

HOLIDAY HOMEWORK FOR WINTER BREAK

Class- VI

Subject: - English

MULTIDISCIPLINARY PROJECT

General Instructions:

1. Continue the 2nd term project in the same file that you have used in the 1st term.
2. Project should be written in neat handwriting. Use water-proof ink.
3. Take care of spellings and punctuation marks.
4. Last date for submitting the project- **10th January 2023.**
5. Arrange the pages in the following order:
 - a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.
 - b. Page 2- Introduction of the project topic
 - c. Page 3- Index
 - d. Page 4 onwards- Subject-wise tasks
 - e. Last page- What I learned from this project

विषय – हिंदी

अभी तक पढ़ाए गए पाठों का अभ्यास याद करें तथा हिंदी नोटबुक में कक्षा कार्य पूरा करें।

एम डी पी टर्म 2 कार्य पूर्ण करें।

- * साफ व सुंदर लिखाई में 10 सुलेख लिखिए।
- * आपने शीतकालीन अवकाश कैसे बिताया , 50-60 शब्दों में अनुच्छेद लिखिए।
- * अनुशासन का महत्व पर निबंध लिखकर याद करें।
- * प्रधानाचार्य जी को बीमारी के अवकाश हेतु प्रार्थना पत्र लिखकर याद करें।

Subject: - Social Studies

MULTIDISCIPLINARY PROJECT

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4. Last date for submitting the project- 10th January 2023.

5. Arrange the pages in the following order:

a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.

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e. Last page- What I learned from this project.

PROJECT TOPIC-

Name of the Chapters

1 Vital Villages, Thriving Town

2. Traders Kings and Pilgrims

3. Rural Administration

4. Urban Administration

Note- Write 10 new words from each chapter with meaning.

Science

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Project Topic: Subject Dictionaries

Chapters to be included

➤ Living Organisms and their surroundings

➤ Motion and measurement of distances

- Light , Shadows and Reflections
- Electricity and Circuits
- Fun with Magnets

Do the following work in your fair notebook-

1. Draw, label and learn the following diagrams-

Parts of a plant

Parts of flower

A leaf

Fibrous and Tap root

An electric circuit with a cell, bulb, and switch

A torch

A compass

A magnet showing it's poles

2. Test the conduction of electricity through various objects made of different materials.

Display your results in tabular form.

(Make a simple circuit and then do the conduction test)

विषय – संस्कृत

Holiday homework

प्रिय बच्चों, संस्कृत गृह कार्य आप संस्कृत नोटबुक (in 1st term notebook) में c.w. side write कर सकते हैं।

To stay energized all day

प्रिया बच्चों, प्रतिदिन सुबह इस वीडियो को सुनकर श्लोक को याद करने का प्रयास करें।

<https://youtu.be/hTdZkPelkhs>

नीचे दिए गए लिंक पर जाकर प्रार्थना गीत याद करने का प्रयास कीजिए। (KVS PRAYER SONG)

<https://youtu.be/TKal5HBTNrw>

<https://youtu.be/e2mFXft5X8>

प्रिय बच्चों, इस लिंक पर जाकर 1-20 तक गिनती संस्कृत में लिखकर याद कीजिए।

<https://youtu.be/NT7Qvi3f-zc>

We shall overcome some day.

<https://youtu.be/ztgztmLIIS0>

संस्कृत गीत वीडियो सुनकर गाने का प्रयास कीजिए।

शब्दार्थः

संस्कृत शब्दावली

मम = मेरा (my)

नाम = name

अस्ति = है (is)

कक्षा = class

विद्यालयस्य =विद्यालय का (of the school)

पितुः नाम =पिता जी का नाम (name of the father)

मातुः = माता जी का नाम (name of the mother)

प्रश्न 2.

Let's read

Question 1

चित्राणि दृष्ट्वा संस्कृतपदानि लिखत-



Q1.LOOK AT THE PICTURES AND WRITE SANSKRIT WORDS

अभी तक पढ़ाए गए पाठों का अभ्यास दोहराएं तथा संस्कृत नोटबुक में कक्षा कार्य पूरा करें।

Subject: - Math

1. Revise ch 9 to11
- 2.Complete your notebook.
- 3.complete MDP for 2 nd term.

Subject: - Work Education

1. MAKE AN WORKING PROJECT USING CELL ,BATTERY,SWITCH,KEYS,CONDUCTOR, INSULATOR .
2. MAKE AN PROJECT OF WASTE PRODUCT.

HOLIDAY HOMEWORK FOR WINTER BREAK

Class- VII

Subject English

Chapters to be included in the 2nd term-

Class VII

Expert Detectives
The Invention of Vita Wonk
Chandni
The Bear Story
A Tiger in the House
An Alien Hand

हिंदी:

अभी तक पढ़ाए गए पाठों का अभ्यास याद करें तथा हिंदी नोटबुक में कक्षा कार्य पूरा करें।

एम डी पी टर्म 2 कार्य पूर्ण करें। साथ ही किसी भी विषय पर आधारित

3 अनुच्छेद और 4 पत्र (2 औपचारिक 2 अनौपचारिक) करें।

WET : CLASS VII

- MAKE AN WORKING PROJECT USING CELL ,BATTERY,SWITCH,KEYS,ACCESSORIES SWITCH,PLUG.
- MAKE AN PROJECT ON BEST OUT OF WASTE.

विषय – संस्कृत

1. **Holiday's homework**
2. प्रिय बच्चों, संस्कृत गृह कार्य आप संस्कृत नोटबुक (in 1st term notebook) में c w. side write कीजिए।
3. **To stay energized all day**
4. प्रिया बच्चों, प्रतिदिन सुबह इस वीडियो को सुनकर श्लोक को याद करने का प्रयास करें।
- 5.
6. <https://youtu.be/hTdZkPelkhs>
- 7.
8. नीचे दिए गए लिंक पर जाकर प्रार्थना गीत याद करने का प्रयास कीजिए। (KVS PRAYER SONG)
- 9.
10. <https://youtu.be/TKal5HBTNrw>
- 11.

12. Let's play (Activities)

13.

14. <https://youtu.be/OM2I00E9c0w>

15.

16. प्रिय बच्चों, इस लिंक पर जाकर इस क्रियाकलाप की सहायता से शब्दार्थ याद करने का प्रयास कीजिए ।

17.

18. https://youtu.be/57KmbOL_DIQ

19. <https://youtu.be/Deb8IMB83rw>

20.

21. संस्कृत गीत वीडियो सुनकर गाने का प्रयास कीजिए।

22. Let's read

23. प्रश्न 1. शब्दार्थः -

24. आवाम् - हम दोनों

25. युवाम् - तुम दोनों

26. तौ - वे दोनों ।

27. संस्कृत शब्दावली

28. मम = मेरा (my)

29. नाम = name

30. अस्ति = है (is)

31. कक्षा = class

32. विद्यालयस्य =विद्यालय का (of the school)

33. पितुः नाम =पिता जी का नाम (name of the father)

34. मातुः = माता जी का नाम (name of the mother)

35. Sanskrit Grammar

36. वचन (NUMBER)

37. प्रश्न 2. संस्कृत वचन (Singular, Dual, Plural)

38. संस्कृत में तीन वचन होते हैं - एकवचन , द्विवचन , बहुवचन

39.

40. एकवचन का प्रयोग -

41. जैसे – बालक दौड़ता है ।

42.

43. बालक क्या है ? बालक कर्ता है , कर्ता अर्थात् काम को करने वाला । क्योंकि वह दौड़ने का काम कर रहा है । बालक अकेला है , इसलिये वह एकवचन है ।

44. दौड़ना क्या है ? दौड़ना एक क्रिया है , और यह वर्तमान काल की क्रिया है , क्योंकि वह अभी इस समय दौड़ रहा है ।

45. अतः कर्ता यदि एकवचन है तो क्रिया में भी एकवचन ही होगा ।

46. बालक दौड़ता है संस्कृत में अनुवाद होगा - बालकः धावति ।

47.

48. इसी प्रकार –

49.

50. सिंह गरजता है - सिंहः गर्जति ।
51. सैनिक जाता है - सैनिकः गच्छति ।
52. मृग चरता है - मृगः चरति ।
53. अश्व दौड़ता है - अश्वः धावति ।
54. कोयल कुजती है - कौकिलः कुजति ।
55. बालक गिरता है - बालकः पतति ।
56. राम आता है - रामः आगच्छति ।
- 57.

58. द्विवचन का प्रयोग

59.

60. द्विवचन का मतलब है- एक साथ दो जैसे- हम दोनों , दो बालक, दो हाथी , दो घोड़े
61. दो घोड़े दौड़ते हैं - अश्वौ धावतः ।
62. दो मृग चरते हैं - मृगौ चरतः ।
63. दो कौए बोलते हैं - काकौ वदतः ।
64. दो शिष्य पढ़ते हैं - शिष्यौ पठतः ।
65. दो सिंह गरजते हैं - सिंहौ गर्जतः ।
66. दो तोते उड़ते हैं - शुकौ उत्पततः ।

67. बहुवचन का प्रयोग

68.

69. बहुवचन का अर्थ है - बहुत सारे , एक या दो से ज्यादा । तीन या इससे अधिक जितने भी हो ।
70. बालकः - एक बालक , बालकौ - दो बालक , बालका - बहुत सारे बालक ।
- 71.
72. बच्चे नमस्कार करते हैं - बालकाः - नमन्ति ।
73. बालकाः - क्या है? ये कर्ता है , बहुवचन है , क्योंकि दो से ज्यादा बालक है , अतः बहुवचन
74. नमन - एक क्रिया है , चूँकि कर्ता में बहुवचन है , इसलिये क्रिया में भी बहुवचन का प्रयोग किया ।

75.

76. अश्वः धावन्ति - घोड़े दौड़ते हैं ।
77. खगाः उत्पतन्ति - पक्षी उड़ते हैं ।
78. जनाः हँसन्ति - मनुष्य हँसते हैं
79. शिष्याः लिखन्ति- शिष्य लिखते हैं ।
80. सिंहाः गर्जन्ति - सिंह गरजते हैं ।
81. मृगाः चरन्ति - मृग चरते हैं ।
82. शुकः वदन्ति - तोते बोलते हैं ।
83. बालकाः पठन्ति - बालक पढ़ते हैं।
84. प्रिय बच्चों ,तीनों वचनों के बारे में पढ़कर ५ इन्हें समझने का प्रयास कीजिए। और संस्कृत नोटबुक(in 1st term notebook)c w. side में लिखिए।

85. प्रश्न 3. मंजूषातः शब्दं चित्वा चित्रं दृष्ट्वा पञ्च वाक्यानि रचयत -



86.

87. मञ्जूषा :

88. // छात्राः, भवनम्, मेघाः, हसन्ति, विद्यालयस्य, घटिका //

89. 1. _____

90. 2. _____

91. 3. _____

92. 4. _____

SCIENCE:

MDP PROJECT

Write the Definitions and Functions of the following words in your MDP project file.

1.BLOOD 2.CIRCULATORY SYSTEM 3.PLASMA 4. RBC'S & WBC'S 5. HAEMOGLOBIN
.WBC'S 6. PLATLETS 7.ARTERIES 8. VEINS 9.CAPILLARIES 10.STETHOSCOPE 11.EXCRETION
12 VASCULAR SYSTEM 13.DIALYSIS 14.TRANSPIRATION 15.STOMATA 16 MOTION , UNIFORM
MOTION & SPEED 17.SIMPLE PENDULUM 18.OSCILLATORY MOTION 19.TIME PERIOD
20.SPEEDOMETER 21. ODOMETER

MAKE A MODEL OF

a) EXCRETORY SYSTEM (ROLL NO 1- 15)

b) MODEL OF SUN DIAL AND SAND DIAL(ROLL NO 16 -30)

c) COLLECT INFORMATION ABOUT TIME MEASURING DEVICES THAT WERE USE IN THE
ANCIENT TIMES(ROLL NO 31 – 45)

d) MAKE A RAINBOW ON A DISC (ROLL NO 46 – 60)

Question 1

Fill in the blanks:

1.The S.I unit of speed is _____

2.The resting position of a bob of pendulum is called
_____ position.

3.When a body does not change its position with respect to its surrounding it is said to
be at _____

4.Speed of a motor vehicle is measured by an instrument
called _____

5.Distance travelled by a vehicle is measured by an instrument
called _____

6.Time taken by a pendulum to complete one oscillation is
called _____

7.The metallic ball used in the pendulum is
called _____

8. A diagram showing relationship between two variable quantities each measured along one of a pair of axes is called _____

9. A substance whose crystals can vibrate very fast and at a very precise rate is called _____

10. An instrument showing the time by the shadow of a pointer cast by the sun on to a graduated plate is called _____

Question 2

Solve the word problems –

- Convert 54 km/hr. into m/s
- Calculate Time-period of a simple pendulum if it takes 72 seconds to complete 24 oscillations.
- A train is travelling at a speed of 100 km/hr. How long will it take to complete a journey of 500 km without stopping in between.
- Ramesh takes 15 minutes to reach market from his house on this cycle. If the speed of his cycle is 4 m/s calculate the distance between his house and market?

Question 4

Unscramble the Jumbled word

- UNELDPMU
- RUINFMO
- IIDOCEPR
- SICATEDN

MCQ

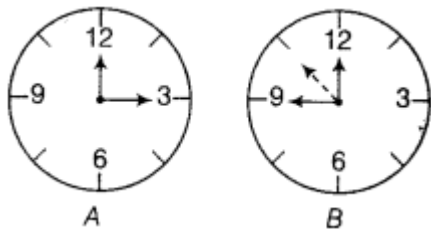
Question 1:

Which of the following cannot be used for the measurement of time?

- A leaking tap
- Simple pendulum
- Shadow of an object during the day
- Blinking of eyes

Question 2:

Two clocks A and B are shown in figure. Clock A has an hour and a minute hand whereas clock B has an hour hand, minute hand as well as a second hand. Which of the following statement is correct for these clocks?



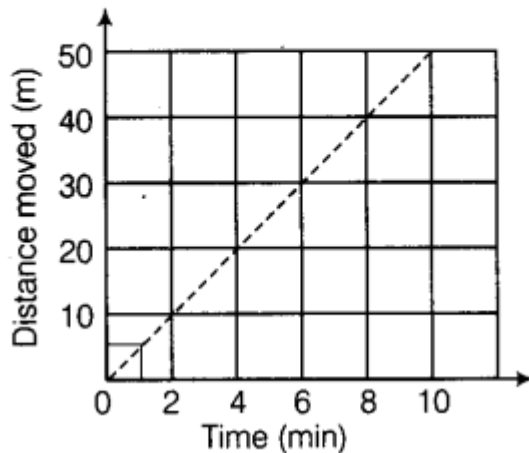
- A time interval of 30 seconds can be measured by clock A
- A time interval of 30 seconds cannot be measured by clock B
- Time interval of 5 minutes can be measured by both A and B
- Time interval of 4 minutes 10 seconds can be measured by clock A

Question 3:

Two students were asked to plot a distance-time graph for the motion described by Table A and Table B.

Distance moved (m)	0	10	20	30	40	50
Time (min)	0	2	4	6	8	10

Distance moved (m)	0	5	10	15	20	25
Time (min)	0	1	2	3	4	5



The graph given in figure is true for

- (a) Both A and B
- (b) Only A
- (c) Only B
- (d) Neither A Nor B

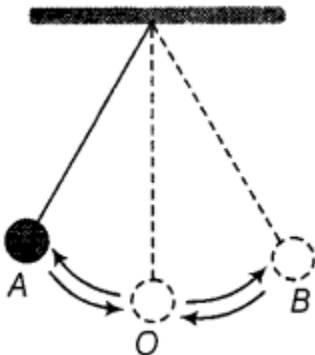
Question 4:

A bus travels 54 km in 90 min. The speed of the bus is

- (a) 6 m/s
- (b) 10 m/s
- (c) 5.4 m/s
- (d) 3.6 m/s

Question 5:

Observe the given figure.



The time period of a simple pendulum is the time taken by it to travel from

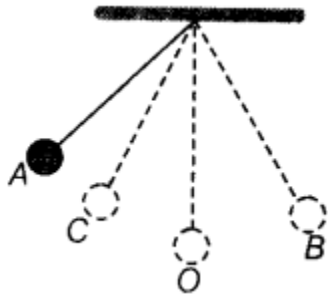
- (a) A to B and back to A
- (b) O to A, A to B and B to A
- (c) B to A, A to B and B to O
- (d) A to B

Question 6:

Figure shows an oscillating pendulum. Time taken the bob to move from A to C is t_1 and from C to O is t_2 . The time period of this simple pendulum is

- (a) $(t_1 + t_2)$
- (b) $2(t_1 + t_2)$

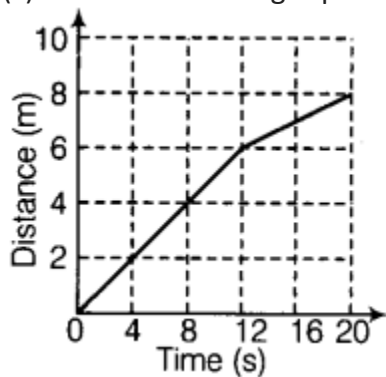
- (c) $3(t_1 + t_2)$
- (d) $4(t_1 + t_2)$



Question 7:

Given below as figure is the distance-time graph of the motion of an object.

- (a) What will be the position of the object at 20 s?
- (b) What will be the distance travelled by the object in 12 s?
- (c) What is the average speed of the object?



Question 8 :

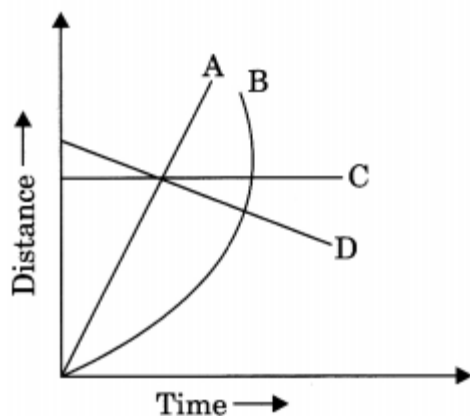
Distance between Bholu's and Golu's house is 9 km. Bholu has to attend Golu's birthday party at 7 O' clock. He started his journey from his home at 6 O' clock on his bicycle and covered a distance of 6 km in 40 min. At that point, he met Chintu and he spoke to him for 5 min and reached Golu's birthday party at 7 O' dock. With what speed, did he cover the second part of the journey? Calculate his average speed for the entire journey.

QUESTION :9 Represent the following graphically:

- (a) An object at rest
- (b) An object moving with uniform speed
- (c) An object moving with non-uniform speed

QUESTION : 10.

Motion of A, B, C and D is plotted on a distance-time graph below. Study the graph and answer the following questions:



- (a) Who is travelling fastest?

- (b) Who is at rest?
- (c) Who is moving in uniform motion?
- (d) Who is accelerating with time?
- (e) Who is moving slowest?

Question 11..

Starting from A, Somnath moves along a rectangular path ABCD as shown in Fig. 13.14. He takes 3 minutes to travel each side. Plot a distance-time graph and explain whether the motion is uniform or non-uniform. Find average speed of Somnath to move along the rectangular path.

QUESTION 12

Question 1.

Ritesh was riding a bicycle on the road, he said that the wheels of the bicycle are moving along a straight line. But his friend, Saket, who was also riding a bicycle said that the wheels of the bicycle are moving circular. They then decided rather than fighting among themselves it is better to ask their science teacher.

- (a) Write some types of motion.
- (b) What is rectilinear motion.
- (c) What is rotatory or circular motion.
- (d) Who among, Ritesh and Saket, is correct? Explain.
- (e) What value of Ritesh and Saket is shown here?

CASE STUDY QUESTIONS

Case study 1

The production of new individuals from their parents is known as reproduction. Most plants have roots, stems and leaves. These are called the vegetative parts of a plant. After a certain period of growth, most plants bear flowers. You may have seen the mango trees flowering in spring. It is these flowers that give rise to juicy mango fruit we enjoy in summer. We eat the fruits and usually discard the seeds. Seeds germinate and form new plants. Flowers perform the function of reproduction in plants. Flowers are the reproductive parts.

There are several ways by which plants produce their offspring. These are categorized into two types: (i) asexual, and (ii) sexual reproduction. In asexual reproduction plants can give rise to new plants without seeds, whereas in sexual reproduction, new plants are obtained from seeds.

Que. 1) The production of new individual due to the fusion of male and female gamete is known as.....

Que. 2) Which of the following is a part of the plant?

Que. 3) In.....reproduction plants can give rise to new individuals without fertilization.

Que. 4) Which part is involved in the reproduction of plants?

Que. 5) Name the vegetative parts of plants?

Case study 2

Stamens are the male reproductive part and pistil is the female reproductive part. Flowers which contain either only pistil or only stamens are called unisexual flowers. Flowers which contain both stamens and pistil are called bisexual flowers. Corn, papaya and cucumber produce unisexual flowers, whereas mustard, rose and petunia have bisexual flowers. Both male and female unisexual flowers may be present in the same plant or in different plants. Anther

contains pollen grains which produce male gametes. A pistil consists of stigma, style and ovary. Ovary contains one or more ovules. The

Female gamete or the egg is formed in an ovule. In sexual reproduction a male and a female gamete fuse to form a zygote.

General Instructions:

1. Continue the 2nd term project in the same file that you have used in the 1st term.
2. Project should be written in neat handwriting. Use water-proof ink.
3. Take care of spellings and punctuation marks.
4. Last date for submitting the project- **10th January 2023.**
5. Arrange the pages in the following order:
 - a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.
 - b. Page 2- Introduction of the project topic
 - c. Page 3- Index
 - d. Page 4 onwards- Subject-wise tasks
 - e. Last page- What I learned from this project

Project Topic- Subject Dictionaries

Subject- Social Science

Chapters to be included in the IInd term-

Note- Select 10 important words from each of the following chapters and write their meaning or definition.

HISTORY

Ch-7 Tribes, Nomads & Settled communities.Ch-8

Devotional Paths to the Divine

Ch-9 The making of Regional Culture

GEOGRAPHY

Ch-5 Water

Ch-8 Human Environment Interactions-the tropical & sub-tropical regionCh-

Life in the deserts

CIVICS

Ch- 5 Women change the worldCh-6

Understanding Media

Ch-7 Market Around Us

Subject : Maths

1. Revise ch 9 to13.

2.Complete your notebook.

3.complete MDP for 2 nd term.

Class- VIII

SOCIAL SCIENCE

MULTIDISCIPLINARY PROJECT

General Instructions:

1. Continue the 2nd term project in the same file that you have used in the 1st term.
2. Project should be written in neat handwriting. Use water-proof ink.
3. Take care of spellings too.
4. Last date for submitting the project- 10th January 2023.
5. Arrange the pages in the following order:
 - a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.
 - b. Page 2- Introduction of the project topic
 - c. Page 3- Index
 - d. Page 4 onwards- Subject-wise tasks
 - e. Last page- What I learned from this project.

PROJECT TOPIC-

Name of the Chapters-1. Civilising The Native Educating Nation

2. Women Cast and Reforms

3. Under Standing Marginalisation

Note- Write 10 new words from each chapter with meaning.

WET:

CLASS VIII

- **MAKE AN WORKING PROJECT ON TOPIC ELECTRONIC CIRCUITS, electromagnet, Series parallel connection, Quiz Board, Electric circuit, or on your topic of interest.**
- **MAKE AN FILE ON ANY WORKING PROJECT OF ABOUT 10 PAGES.**

हिंदी:

अभी तक पढ़ाए गए पाठों का अभ्यास याद करें तथा हिंदी नोटबुक में कक्षा कार्य पूरा करें।

एम डी पी टर्म 2 कार्य पूर्ण करें। साथ ही किसी भी विषय पर आधारित

3 अनुच्छेद और 4 पत्र (2 औपचारिक 2 अनौपचारिक) करें।

SCIENCE

MULTIDISCIPLINARY PROJECT

General Instructions:

6. Continue the 2nd term project in the same file that you have used in the 1st term.
7. Project should be written in neat handwriting. Use water-proof ink.
8. Take care of spellings too.
9. Last date for submitting the project- **10th January 2023.**
10. Arrange the pages in the following order:
 - a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.
 - b. Page 2- Introduction of the project topic
 - c. Page 3- Index
 - d. Page 4 onwards- Subject-wise tasks
 - e. Last page- What I learned from this project

Project Topic: Subject Dictionaries

Chapters to be included in the 2nd term-

- Reproduction In Animals
- Reaching The Age Of Adolescence
- Sound
- Chemical Effects Of Electric Current
- Some Natural Phenomena
- Light

Do the following work in your fair notebook-

1. Draw and learn the following diagrams-
 - Sperm
 - Zygote
 - Fertilisation
 - Male reproductive System
 - Female reproductive system
 - Human ear
 - Human Eye

ENGLISH :

General Instructions:

1. Continue the 2nd term project in the same file that you have used in the 1st term.

2. Project should be written in neat handwriting. Use water-proof ink.
3. Take care of spellings and punctuation marks.
4. Last date for submitting the project- **10th January 2023**.
5. Arrange the pages in the following order:
 - a. Page 1- Cover- Mention the title of the project, your name, class, roll number, and names of the teachers teaching your class.
 - b. Page 2- Introduction of the project topic
 - c. Page 3- Index
 - d. Page 4 onwards- Subject-wise tasks
 - e. Last page- What I learned from this project

Project Topic: Subject Dictionaries

Chapters to be included in the 2nd term-

Class VIII
The Summit Within This is Jody's Fawn A Short Monsoon Diary The Fight Jalebis Ancient Education System of India

विषय - संस्कृत

Holiday's homework

To stay energized all day

प्रिया बच्चों, प्रतिदिन सुबह इस वीडियो को सुनकर श्लोक को याद करने का प्रयास करें।

<https://youtu.be/hTdZkPeIkhS>

नीचे दिए गए लिंक पर जाकर प्रार्थना गीत याद करने का प्रयास कीजिए। (KVS PRAYER SONG)

<https://youtu.be/TKaI5HBTNrw>

Let's play (Activities)

<https://youtu.be/LDQcgrxTSR0>

प्रिय बच्चों, इस लिंक पर जाकर शब्द रूप कमल बनाने का प्रयास कीजिए ।

<https://youtu.be/57KmbOLDIQ>

<https://youtu.be/NT7Qvi3f-zc>

संस्कृत गीत वीडियो सुनकर गाने का प्रयास कीजिए।

<https://youtu.be/Deb8lMB83rw>

<https://youtu.be/QhDEqn3smcc>

Sanskrit birthday song

Let's read

प्रिय बच्चों, संस्कृत गृह कार्य आप संस्कृत नोटबुक में h.w. side write कर सकते हैं।

मंजूषातः शब्दं चित्वा चित्रं दृष्ट्वा पञ्च वाक्यानि रचयत -



मञ्जूषा :

// छात्राः, भवनम्, मेघाः, हसन्ति, विद्यालयस्य, घटिका //

1. _____
2. _____
3. _____
4. _____
5. _____

प्रश्न 2. अधोलिखितं अपठितअवबोधनम् पठित्वा प्रश्नानाम् उत्तराणि लिखत।

शब्दः 'क' 'अर्थित अवबोधनम्'

प्रश्न 1. अर्थोक्तिवत् अनुबोधनं पठित्वा पञ्चम् उदाहरण- (निम्ने लिखे अनुबोधनं को पञ्चम् उदाहरणं के उदाहरणं दीजिए।)

गंगा भारतस्य पवित्रतमा नदी अस्ति । इयं देवताया अस्ति । गंगा नदी नारा इव स्वयन्वरीः दुर्गकृतेन अनुपममेव पावती भवति । गंगातन्त्रे अनेके चित्रे जीवन् नद्यु व पशुनि । एतेन गंगातन्त्रे पशुनि भस्करेण पश्यन्ते । अस्याः नदी अनेकेन पशुनिभस्करेण पशुनि नद्या हरीद्वारम् । अस्याः पशुनि नद्याः । गंगातन्त्रे अनेके पशुनि कसे व वनने ।

क) एकं पदम् उदाहरण-

1. गंगा भारतस्य कीदृशी नदी अस्ति? 2. गंगातन्त्रे, कुरु पशुनि?

ख) पूर्ववत्पदम् उदाहरण-

1. गंगातन्त्रे, कसे पशुनि?

2. अस्याः नदी कसे स्वयन्वरी भवति?

ग) विशदयित्वा उदाहरण-

पशुनि कसे हीन पशुनिः विशेषतः किम्?

2) निर्माणात्पदम् लिखत-

क) के नदी नदी ग) हीन पशुनि नदी ग) के किम् पशुनि ग) के अस्वयन्वरी

Q3. नीतिनवनीतम् पाठ में से कोई दो श्लोक याद करके लिखिए।

सावित्री बाई फुले का जीवन परिचय याद करके संस्कृत में लिखिए। (5 या 7 वाक्यों में)

बालक, फल और लता शब्द रूप याद करके लिखिए।

नवमः पाठः सप्तभगिन्यः

दशमः पाठः नीतिनवनीतम
एकादशः पाठः सावित्री बाई फुले
द्वादशः पाठः कः रक्षति कः रक्षितः
उपरिलिखित पाठों का अभ्यास दोहराएं।

SUBJECT : MATHS

1. Learn tables from 2 to 20
2. Revise again all the examples and exercise of chapters Exponents and Powers, Perimeter and Area, Algebraic expressions and Direct and Inverse Proportion.
3. Activity:
 - a) Find curved surface Area ,Total surface area of cylinder by using paper folding of rectangular sheet.Also show the derivation of rectangular dimensions to cylindrical dimensions.
 - b) Prove volume of cone is one third of volume of cylinder by performing activity and write this in maths notebook.(Hint:by using sand pouring method)
- 4.Complete MDP of 2nd term in previous file.

CLASS 9th

Subject: - Math

1. Revise ch8 (Quadrilaterals) and ch10 (Circles), Ch. 12 for PT3 exam.
2. Complete your notebook.
3. Complete your Activity file.

Subject: - Social Studies

1. CLIMATE
2. NATURAL VEGETATION AND WILDLIFE
3. FOREST SOCIETY AND COLONIALISM
4. Pastoralism in the modern world.
5. Electoral politics
6. Working of Institutions
7. Democratic Rights

Complete all the pending work of above chapters and revise all these chapters for your PT-2 Exam

Subject: - Work Education

1. MAKE AN WORKING MODEL FOR EXHIBITION LIKE GENERATOR, MOTOR,
2. 2. EARTHING, MAGNET, Extension Board, or on your interest topic, ETC.
3. MAKE AN FILE ON THE ABOVE PROJECT HAVING PICTURES AND DIAGRAM WITH 10 PAGES.

Subject: - English

1. Portfolio (step-wise)
2. Diary Entry

You have visited Goan Beach for New year celebrations. Write your experience in form of a diary.

3. Write a 'travelogue' on your visit to any place you recently undertook.

Subject: - हिंदी

मोहल्ले की सफाई हेतु नगर पालिका अध्यक्ष को पत्र लिखें।

अपने मोहल्ले के पोस्टमैन के पत्र वितरण की अनियमितता को लेकर पोस्टमास्टर को शिकायती पत्र लिखिए।

अपने मित्र को अपनी जन्मदिन की पार्टी के लिए निमंत्रण देने हेतु लगभग 100 शब्दों में ई-मेल लिखिए।

छात्रों के लिए अधिक खेल-सामग्री उपलब्ध कराने का अनुरोध करते हुए अपने प्रधानाचार्य महोदय को ई मेल लिखें।

ऐसे दो अनुच्छेदों का लेखन करें जिसमें संकेत बिंदु शामिल हों।

Subject: - Artificial Intelligence

1. Revise all the Chapters for Exam.
2. Complete your Notebook.
3. Complete your Practical file.

SUBJECT : SCIENCE

CH- GRAVITATION , SOUND AND IMPROVEMENT IN FOOD RESOURCES

A- ASSERTION REASON QUESTIONS –

In the following questions, 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.

1-Assertion : The flash of lightning is seen before the sound of thunder is heard.

Reason : Speed of sound is greater than speed of light.

2- Assertion : To hear a distinct echo, the time interval between the original sound and the reflected one must be at least 0.1 s.

Reason : The sensation of sound persists in our brain for about 0.1s

3- Assertion : An object floats if it displaces an amount of liquid whose weight is greater than the actual weight of the object.

Reason : During floatation an object experiences no net force in the downward direction.

4- Assertion : Weight of a body on earth is equal to the force with which the body is attracted towards the earth.

Reason : Weight is independent of the mass of the object.

5 -Assertion: Inter cropping prevents pests.

Reason: Plant pests can be controlled biologically by their natural parasites and pathogens.

B-SHORT QUESTIONS-

Q1-A sound produces 13 crests and 15 troughs in 3 seconds. When the second crest is produced the first is 2 cm away from the source?

Calculate.

(a) the wavelength

(b) the frequency

(c) the wave speed.

Q2-A sound wave causes the density of air at a place to oscillate 1200 times in 2 minutes. Find the time period and frequency of the wave.

Q3- Suppose that the radius of the earth becomes twice of its original radius without any change in its mass. Then what will happen to your weight?

Q4- Two objects of masses m_1 and m_2 having the same size are dropped simultaneously from heights h_1 and h_2 , respectively. Find out the ratio of time they would take in reaching the ground. Will this ratio remain the same if (i) one of the objects is hollow and the other one is solid; and (ii) both of them are hollow, size remaining the same in each case? Give reasons.

Q5- Write the modes by which insects affect the crop yield.

Q6-List out some useful traits in improved crop.

C-CASE STUDY QUESTIONS-

1- A violin and a flute may both be played at the same time in an orchestra. Both sounds travel through the same medium, that is, air and arrive at our ears at the same time. Both sounds travel at the same speed irrespective of the source. But the sounds received are different. This is due to the different characteristics associated with the sound. Pitch is one of the characteristics. How the brain interprets the frequency of emitted sound is called its pitch. The faster the vibration of the source, the higher the frequency and the higher the pitch. The magnitude of the maximum disturbance in the medium on either side of the mean value is called the amplitude of the wave. It is usually represented by the letter (A).

(i) Pitch of sound is higher when

(a) Vibration of the source of sound is higher

(b) Vibration of the source of sound is Lower

(c) Independent of vibration of the source of sound

(d) None of these

Loudness and softness of sound depend upon

(a) Frequency of sound

(b) Amplitude of sound

(c) Wavelength of sound

(d) None of these

(iii) Sound of single frequency is called

(a) Note

(b) Tone

(c) Noise

(d) None of these

(iv) If we strike a table lightly, we hear a soft sound. If we hit the table hard we hear a louder sound up to a large distance. Why?

(v)- Determine which of the following has a higher pitch- railway horn or guitar?

2-All freely falling bodies fall with a uniform acceleration due to gravity. As a result, all the equations of motion for the uniformly accelerated bodies moving in a straight line are applicable to the freely falling bodies.

The value of g is taken as positive when a body is

(a) dropped from a certain height

(b) moving in horizontal direction

(c) both (a) and (b)

(d) none of these

Velocity of an object at maximum height in case it has been thrown vertically upward is

(a) maximum (b) minimum

(c) zero (d) 9.8 m s^{-1}

During free fall, the acceleration of the object is

(a) zero (b) non-uniform

(c) constant (d) none of these

3- Fish is a cheap source of animal protein for our food. Fish production includes the finned true fish as well as shellfish such as prawns and molluscs. There are two ways of obtaining fish. One is from natural resources, which is called capture fishing. The other way is by fish farming, which is called culture fishery. The water source of the fish can be either seawater or fresh water, Fishing can thus be done both by capture and culture of fish in marine and freshwater ecosystems

Popular marine fish varieties include pamphlet, mackerel, tuna, sardines, and Bombay duck. Marine fish are caught using many kinds of fishing nets from fishing boats. Some marine fish of high economic value are farmed in seawater. This includes finned fishes like mullets, bhetki, and pearl spots, shellfish such as prawns mussels and oysters as well as seaweed. Oysters are also cultivated for the pearls they make. As marine fish stocks get

further depleted, the demand for more fish can only be met by such culture fisheries, a practice called mariculture.

(1) Fish obtaining from natural resources are termed as _____

- (a) Capture fishing
- (b) Culture fishing.
- (c) Marine fishing.
- (d) Freshwater fishing.

(2) Which of the following are marine fish varieties

- (a) Pamphlet
- (b) Mackerel
- (c) Tuna
- (d) All of the above

(3) Oysters are cultivated for

- (a) Pearls
- (b) Meat
- (c) Seaweeds
- (d) Diamonds

HOTS-

1- A girl is sitting in the middle of a park of dimension $12\text{ m} \times 12\text{ m}$. On the left side of it there is a building adjoining the park and on right side of the park, there is a road adjoining the park. A sound is produced on the road by a cracker. Is it possible for the girl to hear the echo of this sound? Explain your answer.

2- The value of acceleration due to gravity on a planet 'A' is 'g'. What will be the value of acceleration due to gravity on another planet B whose mass is same as that of the planet 'A' but its radius is double the radius of planet 'A' ?

3- Define genetically modified organisms. Write a short note on BT Cotton .

CLASS 11

Subject: Political science

SECTION:1

Solve the half yearly question paper SET 1 and SET 2 in your political science fair notebook.

SECTION: 2

Complete your notebook work till

- Chapter 5: Rights from book 2

Solve all the map, cartoon, picture-based question from all the chapters in a separate notebook.

Subject: - Chemistry

LESSON-1

Some basic concepts in chemistry

1. What mass of silver nitrate will react with 5.85g of sodium chloride to produce 14.35g of silver chloride and 8.5g of sodium nitrate, if the law of conservation of mass is true?
2. If 6.3g of NaHCO_3 are added to 15g of CH_3COOH solution, the residue is found to weigh 18g. What is the mass of CO_2 released in the reaction?
3. Copper sulphate crystals contain 25.45% Cu and 36.07% H_2O . If the law of constant proportion is true then calculate the weight of Cu required to obtain 40g of crystalline copper sulphate.
4. Two oxide of a certain metal were separately heated in a current of hydrogen until constant weights were obtained. The water produced in each case was carefully collected and weighed. It was observed that 1g of each oxide gave 0.1254g and 0.2263g of water. Show that the data illustrate the law of multiple proportion.
5. A compound contains 4.07% hydrogen, 24.27% carbon and 71.65% chlorine. Its molecular mass is 98.96. What are its empirical and molecular formula.

LESSON: 2

STRUCTURE OF ATOM

1. Explain with example de Broglie wave equation, Heisenberg uncertainty Principle, Aufbau, Hund's Rule, Pauli's exclusion Principle.
 2. A) Both assertion and reason are correct. Reason is the correct explanation of the assertion
B) Both assertion and reason are correct. Reason is not the correct explanation of the assertion
C) Assertion is correct and reason is wrong
D) Assertion is wrong and reason is correct
1. Assertion: According to Bohr, angular momentum of an electron in an orbit is quantized.
Reason: Bohr's model of an atom could not explain Stark effect.
 2. **Assertion** Bohr's atomic model cannot be used to explain multiple electron species.
Reason: It does not take inter-electronic interactions into account.

3.Assertion: Bohr had to postulate that the electrons in the stationary orbit around the nucleus do not radiate.

Reason: According to classical physics all accelerating electrons radiate.

4.Assertion: Magnetic moment associated with an electron in hydrogen atom is always quantized.

Reason: Magnetic moment associated with an electron in hydrogen atom is an integral multiple of Bohr's magneton but it is independent of atomic number.

5.Assertion: Balmer's series lies in the visible region of electromagnetic spectrum

Reason: $1/\lambda = R [1/2^2 - 1/n^2]$ where $n=3,4,5\dots$

6.Assertion : Hydrogen atom consists of only one electron but its emission spectrum has many lines.

Reason Only Lyman series is found in absorption spectrum of hydrogen atom whereas in emission all series are found.

7.Assertion : Number of orbitals in 3rd shell is 9.

Reason : Number of orbitals for a particular value of $n = n^2$.

8. Assertion : Two nodal planes are present in $3d_{xy}$.

Reason : Number of nodal planes = l

9. Assertion : The energy of an electron is largely determined by its principal quantum number.

Reason : The principal quantum number is a measure of the most probable distance of finding the electrons around the nucleus.

10. Assertion : An orbital cannot have more than two electrons, moreover, if an orbital has two electrons they must have opposite spins.

Reason : No two electrons in an atom can have same set of all the four quantum numbers

11.The quantized energy of electron in hydrogen atom for the n th energy level is given by $E_n = -1.312/n^2 \times 10^6 \text{ J/mol}$. Calculate the minimum energy required to remove the electron completely from hydrogen atom when its quantized energy level n equals 2. What should be the wavelength of light that can be used to cause this transition? ($h = 6.6 \times 10^{-34} \text{ Js}$, $c = 3 \times 10^8 \text{ m/s}$)

12.Write the electronic configuration of the elements with $Z=17$ and predict the a) number of p electrons b) number of filled orbitals c) number of half filled orbitals

13.Energy associated with the 1st orbit in the H atom is $-13.12 \times 10^5 \text{ J/mol}$. What is the energy required for excitation to 2nd Bohr's orbit?

14.(a) Which quantum no. determines (i) energy of an electron, (ii) orientation of orbital? (b) Which shell would be the first to have 'g' sub shell (c) Which orbital is non directional?

LESSON :3

Classification of Elements and Periodicity in Properties

A If both Assertion & Reason are true and the reason is the correct explanation of the assertion.

B If both Assertion & Reason are true but the reason is not the correct explanation of the assertion. C If Assertion is true statement but Reason is false.

D If both Assertion and Reason are false statements.

1. Assertion : Ionic radius of Na^+ is smaller than Na

Reason : Effective nuclear charge of Na^+ is higher than Na

2. Assertion : First ionisation enthalpy of N is higher than O.

Reason : Extra stability of fully filled up 2p subshell of N atom

3. Assertion : Electron gain enthalpy of Cl is more negative than F atom.
Reason : F is more electronegative than Cl atom.
4. Assertion : First ionisation enthalpy of Gallium is higher than aluminium.
Reason : Weak shielding effect of 3d subshell in Gallium.
5. Cations are smaller than their parent atom whereas anions are larger in size than their parent atom. Explain.
6. Ionisation energy of nitrogen is more than 'O' and 'C' both, why ?
7. First ionisation energy of boron is less than Be but size of Be is less than Boron. Why ?
8. Electron gain enthalpy of Mg is positive. Explain.
9. Out of group 17, 18 and I, predict:-
 - (a) Which has most negative first electron gain enthalpy ?
 - (b) Which shows most metallic behaviour ?
 - (c) Which has highly positive electron gain enthalpy?
10. The reactivity of halogens decrease down the group but of alkali metals increases down the group. Why?
11. Name a halogen, a metal and a group 13 element which are liquid at 30°C.
12. The reducing power of elements increases down the group but reverse is true for oxidising power along a period. Why ?
13. PbCl_2 is more stable than PbCl_4 Why?
14. [Magnesium and Lithium both form nitrides why ?
15. Which has least I.E. [$3p^3$, $3p^6$, $2p^3$, $2p^6$]?
16. (a) I.E. of sulphur is lower than chlorine. (b) Arrange the following in decreasing order of their electro-negativity: F, O, N, Cl, C, H.
17. Element 'A' in group 17 (2nd period) 'B' in group 16 (2nd period) 'C' in group 15 (2nd period) Arrange 'A', 'B' and 'C' in their decreasing order of electro-negativity and ionisation enthalpy.
18. LiCl, LiBr, LiI are covalent as well as ionic why ?
19. Write the atomic number of element placed diagonally to : (a) Group 14, period 4 (b) Group 2, period 5 (c) Group 17, period 4
20. An element has outer shell electronic configuration $4s^2 4p^3$. Find :- (a) The atomic number of element placed next below it. (b) Atomic number of next noble gas

LESSON:4

Chemical Bonding and Molecular Structure

1. Assertion (A): Among the two O–H bonds in H_2O molecule, the energy required to break the first O–H bond and the other O–H bond is the same.
Reason (R): This is because the electronic environment around the oxygen is the same even after breakage of one O–H bond.
2. Assertion (A): Though the central atom of both NH_3 and H_2O molecules are sp^3 hybridised, yet H–N–H bond angle is greater than that of H–O–H.
Reason (R): This is because nitrogen atom has one lone pair and oxygen atom has two lone pairs.
3. Assertion (A): SF_6 molecule is unstable.
Reason (R): A stable molecule must have 8 electrons around the central atom. i.e. octet rule should be satisfied.

4. Assertion (A): Pi bond is never formed alone. It is formed along with a sigma bond

Reason (R): Pi bond is formed by sideways overlap of p- orbitals only.

5. Assertion (A): Ionic compounds tend to be non-volatile.

Reason (R): Ionic compounds are solid.

6. Arrange the following in the order of property indicated for each set:

(i) O_2 , O_2^+ , O_2^- , O_2^{2-} (increasing stability)

(ii) LiCl, NaCl, KCl, RbCl (increasing covalent character)

(iii) NO_2 , NO_2^+ , NO_2^- (decreasing bond angle)

(iv) H-F, H-Cl, H-Br, H-I (increasing bond dissociation enthalpy)

7. Arrange the following in the order of property indicated for each set:

(i) H_2O , NH_3 , H_2S , HF (increasing polar character)

(ii) HF, HCl, HBr, HI (decreasing dipole moment)

(iii) NO_3^- , NO_2^- , NO (decreasing 's' character of hybridization)

(iv) $BeCl_2$, BCl_3 , CCl_4 , PCl_3 (increasing bond angle)

8. Give reasons for the following:

(a) NH_3 has higher boiling point than PH_3 .

(b) Ionic compounds do not conduct electricity in solid state.

(c) LiCl is more covalent than KCl.

(d) NH_3 is more polar than NF_3 .

(e) H_2O has bent structure.

9. Draw the shape of following molecules according to VSEPR theory; XeO_3 , XeF_2 , $XeOF_4$, SF_4 , XeF_4

10. Draw molecular orbital diagram for N_2 molecule

LESSON :6

THERMODYNAMICS

In the following questions a statement of assertion (A) followed by a statement of Reason (R) is given. Choose the correct option out of the choices given below for each question.

(i) A and R both are correct, and R is correct explanation of A.

(ii) A and R both are correct, but R is not the correct explanation of A.

(iii) A is true but R is false.

(iv) A and R both are false.

1. Assertion (A): Enthalpy of graphite is lower than that of diamond.

Reason (R): Entropy of graphite is greater than that of diamond.

2. Assertion (A): Enthalpy of formation of $H_2O(l)$ is greater than that of $H_2O(g)$.

Reason (R): Enthalpy change is negative for condensation reaction, $H_2O(g) \rightarrow H_2O(l)$

3. Assertion (A): ΔH and ΔU are same for the reaction $N_2(g) + O_2(g) \rightarrow 2NO(g)$

Reason (R): All the reactants and products are gases.

4. Assertion (A): if both ΔH° and ΔS° are positive then the reaction will be spontaneous at high temperature

Reason (R): All processes with positive entropy change are spontaneous.

5. Assertion (A): Enthalpy of formation of HCl is equal to bond energy of HCl.

Reason (R): Enthalpy of formation and bond energy both involve the formation of one mole of HCl from the elements

6. 'w' amount of work is done by the system and 'q' amount of heat is supplied to the system. What type of system would it be?
7. What is the work done in free expansion of an ideal gas?
8. What is the sign of ΔG for spontaneous reaction?
9. Write the relation between ΔH and ΔU for $H_2(g) + I_2(g) \rightarrow 2HI(g)$.
10. Write the SI unit of entropy. 6. Name the calorimeter used to measure ΔU .
11. What is the standard enthalpy of formation of graphite? 8. What is the sign of ΔH for $H_2(g) \rightarrow 2H(g)$? 9. If $K_c = 1$, what will be the value of ΔG ?
12. An exothermic reaction is spontaneous at all temperature. What is the sign of S ?
13. The enthalpy of combustion of methane, graphite and dihydrogen at 298 K are $-890.3 \text{ kJ mol}^{-1}$, $-393.5 \text{ kJ mol}^{-1}$ and $-285.8 \text{ kJ mol}^{-1}$ respectively. Calculate enthalpy of formation of methane gas
14. For the reaction at 298 K, $2A + B \rightarrow C$; $\Delta H = 400 \text{ kJ mol}^{-1}$, $\Delta S = 0.2 \text{ kJ K}^{-1} \text{ mol}^{-1}$. At what temperature will the reaction become spontaneous considering ΔH and ΔS to be constant over the temperature range.
15. Reaction $X \rightarrow Y$; $\Delta H = +ve$ is spontaneous at temperature 'T'. Determine (i) Sign of ΔS for this reaction. (ii) Sign of ΔG for $Y \rightarrow X$ (iii) Sign of ΔG at a temperature $< T$

LESSON :7

CHEMICAL EQUILIBRIUM

MULTIPLE CHOICE QUESTION (MCQ)

1. For the hypothetical reactions, the equilibrium constant (k) values are given
 $A \leftrightarrow B : K_1 = 2$ $B \leftrightarrow C : K_2 = 4$ $C \leftrightarrow D : K_3 = 8$
 The equilibrium constant (K) for the reaction $A \leftrightarrow D$ is (a) 48 (b) 24 (c) 12 (d) 64
2. The equilibrium constant for the reaction $SO_2(g) + 1/2 O_2(g) \leftrightarrow SO_3(g)$ is $5 \times 10^{-2} \text{ atm}^{-1/2}$
 The equilibrium constant for the reaction $2SO_3(g) \leftrightarrow 2SO_2(g) + O_2(g)$ would be
 (a) 100 atm (b) $25 \times 10^{-4} \text{ atm}$ (c) 400 atm (d) $125 \times 10^{-6} \text{ atm}^{-3/2}$
3. $A(g) + 3B(g) \leftrightarrow 4C(g)$ initial concentration of A is equal to that of B. The equilibrium concentrations of A and C are equal. What is the equilibrium constant for $4C(g) \leftrightarrow A(g) + 3B(g)$
 (a) 4 (b) $1/8$ (c) B (d) 16
4. The equilibrium reaction that is not affected by volume change at constant temperature is
 (a) $H_2(g) + Cl_2(g) \leftrightarrow 2HCl(g)$
 (b) $N_2(g) + 3H_2(g) \leftrightarrow 2NH_3(g)$
 (c) $PCl_5(g) \leftrightarrow PCl_3(g) + Cl_2(g)$
 (d) $H_2(l) + CO_2(g) \leftrightarrow H_2CO_3(l)$
5. For the reaction $CO(g) + Cl_2(g) \leftrightarrow COCl_2(g)$, the value of K_c / K_p is equal to
 (a) RT (b) $RT=0$ (c) $1/RT$ (d) 1.0
6. At 90°C pure water has $K_w = 10^{-12}$. The solution with pH value 6.5 is
 (a) Acidic (b) Basic (c) Amphoteric (d) Data insufficient
- A. If both the statements are true and statement -2 is the correct explanation of statement-1
 B. If both the statements are true but statement-2 is not the correct explanation of statement-1
 C. If statement-1 is true and statement-2 is false
 D. If statement-1 is false and statement-2 is true.
7. Statement-1 : The endothermic reactions are favoured at lower temperature and the exothermic reactions are favoured at higher temperature.

Statement-2 : when a system in equilibrium is disturbed by changing the temperature, it will tend to adjust itself so as to overcome the effect of change.

8. Statement-1 : The melting point of ice decreases with increase of pressure

Statement-2 : Ice contracts on melting.

9. Statement -1 : The gas phase reaction $\text{PCl}_3(\text{g}) + \text{Cl}_2(\text{g}) \rightleftharpoons \text{PCl}_5(\text{g})$ shifts to the right on increasing pressure.

Statement-2 : When pressure increase, equilibrium shifts towards more number of moles.

10. Statement-1 : The physical equilibrium is not static but dynamic in nature.

Statement-2: The physical equilibrium is a state in which two opposing process are proceeding at the same rate.

11. Statement-1 : The catalyst does not after the equilibrium constant.

Statement-2 : Because for the catalysed reaction and uncatalysed reaction ΔH remains same and equilibrium constant depends on ΔH

12.State Henry's law and Le Chatelier's Principle

13. In a reversible reaction, the two substances are in equilibrium. If the concentration of each one is reduced to half, then what is the effect on the equilibrium constant ?

14. K_1 and K_2 are equilibrium constant for reactions (1) and (2) (i) $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2 \text{NO}(\text{g})$ (ii) $\text{NO}(\text{g}) \rightleftharpoons \frac{1}{2} \text{N}_2(\text{g}) + \frac{1}{2} \text{O}_2(\text{g})$ Calculate the relation between K_1 and K_2 .

15. Write the equilibrium constant expression for the following reaction :



16. Classify the equilibrium as homogeneous or heterogeneous : $\text{CH}_3\text{COOC}_2\text{H}_5(\text{aq.}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{CH}_3\text{COOH}(\text{aq.}) + \text{C}_2\text{H}_5\text{OH}(\text{aq.})$

17. The standard Gibbs energy change at 300 k for the reaction $2\text{A} + \text{B} + \text{C}$ is 2494. 2 J. At a given temperature, and time. the composition of the reaction mixture is $[\text{A}] = \frac{1}{2}$, $[\text{B}] = 2$, $[\text{C}] = \frac{1}{2}$. The reaction proceed in the ($R = 8.314\text{J/K/mol}$, $\ln 2 = 0.693$)

18. At constant temperature, the equilibrium constant K_p

$\text{N}_2\text{O}_4 \rightleftharpoons 2\text{NO}_2$ is given by $K_p = \frac{4x^2 P}{1-x}$ where, P = Pressure and X = Extent of reaction .

How does the value of K_p change on following changes

(a) 'P' increases (b) X changes (c) 'P' decreases

19. When the system $\text{A} + \text{B} \rightleftharpoons \text{C} + \text{D}$ is at equilibrium,

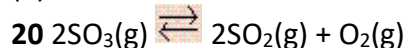
(a) the sum of the concentrations of A and B must equal the sum of the concentrations of C and D.

(b) the forward reaction has stopped.

(c) both the forward and the reverse reactions have stopped.

(d) the reverse reaction has stopped.

(e) neither the forward nor the reverse reaction has stopped.



The conventional equilibrium constant expression (K_c) for the system as described by the above equation is:

(a) $[\text{SO}_2]^2/[\text{SO}_3]$

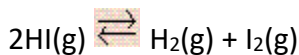
(b) $[\text{SO}_2]^2[\text{O}_2]/[\text{SO}_3]^2$

(c) $[\text{SO}_3]^2/[\text{SO}_3]^2[\text{O}_2]$

(d) $[\text{SO}_2][\text{O}_2]$

(e) none of these

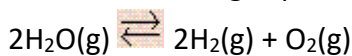
21. At 445°C, K_c for the following reaction is 0.020.



A mixture of H_2 , I_2 , and HI in a vessel at 445°C has the following concentrations: $[\text{HI}] = 2.0 \text{ M}$, $[\text{H}_2] = 0.50 \text{ M}$ and $[\text{I}_2] = 0.10 \text{ M}$. Which one of the following statements concerning the reaction quotient, Q_c , is **TRUE** for the above system?

- (a) $Q_c = K_c$; the system is at equilibrium.
- (b) Q_c is less than K_c ; more H_2 and I_2 will be produced.
- (c) Q_c is less than K_c ; more HI will be produced.
- (d) Q_c is greater than K_c ; more H_2 and I_2 will be produced.
- (e) Q_c is greater than K_c ; more HI will be produced.

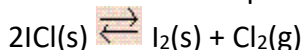
22. Consider the gas-phase equilibrium system represented by the equation:



Given that the forward reaction (the conversion of "left-hand" species to "right-hand" species) is **endothermic**, which of the following changes will **decrease** the equilibrium amount of H_2O ?

- (a) adding more oxygen
- (b) adding a solid phase catalyst
- (c) decreasing the volume of the container (the total pressure increases)
- (d) increasing the temperature at constant pressure
- (e) adding He gas

23. Consider the equilibrium system:



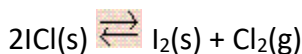
Which of the following changes will increase the total amount of Cl_2 that can be produced?

- (a) removing some of the $\text{I}_2(\text{s})$
- (b) adding more $\text{ICl}(\text{s})$
- (c) removing the Cl_2 as it is formed
- (d) decreasing the volume of the container
- (e) all of the above

24. For a specific reaction, which of the following statements can be made about K , the equilibrium constant?

- (a) It always remains the same at different reaction conditions.
- (b) It increases if the concentration of one of the products is increased.
- (c) It changes with changes in the temperature.
- (d) It increases if the concentration of one of the reactants is increased.
- (e) It may be changed by the addition of a catalyst.

25. The conventional equilibrium constant expression (K_c) for the system below is:



- (a) $[\text{I}_2][\text{Cl}_2]/[\text{ICl}]^2$
- (b) $[\text{I}_2][\text{Cl}_2]/2[\text{ICl}]$
- (c) $[\text{Cl}_2]$
- (d) $([\text{I}_2] + [\text{Cl}_2])/2[\text{ICl}]$
- (e) $[\text{Cl}_2]/[\text{ICl}]^2$

Subject: - English

Complete the CBSE project on the topic assigned by your teacher.

Subject: - HINDI

1. अर्यवावषयक परिक्षा केप्रश्न- पत्र को हल किना।
2. ओह भाग -एक (िजनी एवम ् गज़ल पाठों को पढ़ना, र्ाद किना एवम ् पींच- पींच वस्तुननष्ठ प्रश्न बनाकि हल किना।)
- 3.ववतान भाग -एक (आलो आींरारि पाठ को पढ़ना र्ाद किना एवम दस वस्तुननष्ठ प्रश्न बनाकि हल किना।)
4. व्रवहारिक लेखन - (प्रनतवेदन, प्रेस ववज्ञप्तत, परिपत्र कार्यवत्त एवींकार्यसचूी) सभी पि एक - एक लेख ललखना। 5.पत्र लेखन -(लशकार्ती पत्र एवम ् सींपादक केनाम पत्र) एक -एक ललखना। 5.जनसींचाि माध्म - 50 प्रश्न हल किना
- 6.परिर्ोजना कार्य- आवींहित ववषर् पि परिर्ोजना कार्यपूिा किना। ध्ान दे-
 1. गह्व कार्यएवम ् जन सींचाि के प्रश्नोत्ति नोि बुक मेंकिनेहै।
 2. परिर्ोजना कार्यअलग फाइल मेंकिना

Subject: - Mathematics

- Q.1 The length L (in centimetre) of a copper rod is a linear function of its Celsius temperature C . In an experiment, if $L = 124.942$ when $C = 20$ and $L = 125.134$ when $C = 110$, express L in terms of C . (3 marks)
- Q.2 Write the equation of a line parallel to x -axis and passing through $(-2,3)$.
- Q.3 Point $R(h, k)$ divides a line segment between the axes in the ratio $1:2$. Find equation of the line. (5 marks)
- Q.4 Find the equation of the straight line which makes an angle of 60° with the x - axis and cuts off an intercept -2 from the y - axis.
- Q.5 Find the equation of the straight line joining the points (a,b) and $\{(a+b),(a-b)\}$.
- Q.6 Find the slope of a line which passes through $(1,2)$ and $(-3,4)$? (1 mark)
- Q.7 Find the coordinates of point C , which divides the line segment joining the points $D(-2, 5)$ and $E(4, 6)$ in the ratio $2 : 3$. (2 marks)
- Q.8 If three lines whose equations are $y = m_1x + c_1$, $y = m_2x + c_2$, $y = m_3x + c_3$ are concurrent, then show that $m_1(c_2 - c_3) + m_2(c_3 - c_1) + m_3(c_1 - c_2) = 0$. (5 marks)
- Q.9 Find the equation of a line which is equidistant from the lines $x = -4$ and $x = 8$. (1 mark)
- Q.10 The vertices of ΔPQR are $P(2, 1)$, $Q(-2, 3)$ and $R(4, 5)$. Find equation of the median through the vertex R . (3 marks)
- Q.11 Find the value of p so that the three lines $3x + y - 2 = 0$, $px + 2y - 3 = 0$ and $2x - y - 3 = 0$ may intersect at one point. (3 marks)
- Q.12 Reduce $4x - 3y - 12 = 0$ to the 'intercept form'. (2 marks)
- Q.13 Find the equation of the line perpendicular to the line $2x - 3y + 7 = 0$ and having x -intercept 4 . (3 marks)
- Q.14 By using the concept of equation of a line, prove that the three points $(3, 0)$, $(-2, -2)$ and $(8, 2)$ are collinear. (3 marks)
- Q.15 Find the equation of the right bisector of the line segment joining the points $(3, 4)$ and $(-1, 2)$. (3 marks)
- Q.16 Find the equation of the straight line passing through $(2, 3)$ and cutting off intercepts equal in magnitude and opposite in sign. (2 marks)

Q.17 Prove that the product of the lengths of the perpendiculars drawn from the points (5 marks)

Q.18 Find equation of the line perpendicular to the line $x - 7y + 5 = 0$ and having x intercept 3. (3 marks)

Q.19 A line passes through (x_1, y_1) and (h, k) . If slope of the line is m , show that $k - y_1 = m(h - x_1)$. (2 marks)

Q.20 Write the equation of a line passing through $(2,3)$ and makes an angle of 45° with x-axis.

Q 21 Do 4 Maths activity in maths manual file.

Q 22 Do Ex 11.1 and Ex 11.2 in notebook.

Q 23 Do the Concept of CH-12 Introduction to 3-dimensional Geometry and solve Ex 12.1 and Ex 12.2 in notebook.

Subject: - Biology

A. Complete Biology Practical file for practical exam.

B. Answer the Following Questions

2. (a) Give steps to ATP synthesis in chloroplasts through chemiosmosis. Draw diagram also.

(b) Schematically represent non-cyclic photophosphorylation in plants.

3. a). What is glycolysis ? Where does glycolysis takes place in a cell ? Give schematic representation of glycolysis.

b). Draw C3 and C4 cycle .Discuss the difference between C3 AND C4 Cycle.

4. Differentiate between endarch and exarch conditions. Draw diagrams too.

5. Mention the significance of casparian strips. Where do you find them ?

6. Draw labelled diagrams of various organ systems in a frog?

7. Differentiate between prosthetic group and coenzyme ?

8. Amino acids exist as zwitter ions. Give its structure. Why is it formed ?

9. Explain competitive inhibition along with an example.

10. Differentiate between primary and secondary metabolites with examples ?

11. Differentiate between Mitosis and Meiosis. Draw labelled diagrams showing various stages in both cell divisions.

12. (a) Write the function of inclusion bodies in prokaryotic cells ?

(b) Where are they present ?

(c) Give two examples of inclusion bodies.

13. Diagrammatically represent the types of chromosomes based on the position of centromere.

14. Differentiate between the electron microscopic structure of cilia/flagella and centriole.

15.a. Provide the scientific terms for the following :

(i) The leaf without a petiole (stalk).

(ii) The flat and expanded portion of a leaf.

(iii) Orderly arrangement of leaves on the node.

(iv) Lateral appendages on either side of the leaf.

b. Differentiate between peduncle and Pedicel

Subject: - Geography

Topic- Important Diagrams/Maps of Book-II (India: Physical Environment)

NOTE- 1. Explain the following diagram/map-based questions in a scrap book.

2. In the brackets the page no. of TEXT BOOK are mentioned.

Q.1 States and UTs of India (Page no.3)

Q.2 Neighbouring countries of India (Page no. 4)

Q.3 Major rivers of India (Page no. 22)

Q.4 Normal dates of onset of SW monsoon (Page no. 39)

Q.5 Annual Rainfall of India (Page no. 51)

Q.6 Climatic Regions (Koeppen's Scheme) (Page no. 54)

Q.7 Natural Vegetation of India (Page no. 58)

Q.8 Biosphere Reserves of India (Page no. 65)

Q.9 Major Soil Types of India (Page no. 70) Q.10 Earthquake Hazard Zones (Page no. 82) Q.11

Drought prone areas of India (Page no. 89)

Subject: - Accountancy and Business studies

ACCOUNTANCY- XIC

- COMPLETE BACK EXERCISE OF NCERT OF CHAPTER DEPRECIATION.
- SOLVE THE HALF YEARLY QUESTION PAPER IN NOTEBOOKS.
- REVISE THE CONCEPTS / PRINCIPLES OF ACCOUNTING.
- REVISE THE REASONS WHY CASH BOOK & PASS BOOK DOES NOT AGREE ON A PARTICULAR DATE.

BUSINESS STUDIES – XIC

- SOLVE THE HALF YEARLY QUESTION PAPER IN NOTEBOOKS.
- WRITE & REVISE THE FOLLOWING QUESTIONS:-
 1. STEPS IN THE FORMATION OF A JOINT STOCK COMPANY.
 2. PRINCIPLES OF INSURANCE.
 3. DIFFERENCE BETWEEN EMPLOYMENT AND PROFESSION.
 4. COMPLETE BACK EXERCISE OF NCERT-- SOURCES OF BUSINESS FINANCE.
 5. SUBMIT THE GIVEN PROJECT WORK (**ON TOPIC SMALL BUSINESS & ENTERPRISES**). THE PROJECT WORK SHOULD COVER THE WHOLE CHAPTER 8.

PHYSICS(2022-23)

1. If 'R' is the horizontal range for θ inclination and H is the height reached by the projectile, show that $R(\max.)$ is given by
 $R_{\max} = 4H$
2. A motor boat is racing towards north at 25 km/h and water current in the region is 10km/h in the direction of 60 degree east of south. Find the relative velocity of the boat and its direction.
3. Find the centre of mass of the remaining disc, if a circular hole of radius 1 m is cut off from a disc of radius 6 m and the centre of the hole is 3 m from the centre of the disc.
4. If a block of mass 2 kg is pulled up on a smooth incline of angle 30° with horizontal and the block moves with an acceleration of 1 m/s^2 , then
 - (a) Find the power delivered by the pulling force at a time 4 seconds after motion starts.
 - (b) What is the average power delivered during these four seconds after the motion starts?
5. An automatic manufacturer claims that its super-deluxe sports car will accelerate from rest to a speed of 42.0 ms^{-1} in 8.0 s assuming that the acceleration is constant.
 - (a) Determine the acceleration of car in 2 ms
 - (b) Find the distance the car travels in 8.0 s
 - (c) Find the distance the car travels in 8th second.
6. A monkey of mass 40 kg climbs on a rope which stands a maximum tension of 600 N. In which of the following cases will the rope break.
 - (i) When the monkey climbs up with an acceleration of 6 m/s^2
 - (ii) When the monkey climbs down with an acceleration 4 m/s^2

(iii) When the monkey climbs up with a uniform speed of 5 m/s

(iv) When the monkey falls down the rope nearly freely under gravity

7. Show that the average life span of humans on a planet in terms of its natural years is 25 planet years if the average span of life on Earth is taken to be 70 years.

8. Two bodies A and B having masses m_A and m_B respectively have equal K.E. If p_A and p_B be their respective momenta, then prove that the ratio of momenta is equal to the square root of the ratio of respective masses. f.c.

9. What percentage of K.E. of a moving particle is transferred to the stationary particle of

(a) 7 times it's mass

(b) equal mass,

(c) 1/7 th of its mass.

10. A cord is wound around the circumference of a wheel of diameter 0.3m. The axis of the wheel is horizontal. A mass of 0.5kg is attached at the end of the cord and it is allowed to fall from rest. If the weight falls 1.5m in 4s, what is the angular acceleration of the wheel? Also, find out the M.I. of the wheel.

11. What would be the duration of the day if:

(a) Earth suddenly shrinks to 1/64 th of its original volume, mass remaining uncharged.

(I of earth = $\frac{2}{5} mR^2$)?

(b) Earth suddenly contracts to half of its present radius (without any central torque acting on it). By how much would the day be decreased?

12. Show that Kepler's Second law is the law of conservation of angular momentum.

13. Write following experiments in practical copy. Write the reading in observation table only those experiment which is performed in the lab. Leave the other observation tables as blank and fill the observation table after performing experiment in the lab-

(a) To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.

(b) To measure diameter of a given wire and thickness of a given sheet using screw gauge.

(c) Using a simple pendulum, plot its L-T² graph and use it to find the effective length of second's pendulum.

(d) To study the relationship between force of limiting friction and normal reaction and to find the co- efficient of friction between a block and a horizontal surface.

(e) To find the force constant of a helical spring by plotting a graph between load and extension.

(f) To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.

(g) To study the relationship between the temperature of a hot body and time by plotting a cooling curve.

(h) To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

14. Write following activities on activity notebook-

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.

2. To plot a graph for a given set of data, with proper choice of scales and error bars.

3. To measure the force of limiting friction for rolling of a roller on a horizontal plane.

4. To observe change of state and plot a cooling curve for molten wax.

5. To study the effect of detergent on surface tension of water by observing capillary rise.
6. To study the factors affecting the rate of loss of heat of a liquid.