान्यताओं को नहीं मानते थे बालगोबिन भगत पाठ के आधार पर उन प्रसंगों का उल्लेख अपने शब्दों में कीजिए।

प्रश्न - 7 रचना के आधार पर वाक्य के भेद तथा परिभाषा एवं दो दो उदाहरण लिखकर उनका परिवर्तन भी लिखें ।
प्रश्न 8 निम्नलिखित में से किन्ही दो विषयों पर अपने शब्दों में अनुच्छेद लिखें।
क-कोरोना महामारी कारण निवारण।
ख - पर्यावरण सुरक्षा हमारी नैतिक जिम्मेदारी।
ग-जल है तो कल है।
प्रश्न-9 हिंदी भाषा में बनी हुई निम्नलिखित फिल्मों को देखें।
1- आई एम कलाम
2- बागवान
3-तारे जमीन पर। इनसे प्राप्त होने वाली सीख को अपने शब्दों में व्यक्त करें।

प्रश्न- 10 अपने जिले के मुख्य चिकित्सा अधिकारी को एक पत्र लिखें तथा मच्छरों से फ़ैलने वाली बीमारियों से निपटने के लिए उचित प्रयास कराने की प्रार्थना करें।

## SUBJECT: SANSKRIT

12. संस्कृत छात्रप्रतिज्ञाया: प्रार्थनाया: च वाचनस्य पुनः पुनः अभ्यासं कुरुत । (संस्कृत छात्रप्रतिज्ञा और प्रार्थना को पुनः पुनः बोलने का अभ्यास करें और याद करें)
13. प्रथमपाठस्य श्लोकान् स्मृत्वा स्वअभ्यासपुस्तिकायां अर्थम् लिखत। (प्रथम पाठ के श्लोकों को याद करके अपनी अभ्यास पुस्तिका में अर्थ लिखिए)

## 14. सर्वनाम शब्दस्य रूपाणि लिखत ।

(सर्वनाम शब्द के रूप लिखिए)

## 15. कृ, दा धातुनां रूपाणि पज्चलकारेषु च लिखत ।

 (कृ, दा धातु के रूप पांचों लकारों में लिखिए)16. उदाहरणमनुसृत्य रिक्तस्थानानां पूर्ति: कोष्ठकात् समुचितै: समस्तपदै: कुरुत(लवकुशे/ लवकुशौ)
$\qquad$ जन: नित्यकर्म कृत्वा प्रातराशं करोति। (विशालवृक्ष:/ सुप्तोत्थित:)
ii) त्र्याणां लोकानां समाहार: $\qquad$ इति कथ्यते। (त्रिलोकी/ त्रिलोकम्)
iii) ऋषे: आश्रम: $\qquad$ अस्ति। (प्रतिगृहम्/ उपगङ्गम्)
iv) तव $\qquad$ मलिनम् अस्ति। (पाणिपादा:/ पाणिपादम्)
v) $\qquad$ सैनिक: व्रणयुक्त: जात:I (स्वर्गपतित:/ अश्वपतित:)
vi) $\qquad$ जीवनस्य उद्देश्या: सन्ति। (धर्मार्थकाममोक्षं/धर्मर्थकाममोक्षा:)

6 उदाहरणानि पठित्वा तदनुसारं विग्रहं समासनामानि च लिखत।

## उदाहरण-

पाणी च पादौ च तेषां समाहार:- पाणिपादम् (समाहार द्वन्द्व)
माता च पिता च इति — मातापितरौ (इतरेतर द्वन्द्व)
माता च पिता च इति — पितरौ (एकशेष)
i) ब्राह्मणौ
ii) सुखदु:खम् $\qquad$
iii) शिरोग्रीवम् $\qquad$
iv) रामलक्ष्मणभरता:
v) अजौ
vi) बालका: $\qquad$
vii) शास्त्रप्रवीण: $\qquad$
viii) नरसिंह: $\qquad$
ix) प्रत्यक्षम् $\qquad$
x) दशानन:

## SUBJECT: MATHEMATICS

## Section- A-

2. If -4 is a zero of the polynomial $x^{2}-x-2 k$, and then find the value of $k$.
3. If p and q are co-prime numbers, then write the $\operatorname{HCF}(\mathrm{p}, \mathrm{q})$.
4. Given that $\operatorname{HCF}(306,657)=9$, find LCM $(306,657)$.

5 . Find the zeroes of the polynomial $x^{2}-3$ and verify the relationship between the zeroes and the coefficients.
6. Given that $\operatorname{HCF}(306,657)=9$, find $\operatorname{LCM}(306,657)$.
7. Show that $4^{\mathrm{n}}$ cannot end with the digit zero for any natural number.
8. Find a quadratic polynomial, the sum and product of whose zeroes are -

3 and 2 respectively
9. Prove that $7-2 \sqrt{3}$ is irrational. Given that $\sqrt{3}$ is irrational.
10. Find the zeroes of the quadratic polynomial $x^{2}-2 x-8$ and verify the relationship between the zeroes and the coefficients.
11. If $\alpha$ and $\beta$ are the zeroes of the polynomial $(x)=x^{2}-6 x+k$, find the value of $k$ such that $\alpha^{2}+\beta^{2}=40$.

## Section-

## (ACTIVITY)

1) To draw the graph of a quadratic polynomial and observe:
(a) The shape of the curve when the coefficient of $x^{2}$ is positive.
(b) The shape of the curve when the coefficient of $x^{2}$ is negative.
(c) Its number of zeroes in each case
2) To Verify the Conditions for Consistency /Inconsistency for a Pair of Linear Equation in Two Variables by Graphical Method.

## SUBJECT: SCIENCE

Chapter 1 -- Activity - $1.1,1.2,1.3,1.4,1.5,1.6, \quad 1.7, \quad 1.8, \quad 1.9$

Chapter 2 -- Activity - 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15

Chapter 5 -- Activity -- $6.1,6.2,6.3,6.4,6.5,6.6,6.7,6.8$
Chapter 10 - Activity -- $10.1,10.2,10.3,10.4,10.5,10.6,10.7,10.8,10.9,10.10$, 10.11, 10.12, 10.13

## SUBJECT: SOCIAL SCIENCE

(History)
Q1. Project work on Nationalism in Europe
Q2. Exercise work of nationalism in Europe
(Geography)
Q1. Define the term 'Resource'. Explain the classification of resources on the basis of origin and give one example of each.
Q2. Explain four types of resources based on ownership and give one example of each type.
Q3. Distinguish between the followings-

1. Potential and Developed Resources
2. Stock and Reserves
3. Renewable and non-renewable resources

Q4. What is resource planning? Discuss major steps which take for conservation of resources at global level.
Q5. Discuss major causes of land degradation and its suitable conservation methods in India.
Q6. What type of soil is found in the river deltas of the Eastern Coast? Give three main features of this type of soil.
Project-Activity- 2: Draw the soil profile on A4 page and write its characteristics of each profile.
a) Use different colours to show the various profiles.
b) It should be drawn on A4 page only.
c) Write your name, roll no, class and subject on forefront of the page.

## (ECONOMICS)

## ACTIVITY:-

Q1. Do a Survey of 20 people of your locality from different walks of life and write about their perception of development.
PROJECT WORK-Every student has to compulsorily undertake any one project (File Work) on the following topics:-

## Social Issues OR Sustainable Development NOTE- Prepare complete chapter (DEVELOPMENT).

## SUBJECT: WORK EDUCATION (W.E)

Q1. Prepare file about thermal/nuclear power plant.

Q2. Draw neat and clean sketch diagram of the fire extinguisher on the full size chart paper showing different parts; also write brief notes about its working. Q3. Prepare any decorative model/craft model/fire alarm.

## SUBJECT: ART EDUCATION (A.E.)

Q1. Composition of City scape and River side, my aim. Use water colour.
Q2. Draw and colour three different state FOLK ART.
Q3. Creative Design of two different styles.
Q4. Outdoor study of LAND SCAPE, and VILLAGE.

## The End

## Summer Vacation Home Work

Session 2022-2023

## Class - XII

## SUBJECT: ENGLISH

NAME:
DATE: $\qquad$

## COUNTRIES and LANGUAGES

Question: Can you say" Hello" in more than two languages?

- Write the names of the 15 countries (on the left) in the correct spaces.


B Brazil n.
C Canada $n$.
Chile $n$.
China n.
E Egypt n.
F France $n$.
G. Germany n.

I iceland $n$.
India $n$.
J Japan $n$.
K Korea $n$
M Mexico n.
N Nigeria n
R Russian $n$
U United Kingdom $n$.

1. People in this island country (located between Europe and North America) Speak lodandic: $\qquad$
2 People in this copuntry, the langest in the world. speak Pussiana: $\qquad$
2. Santiage is the capital city of this South American country. People here speak Spanish: $\qquad$
3. People here speak Morean: $\qquad$
4. English came from thit country: $\qquad$
5. People here speak French: $\qquad$
6. With 510 languages spolken in this African country. English is the official language:- $\qquad$
7. French and English are the two official languages of this large North American country: $\qquad$
8. The country with the world's largest population speaks Chinese: $\qquad$
9. This European country is lacated just to the east of France. People here speak Germian:
10. Many people speak English and Hindi in this large Asian copuntry: $\qquad$
12 People speak Porduguese in this large South American country, net 'Brazilian': $\qquad$
11. One of the oldest copuntries in the vrorld, people in this North African country speak Arabic: $\qquad$
12. People here speak Jippanest $\qquad$
13. This Spanibh-speaking country is located in North America, mot South Arnerica: $\qquad$
14. Look at the picture below and answer the following questiol

a. What do you notice in the above two pictures?
b. Who do you find along with the parents?
c. What are they carrying?
15. Name the four main seasons. Write a short notes on how animals, trees, humans react to these seasons.
16. Name the five main sectors that are forcing the children to work and draw a pie chart explaining the same.
17. Match the age groups to the above four main seasons.


## 1. Look at the picture below and answer the tollowing

 questions.
a. Where are the boys and what are they doing?
b. Can you expect what are they scrounging for?
c. What will they do with it?
d. Some broken/ disposable glasses, pieces of plastic material and some objects. Can you add some more what they can
find there?
6. Make a list of causes and consequences of child labour in India and discuss them in groups. Each group have to submit at least five causes and five consequences.

7. How can we eliminate child labour in India? Students can use the brainstorming technique to kick-start the ideation.
8. Can you name some laws against child labour in India?
9. Fabricate one quote with the knowledge you have gained from this lesson against child labour and explain the same.
10. Name one harmful tradition in which children/ teenagers are the main victims.
11. What are the causes of corruption? List down some and fill the below table. Propose one/ two solutions to the same.

| Sl. No | Cause | Solution |
| :--- | :--- | :--- |
| 1 | Low pay/ wages | 1. Increase the pay <br> according to the work <br> 2. .... |
| 2 | Low job opportunities | 1. Increase jobs with <br> respect to demand. <br> 2. ... |
| 3 |  |  |
| 4 |  |  |

## Activity - Ine Inird Level

1. Match the moustache styles with their names


Match the above moustache styles with their names mentoned below

1. Handlebar
2. Pencil
3. Natural
4. Walrus
5. Paintbrush
6. Horseshoe
7. Cowboy
8. Toothbrush
9. Chevron
10. Lampshade
2.Match the following sleeve styles with their names.

a. Dolman Sleeve.
b. Lantern Sleeve
c. Petal Sleeve
d. Leg of Mutton
e. Peasant Sleeve
f. Juliet Sleeve
g. Kimono Sleeve
h. Puff Sleeve
i. Bishop Sleeve
j. Raglan Sleeve
k. Bell Sleeve

Q4. Your school conducted a seminar on 'How to prevent cruelty towards animals', in which 40 city CBSE schools took part. As Co-ordinator of the programme, write a report in 120-150 Words for the school magazine. You are Vikram/Vidhi of C.P.S. Senior Secondary School Bengaluru.
Q.5. You witnessed a fire accident in a slum area near your colony on Saturday night. You were very much disturbed at the pathetic sight. Write a report in 150-200 words for
your school magazine. You are Lakshmi/Lakshman, a student of P.D.K. International School, Madurai.
Q.6. Write an article on 'Physical Education in Schools'. You may use the information given in the box to draft your article. You are Sandeep/Sandhya of class XII Science. (Word limit: 120-150 Words)
HINTS:- Physical education -all round development-priority in school curriculum inadequate facilities -no incentives to sports- healthy mind in healthy body- promotes teamwork and discipline- competitions.

## SUBJECT: HINDI

प्रश्न -1 सभी छात्र पढ़ाये गए पाठों को पढ़कर पुन: अभ्यास करेंगे।
प्रश्न-2 आत्म परिचय एवं गीत पाठ के सभी पैराग्राफ का सारांश अपने शब्दों में लिखेंगे।
प्रश्न 3 पतंग कविता का में प्रयोग किए गए बिम्ब को खोजकर लिखेंगे।
प्रश्न 4 जनसंचार माध्यम क्या होते हैं विभिन्न जनसंचार माध्यमों के बारे में पीपीटी बनाकर तैयार करें।
प्रश्न 5 आपके जिले में कोरोना नामक महामारी की चौथी लहर से बचाव के लिए अपने जिले के मुखय चिकित्सक अधिकारी को पत्र लिखिए।

प्रश्न-6 सिल्वर बैंडिंग कहानी के आधार पर यशोधर बाबू के जीवन का चरित्र चित्रण कीजिए।
प्रश्न- 7 यशोधर बाबू की पत्नी आधुनिकता को स्वीकार कर लेती है लेकिन यशोधर बाबू क्यों नहीं ?कारण स्पष्ट कीजिए।

प्रश्न -8 मैडम गीता रानी फिल्म को देखिए तथा व्यक्त भाव को अपने शब्दों में लिखिए।

## SUBJECT: CHEMISTRY

## CHAPTER: SOLUTIONS

## 1. QUESTIONS

(i) Which one is preferred for expressing concentration of a solution - molarity or molality? Give reasons.
(ii) Why is glycol and water mixture used in car radiator in cold countries?
(iii) State two characteristics of an ideal solution.
(iv) Two liquids boil at 1100C and 1300C respectively. Which one has higher vapour pressure at 500 C ?
(v) Why is vapour pressure of a glucose solution lower than that of water?
(vi) Why does sprinkling of salt on snow covered road help in cold countries?
(vii) Why is boiling point of water elevated on addition of a non-volatile solute?
(viii) Define ebullioscopy constant and cryoscopy constant mentioning their units.
(ix) Why is elevation of boiling point of 0.1 M NaCl solution different from 0.1 M glucose solution?
(x) What is reverse osmosis? Mention one important use of it.
(xi) Define: isotonic solution, hypotonic solution, hypertonic solution and plasmolysis.
(xii) What happens when RBCs (Red Blood Corpuscles) are placed in water?
(xiii) What do you expect when RBCs are placed in (i) $1 \% \mathrm{NaCl}$ solution, (ii) $0.5 \% \mathrm{NaCl}$ solution?
(xiv) Define van't Hoff factor.
(xv) What is the van't Hoff factor for a compound which undergoes dimerisation in an organic solvent?
(xvi) What are azeopropes?
(xvii) Equimolal solutions of NaCl and BaCl 2 are prepared in water. Freezing point of NaCl is found to be -20C. What freezing point do you expect for the latter solution?
(xviii) State Henry's Law mentioning the significance of Henry's law constant.
(xix) Why do climbers suffer from anoxia at higher altitudes?
(xx) Why are the aquatic species more comfortable in cold water compared to warm water?

## 2. NUMERICALS

A 1.00 molal aqueous solution of trichloroacetic acid $\left(\mathrm{CCl}_{3} \mathrm{COOH}\right)$ is heated to its boiling point. The solution has the boiling point of $100.18^{\circ} \mathrm{C}$. Determine the van't Hoff factor for trichloroacetic acid. $\left(\mathrm{K}_{\mathrm{b}}\right.$ for water $\left.=0.512 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}\right)$.
2. 18 g of glucose, $\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}$ (Molar mass $-180 \mathrm{~g} \mathrm{~mol}^{-1}$ ) is dissolved in 1 kg of water in a sauce pan. At what temperature will this solution boil? ( $\mathrm{K}_{\mathrm{b}}$ for water $=0.52 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$, boiling point of pure water $=373.15 \mathrm{~K}$.
3. Calculate the mass of compound (molar mass $=256 \mathrm{~g} \mathrm{~mol}^{-1}$ ) to be dissolved in 75 g of benzene to lower its freezing point by $0.48 \mathrm{~K}\left(\mathrm{~K}_{\mathrm{f}}=5.12 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}\right)$.
4. 100 mg of a protein is dissolved in just enough water to make 10.0 mL of solution. If this solution has an osmotic pressure of 13.3 mm Hg at $25^{\circ} \mathrm{C}$, what is the molar mass of the protein? $\left(\mathrm{R}=0.0821 \mathrm{~L} \mathrm{~atm} \mathrm{~mol}^{-1} \mathrm{~K}^{-1}\right.$ and $760 \mathrm{~mm} \mathrm{Hg}=1 \mathrm{~atm}$.
5. Calculate the freezing point depression expected for 0.0711 m aqueous solution of Na 2 S 04 . If this solution actually freezes at $-0.320^{\circ} \mathrm{C}$, what would be the value of Van't Hoff factor? ( $\mathrm{K}_{\mathrm{f}}$ for water is $1.86^{\circ} \mathrm{C} \mathrm{mol}^{-1}$ ).
7. A solution of glycerol $\left(\mathrm{C}_{3} \mathrm{H}_{8} \mathrm{O}_{3}\right.$; molar mass $\left.=92 \mathrm{~g} \mathrm{~mol}^{-1}\right)$ in water was prepared by dissolving some glycerol in 500 g of water. This solution has a boiling point of 100.42 ${ }^{\circ} \mathrm{C}$. What mass of glycerol was dissolved to make this solution? $\mathrm{K}_{\mathrm{b}}$ for water $=0.512 \mathrm{~K}$ $\mathrm{kg} \mathrm{mol}^{-1}$
8. ss $=58.5 \mathrm{~g} \mathrm{~mol}^{-1}$ ) must be dissolved in 65 g of water to lower the freezing point by $7.5^{\circ} \mathrm{C}$ ? The freezing point depression constant, $\mathrm{K}_{\mathrm{f}}$, for water is $1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$. Assume van't Hoff factor for NaCl is 1.87 .
9. What mass of ethylene glycol (molar mass $=62.0 \mathrm{~g} \mathrm{~mol}^{-1}$ ) must be added to 5.50 kg of water to lower the freezing point of water from $0^{\circ} \mathrm{C}$ to $-10.0^{\circ} \mathrm{C}$ ? $(\mathrm{K}$, for water $=1.86 \mathrm{~K}$ $\mathrm{kg} \mathrm{mol}{ }^{-1}$ )?
10. 15 g of an unknown molecular substance was dissolved in 450 g of water. The resulting solution freezes at $-0.34^{\circ} \mathrm{C}$. What is the molar mass of the substance? $\left(\mathrm{K}_{\mathrm{f}}\right.$ for water $=1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$.
11. What mass of NaCl must be dissolved in 65.0 g of water to lower the freezing point of water by $7.5^{\circ} \mathrm{C}$ ? The freezing point depression constant $\left(\mathrm{K}_{\mathrm{f}}\right)$ for water is $1.86^{\circ} \mathrm{C} / \mathrm{m}$. Assume van't Hoff factor for NaCl is 1.87 . (Molar mass of $\mathrm{NaCl}=58.5 \mathrm{~g}$ ).
12. Calculate the amount of KCl which must beadded to 1 kg of water so that the freezing point is depressed by 2 K . $\left(\mathrm{K}_{\mathrm{f}}\right.$ for water $\left.=1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}\right)$
13. A solution of glycerol $\left(\mathrm{C}_{3} \mathrm{H}_{8} \mathrm{O}_{3}\right)$ in water was prepared by dissolving some glycerol in 500 g of water. This solution has a boiling point of $100.42{ }^{\circ} \mathrm{C}$ while pure water boils at $100{ }^{\circ} \mathrm{C}$. What mass of glycerol was dissolved to make the solution?
14. 15.0 g of an unknown molecular material was dissolved in 450 g of water. The resulting solution was found to freeze at $-0.34{ }^{\circ} \mathrm{C}$. What is the molar mass of this material? ( $\mathrm{K}_{\mathrm{f}}$ for water $=1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$ ?
15. A solution containing 30 g of non-volatile solute exactly in 90 g of water has a vapour pressure of 2.8 kPa at 298 K . Further 18 g of water is added to this solution. The new vapour pressure becomes 2.9 kPa at 298 K . Calculate
(i) The molecular mass of solute and (ii) Vapour pressure of water at 298 K
16. If $\mathrm{N}_{2}$ gas is bubbled through water at 293 K , how many millimoles of $\mathrm{N}_{2}$ gas would dissolve in 1 litre of water? Assume that $\mathrm{N}_{2}$ exerts a partial pressure of 0.987 bars. Given that Henry's law constant for $\mathrm{N}_{2}$ at 293 K is 76.48 k bar.
17. The partial pressure of ethane over a saturated solution containing $6.56 \times 10^{-2} \mathrm{~g}$ of ethane is 1 bar. If the solution contains $5.0 \times 10^{-2} \mathrm{~g}$ of ethane, then what will be the partial pressure of the gas?
18. Determine the osmotic pressure of a solution prepared by dissolving $2.5 \times 10^{-2} \mathrm{~g}$ of $\mathrm{K}_{2} \mathrm{SO}_{4}$ in 2 L of water at $25^{\circ} \mathrm{C}$, assuming that it is completely dissociated. ( $\mathrm{R}=0.0821 \mathrm{~L} \mathrm{~atm} \mathrm{~K}^{-1} \mathrm{~mol}^{-1}$, Molar mass of $\mathrm{K}_{2} \mathrm{SO}^{4}=174 \mathrm{~g} \mathrm{~mol}^{-1}$.
19. The partial pressure of ethane over a saturated solution containing $6.56 \times 10^{-2} \mathrm{~g}$ of ethane is 1 bar. If the solution were to contain $5.0 \times 10^{-2} \mathrm{~g}$ of ethane, then what will be the partial pressure of the gas?
20. Some ethylene glycol, $\mathrm{HOCH}_{2} \mathrm{CH}_{2} \mathrm{OH}$, is added to your car's cooling system along with 5 kg of water. If the freezing point of a water-glycol solution is $-15.0^{\circ} \mathrm{C}$, what is the boiling point of the solution?
$\left(\mathrm{K}_{\mathrm{b}}=0.52 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}\right.$ and $\mathrm{K}_{\mathrm{f}}=1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$ for water)
21. 3.9 g of benzoic acid dissolved in 49 g of benzene shows a depression in freezing point of 1.62 K . Calculate the Van't Hoff factor and predict the nature of solute (associated or dissociated).
(Given: Molar mass of benzoic acid $=122 \mathrm{~g} \mathrm{~mol}^{-1}, \mathrm{~K}_{\mathrm{f}}$ for benzene $=4.9 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$ ).
22. A solution is prepared by dissolving 10 g of non-volatile solute in 200 g of water. It has a vapour pressure of 31.84 mm Hg at 308 K . Calculate the molar mass of the solute. (Vapour pressure of pure water at $308 \mathrm{~K}=32 \mathrm{~mm} \mathrm{Hg}$ ).
23. 45 g of ethylene glycol $\left(\mathrm{C}_{2} \mathrm{H}_{6} \mathrm{O}_{2}\right)$ is mixed with 600 g of water. Calculate
(i) The freezing point depression and
(ii) The freezing point of the solution
(Given: $\mathrm{K}_{\mathrm{f}}$ of water $=1.86 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}$ )
24. A 5 percent solution (by mass) of cane-sugar (M.W. 342) is isotonic with $0.877 \%$ solution of substance X. Find the molecular weight of X.
25. Calculate the boiling point of solution when 4 g of $\mathrm{MgSO}_{4}\left(\mathrm{M}=120 \mathrm{~g} \mathrm{~mol}^{-1}\right)$ was dissolved in 100 g of water, assuming $\mathrm{MgSO}_{4}$ undergoes complete ionization.
$\left(\mathrm{K}_{\mathrm{b}}\right.$ for water $\left.=0.52 \mathrm{~K} \mathrm{~kg} \mathrm{~mol}^{-1}\right)$
26. Calculate the mass of a non-volatile solute (molecular mass 40) which should be dissolved in 114 g octane to reduce the vapour pressure to 80
27. An aqueous solution of 2 percent non-volatile solute exerts a pressure of 1.004 bars at the boiling point of the solvent. What is the molecular mass of the solute?
[Vapour pressure of water $=1.013 \mathrm{bar}$ ]
28. A $10 \%$ solution (by mass) of sucrose in water has freezing point of 269.15 K . Calculate the freezing point of $10 \%$ glucose in water, if freezing point of pure water is 273.15 K.

Given: $\left(\right.$ Molar mass of sucrose $\left.=342 \mathrm{~g} \mathrm{~mol}^{-1}\right)\left(\right.$ Molar mass of glucose $\left.=180 \mathrm{~g} \mathrm{~mol}^{-1}\right)$
29. The vapour pressure of pure liquids A and B at 400 K are 450 and 700 mmHg respectively. Find out the composition of liquid mixture if total vapour pressure at this temperature is 600 mmHg .

## 3. MULTIPLE CHOICE QUESTIONS

1. Determination of correct mol. mass from Raoult's Law is applicable to
(a) An electrolyte in solution
(b) a non-electrolyte in dilute solution
(c) a non-electrolyte in a concentrated solution
(d) an electrolyte in liquid solvent
2. Which of the following is a colligative property?
(a) Osmotic pressure
(b) Boiling point
( c) Vapour pressu
(d)Electrical conductivity
3. Which of the following solution has highest freezing point?
(a) 0.1 MNaCl
(b) $0.1 \mathrm{MBaCl}_{2}$
(c ) $0.1 \mathrm{MAl}_{2}\left(\mathrm{SO}_{4}\right)_{3}$
(d) O.1M Urea
4. Which of the following solution 0.1 Maqueous solutions have the lowest freezing point?
(a) Potassium sulphate
(b) Sodium chloride (c ) Urea
(d) Glucose
5. Which of the following salt will have same value of Vant Hoff factor (i) as that of $\mathrm{K} 4[\mathrm{Fe}(\mathrm{CN}) 6]$
(a) $\mathrm{Al}_{2}\left(\mathrm{SO}_{4}\right)_{3}$
(b) NaCl
(c) $\mathrm{Al}\left(\mathrm{NO}_{3}\right)_{3}$
(d) $\mathrm{Na}_{2} \mathrm{SO}_{4}$
6. An ideal solution is formed by mixing Methanol and Ethanol at 250C.The partial pressure of methanol and that of Ethanol was found to be 2.615 kPaand 4.556 kPa respectively. The composition of vapour in terms of mole fraction ym and ye are respectively
(a) $0.635,0.365$
(b) $0.365,0.635$
(c ) $0.574,0.326$
(d) $0.173,0.827$
7. The vapour pressure of solvent decreased by 10 mm of Hg when a non-volatile solute was added to the solvent. The mole fraction of the solute in the solution is 0.2 what should be the mole fraction of solvent if the decrease in vapour pressure is required to be 20 mm of Hg ?
(a) 0.6
(b) 0.8
(c ) 0.4
(d) 0.2
8. The van't Hoff factor for $0.1 \mathrm{M} \mathrm{Ba}(\mathrm{NO} 3) 2$ solutions is 2.74 .The degree of dissociation is
(a) $91.3 \%$
(b) $87 \%$
(c ) $100 \%$
(d) $74 \%$
9. If liquid $A$ and $B$ form ideal solutions
(a) The enthalpy of mixing is zero
(b) The entropy of mixing is zero
(c) The free energy of mixing is zero
(d) The free energy as well as entropy of mixing is each zero.
10. A $1 \%$ aqueous solution (mass-volume) of certain substance is Isotonic with $3 \%$ solution of glucose (molar mass 180). The molar mass of substance is
(a) 60
(b) 120
(c) 180
(d) 540
11. $6.02 \times 10^{20}$ molecules of urea are present in 100 ml .of its solution. The concentration of urea solution is
(a) 0.001 M
(b) 0.01 M
(c ) 0.02 M
(d) 0.1 M
12. The vapour pressure of the two liquids $P$ and $Q$ are 80 and 60 torr respectively. The total pressure of the solution obtained by mixing 3 mole of P and 2 mole of Q would be
(a) 68 torr
(b) 140 torr
(c) 72 torr
(d) 20 torr
13. During Osmosis, flow of water through semi permeable membrane is
(a) From solution having lower concentration only
(b) From solution having higher concentration
(C) from both sides of semi permeable membrane with equal flow
(d)from both sides semi permeable membrane with unequal flow rates.
14. If two substances $A$ and $B$ have $p_{A}{ }^{\circ}: p_{B}{ }^{\circ}=1: 2$ and also $X_{A}: X_{B}$ in solution as $1: 2$ then mole fraction mole fraction of A in vapour phase is.
(a) 0.33
(b) 0.25
(c ) 0.52
(d) 0.2
15. Density of 2.05 M solution of Acetic acid in water is $1.02 \mathrm{~g} / \mathrm{ml}$. The Molality of solution is.
(a) $2.28 \mathrm{molkg}-1$
(b) $0.44 \mathrm{molKg}-1$
(c ) $1.14 \mathrm{molKg}-1$
(d) $3.28 \mathrm{molKg}-1$
16. If $\alpha$ is the degree of dissociation of $\mathrm{Na}_{2} \mathrm{SO}_{4}$ the Vant Hoff factor (i) used for calculating molar mass is
(a) $1+\alpha$
(b) $1-\alpha$
(c ) $1+2 \alpha$
(d) $1-2 \alpha$

## 4. WRITE THE PRACTICALS IN PRACTICAL NOTEBOOK. <br> 5. PREPARE INVESTIGATORY PROJECT.

## SUBJECT: BIOLOGY

## I. Write the answer to the following questions from Chapter $2 \& 3$ in your class-work copy.

1. Why is apple and cashewnut called a false fruit?
2. Draw a labeled sketch of a mature 7-celled and 8-nucleate embryo sac. Which one of the cell in the embryo sac produces endosperm after fertilization?
3. Give one advantage and one disadvantage of cleistogamous flowers.
4. Write any two out breeding devices to prevent auto gamy
5. Study the given figure and answer the questions that follow.

a) Identify the figure that illustrates ovulation and explain the phenomenon that is the cause of ovulation.
b) Identify the figure that illustrates corpus luteum and name the phase of menstrual cycle during which it is produced.
c) Mention the endocrine function of corpus luteum in case of fertilization.
d) What does the figure ' $e$ ' represents.
6. 

a) Give the schematic represents of Spermatogenesis.
b) Mention the role of Sertoli cells.
c) What is the difference between spermatogenesis and permeation?
7. How many microspore mother cell will be required to produce 400 pollen grains and why?
8. In case of polyembryony, an embryo $A$ develops from the synergids and the embryo B develops from the nucleolus. State the ploidy of embryo A and B.
9. How can pollen grains be stored?
10. The outer layer of a pollen grain called exine is made of one of the most resistant organic material. What is this organic material?
11. When a seed of an orange is squeezed instead of one embryo many embryos are found. Identify the phenomenon and give the possible reasons of it. Mention one example of such fruit
12. a) Describe the events of spermatogenesis with the help of a schematic diagram. Write two differences between spermatogenesis and oogenesis.
13. With the help of diagram explain the process of monosporic embryo sac development in angiosperm
14. What is the remnant of nucleolus in the seeds of black pepper and beet called?
15. In some species of Asteraceae and grasses seeds are formed without fertilization. Give the scientific term for such type of reproduction.
16. Draw a neat diagram of a mature embryo sac and label any two of the following parts: Egg, polar nuclei, central cell and nucellus.
17. Draw a neat diagram of a pollen grain and label any two of the following: Exine, Intine, Germ pore, vegetative nucleus, and generative nucleus.
18. Write the steps involved in artificial hybridization technique.
II. Write down the following practical in your practical notebook

1. Prepare a temporary mount to observe pollen germination.
2. Identification of stages of gamete development i.e T.S of Testis and T.S of Ovary through permanent slides.
(Write-up is provided in the class group)
III. Think of an Investigatory project for the Biology Practical. Collect the data, prepare an outline of the project.
The content of the project has to be shown the Biology teacher after school re-opens before initiating the fair work.

## SUBJECT: MATHEMATICS

Solve the following questions in a separate note-book.

1. If $R=\left\{\left(a, a^{2}\right)\right.$ : a is a prime number less than 15$\}$ be a relation. Find the range of $R$.
2. If $R=\{(x, y): x+2 y=20\}$ is a relation on $N$, find the range of $R$.
3. Write the range of the function $f(x)=\frac{|x-1|}{x-1}, x \neq 1$.
4. If R is a relation defined on the set of natural numbers N as follows:
$\mathrm{R}=\{(\mathrm{x}, \mathrm{y}), \mathrm{x}, \mathrm{y} \in \mathrm{N}$ and $2 \mathrm{x}+\mathrm{y}=24\}$, then find the domain and range of the relation R.Also check whether R is equivalence or not?
5. If $A=R-\{3\}$ and $B=R-\{1\}$ consider the function $f: A \rightarrow B$ defined by $f(x)=$ $\frac{x-2}{x-3}, \forall x \in A$ then show that f is bijective.
6. If $A=R-\{2\}$ and $B=R-\{1\}$ consider the function $f: A \rightarrow B$ defined by $f(x)=$ $\frac{x-1}{x-2}, \forall x \in A$ then show that f is bijective.
7. Show that the function $f$ in $A=R-\left\{\frac{2}{3}\right\}$ defined as $f(x)=\frac{4 x+3}{6 x-4}$ is one-one and onto.
8. Show that $f: N \rightarrow N$, given by
$f(x)=\left\{\begin{array}{l}x+1, \text { if } x \text { is odd } \\ x-1, \text { if } x \text { is even }\end{array}\right.$ is bijective.
9. Draw the graphs of following functions:
(i) $\sin x$
(ii) $\sin ^{-1} x \quad$ (iii) $\cos x$
(iv) $\cos ^{-1} x$
(v) $\tan x \quad(v i) \tan ^{-1} x$ (vii) $\operatorname{cosec} x \quad(v i i i) \operatorname{cosec}^{-1} x \quad(i x) \sec x \quad(x) \sec ^{-1} x \quad(x i) \cot x \quad(x i i) \cot ^{-1} x$ 11. If $A$ is a square matrix such that $A^{2}=A$, then write the value of $7 A-(I+A)^{3}$, where $I$ is an Identity matrix.
10. The elements $\mathrm{a}_{\mathrm{ij}}$ of a matrix A of order $4 \times 3$ is given by $a_{i j}=\frac{1}{4}|3 i+2 j|$. Find the matrix A.
11. If $A=\left[\begin{array}{rrr}2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0\end{array}\right]$, then find the value of $A^{2}-3 A+2 I$.
12. If $A=\left[\begin{array}{lll}1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1\end{array}\right]$, then prove that $A^{2}-4 A-5 I=O$ and hence find $A^{-1}$.

## SUBJECT: HISTORY

Q1. Complete the exercise work of first and second chapter.

## SUBJECT: GEOGRAPHY

## Part- A (Fundamentals of Human Geography)

Q1. Define Human Geography.
Q2. Why Geography is often called the 'mother of all Sciences'? Give three reasons.
Q3. 'Man is a slave of nature.' Discuss with two examples.
Q4. Explain the concept of 'Neo Determinism' with suitable examples.
Q5. "Physical environment has been greatly modified by human beings; it has also, in turn impacted human lives." Explain the statement.
Q6. There are a number of areas of high population density in the world. Why does this happen?
Q7. What are the three components of population change?
Q8. What is population doubling time?
Q9. Distinguish between Push factors and pull factors of migration.
Q10. Distinguish between place of origin and place of destination.

## Part -B (India: People and Economy)

Q1. "The decades 1951-81 are referred to as the period of population explosion in India." Explain the statement by giving three reasons.
Q2. Very hot and dry and very cold and wet regions of India have low density of population. In this light, explain the role of climate on the distribution of population.
Q3. Discuss the spatial pattern of density of population in India.
Q4. Which are the three groups of Indian population according to their economic status?
Explain the main characteristics of each group.
Q5. What is the meaning of a settlement?
Q6. What is the basic difference between rural and urban settlements?
Q7. State any three characteristics of clustered rural settlements in India.
Q8. Distinguish between Statutory Towns and Census Towns.

## SUBJECT: ECONOMICS (TOPIC - NATIONAL INCOME AND AGGREGATES) VERY SHORT ANSWER QUESTIONS

Q1. Define real flow.
Q2. Define money flow.
Q3. Should purchase of wheat in the wholesale market be treated as the purchase of final goods?

Q4. What is national debt interest?
Q5. What is meant by transfer payment?
Q6. What is meant by nominal GDP?
Q7. Define the term Macro Economics.
Q8. Define the term National Income.
Q9. Who are Normal Residents?
Q10. Briefly explain the concept of Depreciation or Consumption of Fixed Capital (CFC).

## SHORT ANSWER OUESTIONS

Q1. Define intermediate goods.
Q2. What is meant by producer goods?
Q3. What is meant by capital goods?
Q4. What is fixed investment?
Q5. What do you mean by inventory investment?
Q6. What is meant by consumption of fixed capital?
Q7. Define depreciation reserve fund?
Q8. Briefly explain the concept of Net Indirect Tax.
Q9. Define the term Net Factor Income from Abroad \& explain its components.
Q10. Define the following Concepts of Value of Output.

## LONG ANSWER OUESTIONS

Q1. Explain the methods of measuring NI. Also state their precautions.
Q2. Define the term double counting with the help of an example.
Q3. Explain the related aggregates of National Income.
Q4. How private income is different from National Income?
Q5. Differentiate between Real \& Nominal GDP.
Q6. Which one is a better indicator of economic growth \& why?
Q7. What is meant by economic welfare? What is its indicator?
Q8. Explain the limitations of Per Capita Real GDP as Indicator of Economic Welfare.

## OR

"The economic growth of a country is rising but most of the people are still poor \& there is a huge environmental pollution." Explain.
Q9. How Real GDP is derived?
Q10. Explain the circular flow of Income \& Product (two sector model).
Q11. How are the following treated while estimating private final consumption expenditure Give reasons for your answer.
Q12. Differentiate between stock \& flow.
Q13. How will you treat the following in the calculation of gross domestic product of India? Give reasons for your answers.
(i) Profit earned by a branch of foreign Bank in India.
(ii) Salaries of Indian employees working in embassy of Japan in India
(iii) Salaries of residents of Japan working in Indian embassy of Japan

Q14. Classify the following expenditures as intermediates consumption expenditures and finals consumption expenditures.
(i) Expenditure on research and development by TATA on Nano car.
(ii) Insurance premium paid by a firm to an insurance company.
(iii) Insurance premium paid by households to an insurance company.
(iv) Expenditure on repairs and maintenance of plant and machinery.
(v) Expenditure incurred by a firm on purchase of equipment.
(vi) Advertising expenditure incurred by Airtel on promotion of its product.
(vii) Business expenses of employees on tour and entertainment.

## TRUE \& FALSE

1. Nominal GDP can never be less than real GDP.
2. Good produced for self-consumption will be included in national income.
3. Increase in stock of goods held by a consumer will contribute to capital formation.
4. Gross domestic capital formation is always greater than gross fixed capital formation.
5. Productions of services for self-consumption are not included in national income.

NOTE- PREPARE

1. MONEY AND BANKING
2. GOVERNMENT BUDGET
3. NATIONAL INCOME AND RELATED AGGREGATES FOR MT-1 EXAM

## SUBJECT: WORK EDUCATION (W.E.)

Q1. Prepare any toy/craft model/electrical working model.
Q2. Prepare file about any one given topic.1-Electroniccomponents, 2-Fuseandm.c.b, 3Transformer, 4-light sand bulb (power saving lamps), 5-production of light through solar panel.

## The End

