

# CLASS IX

## Subject -English Communicative

1. Portfolio  
Complete the portfolio work in the format shared in the class.
2. Select a poem for Poem Recitation .Write the poem with meaning in a file Page.
3. Write Dialogues on Any one of the topics :
  - i) Parents Teachers Meeting in the School.
  - ii) Shopkeeper and the Customer (Buyer)
4. Revise all the lessons completed till date.

**Date of Submission: 01.11.2023**

## SUBJECT -HINDI

### 1 संवाद लेखन –

- ग्राहक एवं विक्रेता के मध्य संवाद
- दो मित्रों के मध्य जल संरक्षण पर संवाद

### 2 अनुच्छेद लेखन

- स्वच्छ भारत
- पर्यावरण संरक्षण

### 3 एकता में शक्ति – शीर्षक पर लघु कथा लिखिए

### 4 अपने कंपनी के निदेशक को अवकाश हेतु ई मेल कीजिए

## SUBJECT- MATHEMATICS

1.Prove that the diagonal of parallelogram divides it into two congruent triangle

2. State and prove theMid point theorem

3 .Prove that the if angles subtended by the chords of a circle at the center are equal,then the chords are equal.

4. Prove that the lines drawn through the center of a circle to bisects a chord is perpendicular to to chord

5. Prepare 10 multiple choice questions from (5 fromeach ) Quadrilateral and Circles chapter .

## SUBJECT –SCIENCE

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1.Preparation of true solutions of common salt, sugar in water and study it's properties on the basis of -

(I) Transparency

(ii) Filtration

(III) Stability

2. Preparation of suspension of chalk.,soil, and fine sand studying it's properties on the basis of -

I) Transparency

(ii) Filtration

(III) Stability

3.Preparation of colloidal solutions of starch in water and studying it's properties on the basis of -

I) Transparency

(ii) Filtration

(III) Stability

4.Identification of plant tissues like parenchyma, collenchyma and sclerenchyma.

1.draw the diagram

2.identification features

3,function

4.Locartion

5. Prepare a periodic table in drawing sheet.

6.Solve one sample papers

## SUBJECT -SST

**1. Prepare the state profile of Gujarat state by mentioning following topics related to Gujarat state only.(Do it in preferably A4 size paper.)**

- i. Introduction of the Gujarat State: Physical Map, Political Map, Latitudinal and Longitudinal Extent

- ii. Historical Place of Gujarat State: Different places, Monuments, Forts, Caves
- iii. Indigenous games of the Gujarat state: Famous Sports of the state
- iv. Festivals of Gujarat States
- v. Other important and interesting information about the Paired State Gujarat like Food, Costumes, religious centers and Literature

## 2. Mapwork:-

### Chapter-2: Physical Features of India

- **Mountain Ranges:** The Karakoram, The Zasker, The Shivalik, The Aravali, The Vindhya, The Satpura, Western & Eastern Ghats
- **Mountain Peaks**—K2, Kanchan Junga, Anai Mudi □ Plateau- Deccan Plateau, Chotta Nagpur Plateau, Malwa Plateau
- **Coastal Plains** - Konkan, Malabar, Coromandal & Northern Circar (Location and Labelling)

## SUBJECT – SANSKRIT

पञ्चपत्र लेखनम् , पञ्च चित्रवर्णनम् , अनुच्छेद लेखनम् [ एकम् ]

# CLASS X

## English Language and Literature

5. Portfolio  
Complete the portfolio work in the format provided.
6. Select a poem for Poem Recitation .Write the poem with meaning in a file Page.  
Or prepare Poem Tale of Custard the Dragon for Poem Recitation in the Class
7. Revise all the lessons completed till date. (with Focus on Syllabus Provided for Monthly Test – October)

**Date of Submission: 01.11.2023**

## HINDI

1 हिंदी शिक्षक पद के लिए एक स्ववृत्त तैयार कीजिए

2 अनुच्छेद लिखिए-

क पर्यावरण संरक्षण                      ख स्वच्छ भारत

3 एटीएम कार्ड न मिलने की शिकायत करते हुए शाखा प्रबंधक को ई मेल कीजिए

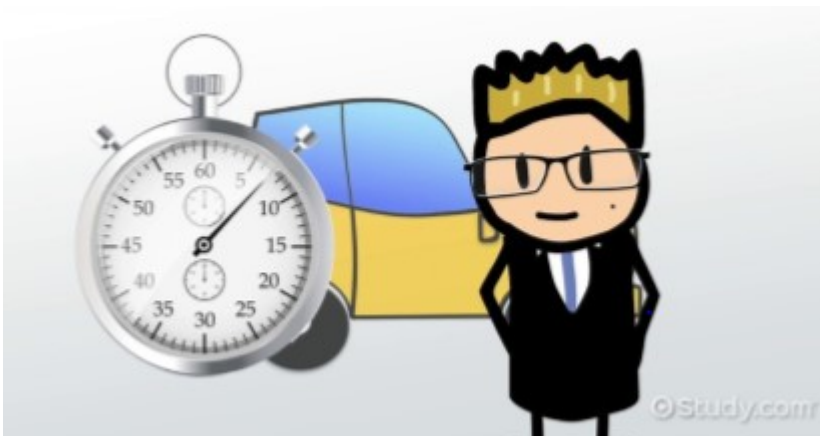
## SCIENCE

1. Portfolio - Chapter Our Environment
2. Solve two sample papers from CBSE .
3. Complete any three practical in practical copy.

## MATHEMATICS

### CASE BASED

1) Manpreet was a student of Class X. One day Sir asked him to calculate and give the answer of following questions, if she will start increasing reading time of English at home daily by 5 minutes and on first day you read only for 10 minutes. You also have to give the answer of the following questions.



- (A) On which day you will do reading 1 hour?
- (B) On 75th day how many minutes she will read?
- (C) What will be total time of reading in 1st five days?
- (D) On which day she will start reading more than 20 minutes?

2) Raj and Ajay are very close friends. Both the families decide to go to Ranikhet by their own cars. Raj's car travels at a speed of  $x$  km/h while Ajay's car travels 5 km/h faster than Raj's car. Raj took 4 h more than Ajay to complete the journey of 400 km.



(A) What will be the distance covered by Ajay's car in two hours?

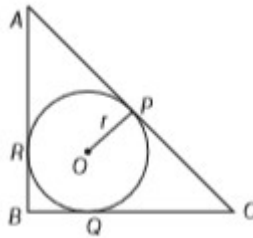
(B) Write a quadratic equation describe the speed of Raj's car?

(C) What is the speed of Raj's car?

(D) How much time took Ajay to travel 400 km?

(E) How much time took Raj to travel 400 km?

3) A playground is in the shape of a triangle with right angle at B,  $AB = 3\text{m}$  and  $BC = 4\text{m}$ . A pit was dug inside it such that it touches the walls AC, BC, and AB at P, Q and R, respectively such that  $AP = x$  m.



Based on the above information, answer the following questions.

(i) Find the value of AR?

(ii) Find the value of BQ?

(iii) The value of CQ?

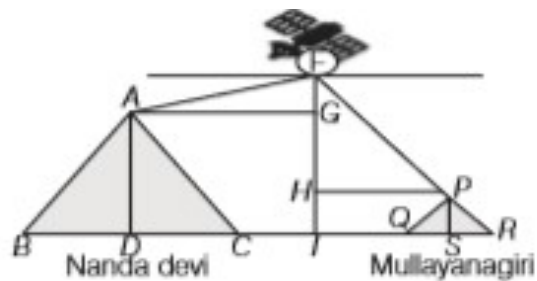
(v) Find the Radius of the pit?

4) A group of students of class X visited India Gate on an educational trip. The teacher and students had interest in history as well. The teacher narrated that India Gate, official name Delhi Memorial, originally called All-India War Memorial, monumental sandstone arch in New Delhi, dedicated to the troops of British India who died in wars fought between 1914 and 1919. The teacher also said that India Gate, which is located at the eastern end of the Rajpath (formerly called the Kingsway), is about 138 feet (42 m) in height.



- (i) What is the angle of elevation if they are standing at a distance of 42 m away from the monument?
- (ii) They want to see the tower at an angle of  $60^\circ$ . So, they want to know the distance where they should stand and hence find the distance.
- (iii) If the altitude of the Sun is at  $60^\circ$ , then find the height of the vertical tower that will cast a shadow of length 20 m?
- (iv) The ratio of the length of a rod and its shadow is 1: 1. Then find the angle of elevation of the Sun ?

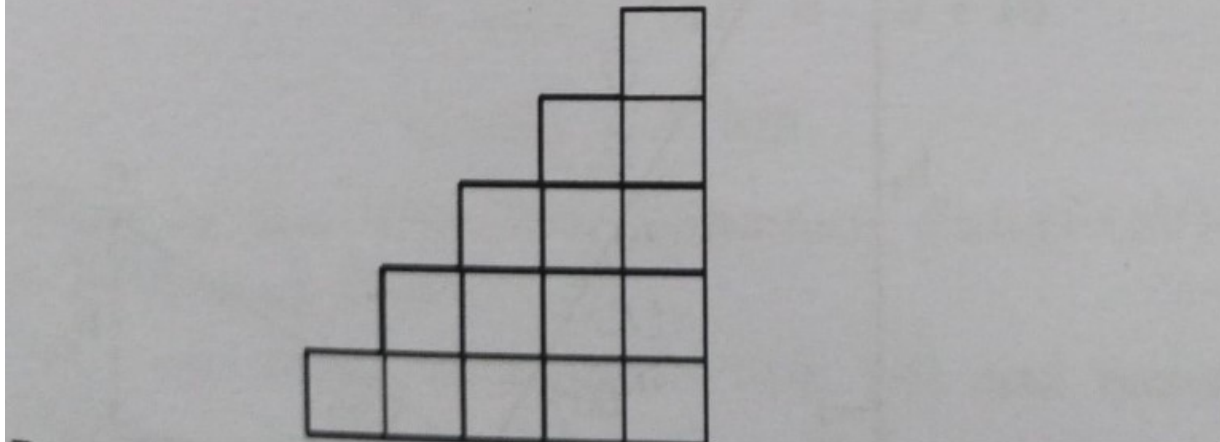
5) A Satellite flying at height  $h$  is watching the top of the two tallest mountains in Uttarakhand and Karnataka, they being Nanda Devi (height 7,816m) and Mullayanagiri (height 1,930 m). The angles of depression from the satellite to the top of Nanda Devi and Mullayanagiri are  $30^\circ$  and  $60^\circ$ , respectively. If the distance between the peaks of two mountains is 1937 km, and the satellite is vertically above the mid-point of the distance between the two mountains. (Use  $\sqrt{3} = 1.73$ )



- (i) Find the distance of the satellite from the top of Nanda Devi?
- (ii) Find the distance of the satellite from the top of Mullayanagiri?
- (iii) Find the distance of the satellite from the ground?
- (iv) What is the angle of elevation, if a man is standing at a distance of 7816 m from Nanda Devi?

6)

A person places the bricks one above the other. There are total 360 bricks and are stacked in the following manner, 30 bricks are placed in the bottom row, then 29 bricks in the row above it and so on. Now it forms a mathematical concept, which can be used to solve and get the number of bricks in the various layers.



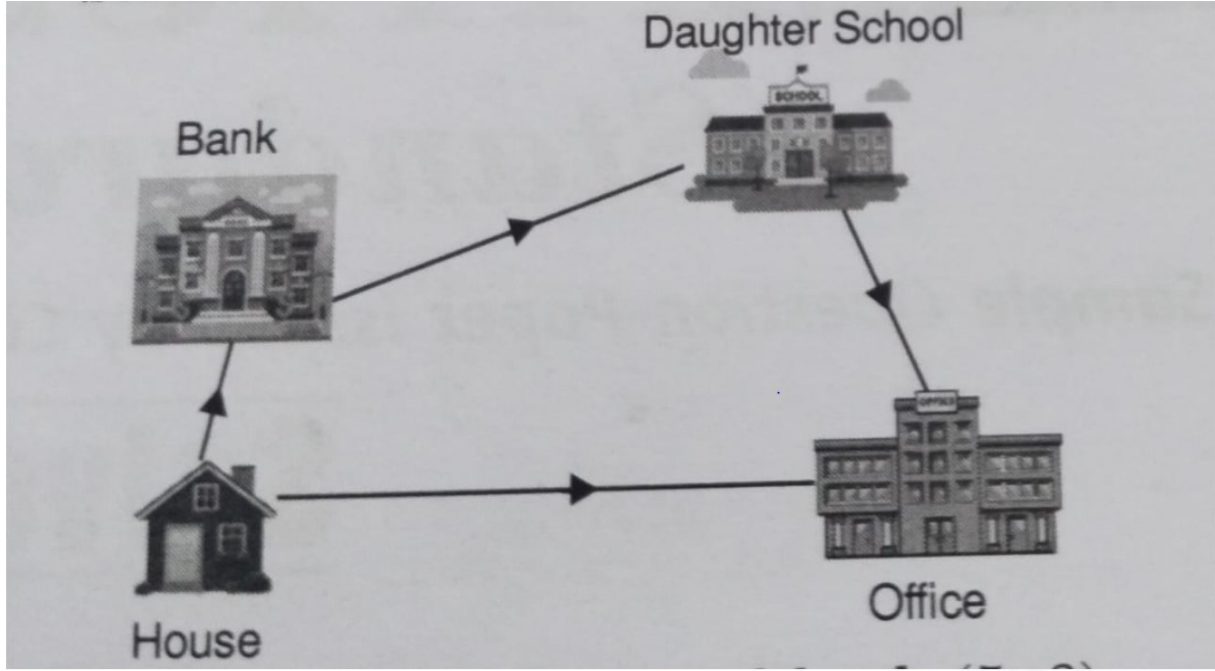
(i) In how many rows 360 bricks can be placed?

(ii) Find the value of  $x$ , for which  $2x$ ,  $x+10$  and  $3x+2$  are three consecutive terms of AP.

(iii) The  $n$ th term of an AP is  $(7-4n)$ . Find its common difference?

(iv) Which term of AP 21, 18, 15..... Is zero?

7) Aditya starts walking from his house to office, instead of going to the office directly, he goes to a bank first, from there to his daughter's school and then reaches the office. (Assume that all distances covered are in straight lines.) If the house is situated at  $(2,4)$ , bank at  $(5,8)$ , School at  $(13,14)$  and office at  $(13,26)$ . (All distances are measured in km).



- (i) What is the distance between house and bank?
- (ii) What is the distance between daughter's school and bank?
- (iii) What is the distance between house and office?
- (iv) What is the total distance travelled by Aditya to reach the office?

## **SOCIAL SCIENCE**

1. Do all the map work given in syllabus.
2. Prepare the chapters given for monthly test.
3. Complete the notes and learn all the taught chapters.

## **SANSKRIT**

कक्षा दशमी कृते –

पञ्चपत्रलेखनम् , पञ्चचित्रवर्णनम् , अनुच्छेदलेखनम् [ एकम् ]

## **CLASS XI**

### **SUBJECT- English**

1. Write debates on:
  - I) Academic Excellence is the only requirement for a successful career.
  - II) Online smart classes are the future of the education system.
2. Draft posters on :
  - I) Say 'No' to crackers





2. What is excitation theory, why it is given , explain it briefly.
3. Write note on stoichiometry calculations with minimum 2 examples?
4. Write about periodic properties, trends and exceptions of –
  - A. Ionization enthalpy
  - B. Electron gain enthalpy
  - C. Electronegativity
  - D. Ionic radii
5. What is entropy? Write note on Born haber cycle.

### **SUBJECT- PHYSICS**

6. Q1. What is elastic collision? show that in elastic collision of same mass velocity get interchange.
7. Q2. Show that in free fall total energy remain conserved.
8. Q3. Distinguish between conservative and non-conservative force.
9. Q4, what is angle of banking? Derive the expression of maximum velocity in a banked road?
- 10.Q5. Explain why pull is better than push?
- 11.Q6. State and prove law of conservation of momentum.
- 12.Q7. Show that newton second law is real law of motion.
- 13.Q8. Derive expression for time of flight, maximum height and horizontal range in projectile motion.

### **SUBJECT-HISTORY**

Prepare a Project work (Individual)of followingtopics.(DoitinpreferablyA4sizepaper.)

1. Ancient history in depth: Mesopotamia( For roll no. 01 to 06)
2. Greek Philosophy and City States ( For roll no. 07 to 12)
3. Contributions of Roman Civilization ( For roll no. 13 to 18)
4. Different schools of thoughts-Realism; Humanism; Romanticism ( For roll no. 19 to 24)
5. Crusades: causes; rationale; events outcomes; Holy Alliance ( For roll no. 25 to 30)
6. Facets of the Industrialization in 16<sup>th</sup>-18<sup>th</sup> centuries ( For roll no. 31 to 36)

## MAP WORK

Prepare a Map work profile on the suitable map of the following map items:

- (A) On the suitable map (West Asia) mark and locate the following cities: 1. Mecca 2. Medina 3. Damascus 4. Antioch 5. Edessa 6. Armenia 7. Bukhara 8. Samarqand
- (B) On the suitable map (South East Asia) mark and locate the following places related to Mongol empire: 1. Karakorum 2. Moscow 3. Turfan 4. Merv 5. Heart 6. Balkh
- (C) On the suitable map ( Western Europe) mark and locate the following extent of feudalism: 1. St. Denis 2. Bingen 3. London 4. Rome 5. Vienna
- (D) On the suitable map, mark and locate the following Italian States. 1. Rome 2. Venice 3. Padua 4. Genoa 5. Mantua 6. Florence

NOTE:

- 1. Revision for Half yearly examination
- 2. Complete your Class work Home work Notebook

### **SUBJECT- Geography**

- 1. Complete the practical work Introduction of Maps in file pages.
- 2. Do the map work of all taught chapters.
- 3. Learn and complete all the notes of taught chapters.

### **SUBJECT- ECONOMICS**

A) Draw different graph in graph copy

- 1. Line frequency graph
- 2. Histogram
- 3. Polygon with histogram

Without histogram

- 4. Frequency curve
- 5. Ogive

B) Solve 3 questions from Mean , Median and Mode

By step deviation method..

### **Business studies –**

PROJECT WORK COMPLETION

## ACCOUNTANCY –

### PROJECT WORK COMPLETION

Solve the CBSE sample paper

### SUBJECT HINDI

निम्नलिखित में से किसी एक विषय पर सचित्रपरियोजनाकार्यतैयारकीजिए-

- 1 हिन्दी साहित्य का काल विभाजन करते हुए सभी कालों की प्रमुख विशेषताओं का वर्णन कीजिए।
- 2 हिन्दी साहित्य के आदिकाल की प्रमुख विशेषताओं का वर्णन कीजिए।
- 3 हिन्दी साहित्य के भक्तिकाल की प्रमुख विशेषताओं का वर्णन कीजिए।
- 4 हिन्दी साहित्य के रीतिकाल की प्रमुख विशेषताओं का वर्णन कीजिए।
- 5 हिन्दी साहित्य के आधुनिक काल की प्रमुख विशेषताओं का वर्णन कीजिए।
6. हिन्दी साहित्य के आधुनिक काल के प्रमुख वाद / युगों की विशेषताओं का वर्णन कीजिए।
- 7 हिन्दी साहित्य के भारतेंदु युग की प्रमुख विशेषताओं का वर्णन कीजिए।
- 8 हिन्दी साहित्य के द्विवेदी युग की प्रमुख विशेषताओं का वर्णन कीजिए।
- 9 हिन्दी साहित्य के छायावादी युग की प्रमुख विशेषताओं का वर्णन कीजिए।
- 10 हिन्दी साहित्य के प्रगतिवाद की प्रमुख विशेषताओं का वर्णन कीजिए।
- 11 हिन्दी साहित्य के प्रयोगवाद की प्रमुख विशेषताओं का वर्णन कीजिए।
- 12 हिन्दी साहित्य के नई कविता की प्रमुख विशेषताओं का वर्णन कीजिए।
13. अपने प्रिय कवि, कहानीकार, उपन्यासकार का जीवन परिचय देते हुए उनकी प्रमुख रचनाओं का उल्लेख कर हिन्दी साहित्य में उनके योगदान का वर्णन कीजिए।
14. आधुनिक युग में प्रकाशित होने वाली हिन्दी की प्रमुख पत्रिकाओं व उनके संपादकों के नाम का सचित्र वर्णन करते परियोजना बनाइये।
15. हिन्दी के प्रमुख समाचार पत्रों संपादक व प्रकाशन स्थान पर परियोजना बनाइये।

पाठ से- निम्नलिखित साहित्यकारों में से किसी एक के व्यक्तित्व एवम कृतित्व पर परियोजना तैयार कीजिये।

1. नागार्जुन
- 2 कबीरदास
3. मुंशीप्रेमचंद

4. भवानीप्रसादमिश्र

5.अपने किसी भी प्रिय साहित्यकार पर।

काट्य खण्ड से-

1.गजल किसे कहते हैं?प्रमुख गजलकारों का साहित्यिक परिचय दीजिये।

2 विज्ञापन किसे कहते हैं? प्रमुख उत्पादों के प्रसिध्द विज्ञापनों पर परियोजना

3. कविता किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

4 कहानी किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

5. नाटक किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

12. समाचार की परिभाषा लिखिए। समाचार लेखन शैली का विस्तृत रूप से वर्णन कीजिए एवं शिक्षा, खेल, राजनीति, आर्थिक जगत, फ़िल्म एवं अपराध जगत के एक एक समाचार का सचित्र संकलन कीजिए।

13. जनसंचार किसे कहते हैं? जनसंचार के प्रमुख माध्यमों पर सचित्र एवं विवरणात्मक परियोजना बनाइये।

परियोजनाफाइलकाप्रारूप

# केन्द्रीय विद्यालय बिलासपुर

2021-22

## हिन्दीपरियोजना कार्य

विषय :

प्रस्तुतकर्ता-समरजीतसिंह

कक्षा :ग्यारहवीं'स'

अनुक्रमांक :

निर्देशक-  
पी जी टी (हिन्दी)

सुनील कुमार पाण्डेय

प्रमाण पत्र

(विद्यार्थी द्वारा प्रदत्त)

मैं केन्द्रीय विद्यालय बिलासपुर का छात्र/की छात्रा प्रमाणित करता हूँ/करती हूँ कि यह परियोजना कार्य मेरे सीबीएसई पाठ्यक्रम के एक भाग के रूप में तैयार किया गया है। इस परियोजना में उपयोग में लायी गयी सामग्री विभिन्न माध्यमों से प्राप्त की गयी है। मैं प्रमाणित करता हूँ कि यह सामग्री प्रामाणिक है।

नाम व हस्ताक्षर

अनुक्रमांक

प्रमाण पत्र

प्रमाणित किया जाता है कि ( विद्यार्थी का नाम )-----  
कक्षा ----- केन्द्रीय विद्यालय बिलासपुर ने मेरे मार्गदर्शन में यह परियोजना कार्य पूर्ण किया है। उन्होंने इस कार्य में पूर्ण सावधानी बरती है साथ ही परियोजना को बनाने में पूर्ण जिम्मेदारी का परिचय दिया है।

मैं प्रमाणित करता हूँ कि यह परियोजना सीबीएसई के दिशा निर्देशों के अनुरूप पूर्ण की गयी है।

सुनील कुमार पाण्डेय

पी जी टी (हिंदी)

के. वि. बिलासपुर

श्री धीरेंद्र कुमार झा

प्राचार्य

के. वि. बिलासपुर

# CLASS XII

## ENGLISH

1. Solve the CBSE sample paper in your English notebook.
2. Write a story, poem or article for the school magazine. (File pages)

## HINDI

निम्नलिखित में से किसी एक विषय पर सचित्रपरियोजनाकार्यतैयारकीजिए-

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6. हिन्दी साहित्य के आधुनिक काल के प्रमुख वाद / युगों की विशेषताओं का वर्णन कीजिए।
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- 9 हिन्दी साहित्य के छायावादी युग की प्रमुख विशेषताओं का वर्णन कीजिए।
- 10 हिन्दी साहित्य के प्रगतिवाद की प्रमुख विशेषताओं का वर्णन कीजिए।
- 11 हिन्दी साहित्य के प्रयोगवाद की प्रमुख विशेषताओं का वर्णन कीजिए।
- 12 हिन्दी साहित्य के नई कविता की प्रमुख विशेषताओं का वर्णन कीजिए।
13. अपने प्रिय कवि, कहानीकार, उपन्यासकार का जीवन परिचय देते हुए उनकी प्रमुख रचनाओं का उल्लेख कर हिन्दी साहित्य में उनके योगदान का वर्णन कीजिए।
14. आधुनिक युग में प्रकाशित होने वाली हिन्दी की प्रमुख पत्रिकाओं व उनके संपादकों के नाम का सचित्र वर्णन करते परियोजना बनाइये।
15. हिन्दी के प्रमुख समाचार पत्रों संपादक व प्रकाशन स्थान पर परियोजना बनाइये।

पाठ से- निम्नलिखित साहित्यकारों में से किसी एक के व्यक्तित्व एवम कृतित्व पर परियोजना तैयार कीजिये।

1. तुलसीदास

2सूर्यकांतत्रिपाठीनिराला

3. हरिवंशरायबच्चन

4.धर्मवीरभारती

5.अपने किसी भी प्रिय साहित्यकार पर।

काव्य खण्ड से-

1.गजल किसे कहते हैं?प्रमुख गजलकारों का साहित्यिक परिचय दीजिये।

2 विज्ञापन किसे कहते हैं? प्रमुख उत्पादों के प्रसिध्द विज्ञापनों पर परियोजना

3. कविता किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

4 कहानी किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

5. नाटक किसे कहते हैं? इसके मूल तत्व क्या क्या हैं?

12. समाचार की परिभाषा लिखिए। समाचार लेखन शैली का विस्तृत रूप से वर्णन कीजिए एवं शिक्षा, खेल, राजनीति, आर्थिक जगत, फ़िल्म एवं अपराध जगत के एक एक समाचार का सचित्र संकलन कीजिए।

13. जनसंचार किसे कहते हैं? जनसंचार के प्रमुख माध्यमों पर सचित्र एवं विवरणात्मक परियोजना बनाइये।

परियोजनाफाइलकाप्रारूप

# केन्द्रीय विद्यालय बिलासपुर

2021-22

## हिन्दीपरियोजना कार्य

विषय :

प्रस्तुतकर्ता-वासुयादव

कक्षा :बारहवीं'स'



अनुक्रमांक :

निर्देशक-  
पी जी टी (हिन्दी)

सुनील कुमार पाण्डेय

प्रमाण पत्र

(विद्यार्थी द्वारा प्रदत्त)

मैं केन्द्रीय विद्यालय बिलासपुर का छात्र/की छात्रा प्रमाणित करता हूँ/करती हूँ कि यह परियोजना कार्य मेरे सीबीएसई पाठ्यक्रम के एक भाग के रूप में तैयार किया गया है। इस परियोजना में उपयोग में लायी गयी सामग्री विभिन्न माध्यमों से प्राप्त की गयी है। मैं प्रमाणित करता हूँ कि यह सामग्री प्रामाणिक है।

नाम व हस्ताक्षर

अनुक्रमांक

प्रमाण पत्र

प्रमाणित किया जाता है कि ( विद्यार्थी का नाम )-----  
कक्षा ----- केन्द्रीय विद्यालय बिलासपुर ने मेरे मार्गदर्शन में यह परियोजना कार्य पूर्ण किया है। उन्होने इस कार्य में पूर्ण सावधानी बरती है साथ ही परियोजना को बनाने में पूर्ण जिम्मेदारी का परिचय दिया है।

मैं प्रमाणित करता हूँ कि यह परियोजना सीबीएसई के दिशा निर्देशों के अनुरूप पूर्ण की गयी है।

सुनील कुमार पाण्डेय

पी जी टी (हिन्दी)

के. वि. बिलासपुर

श्री धीरेन्द्र कुमार झा

प्राचार्य

के. वि. बिलासपुर

3.

### MATHEMATICS

1. Find the vector equation of the line passing through the point  $(1, 2, -4)$  and is perpendicular to the two lines  $\frac{x-8}{3} = \frac{y+19}{-16} = \frac{z-10}{7}$  and  $\frac{x-15}{3} = \frac{y-29}{8} = \frac{z-5}{-5}$
2. Find the value of  $p$ , so that the lines  $l_1: \frac{1-x}{3} = \frac{7y-14}{p} = \frac{z-3}{2}$  and  $l_2: \frac{7-7x}{3p} = \frac{y-5}{1} = \frac{6-z}{5}$  are perpendicular to each other. Also find the equations of a line passing through a point  $(3, 2, -4)$  and parallel to line  $l_1$
3. Find the values of  $p$  so that the lines  $:\frac{1-x}{3} = \frac{7y-14}{2p} = \frac{z-3}{2}$  and  $\frac{7-7x}{3p} = \frac{y-5}{1} = \frac{6-z}{5}$  are at right angles
4. Find the vector and Cartesian equations of the line passing through the point  $(2, 1, 3)$  and perpendicular to the lines  $\frac{x-1}{1} = \frac{y-2}{2} = \frac{z-3}{3}$  and  $\frac{x}{-3} = \frac{y}{2} = \frac{z}{5}$
5. Let  $\vec{a} = \hat{i} + 4\hat{j} + 2\hat{k}$ ,  $\vec{b} = 3\hat{i} - 2\hat{j} + 7\hat{k}$ , and  $\vec{c} = 2\hat{i} - \hat{j} + 4\hat{k}$ . Find a vector  $\vec{d}$  which is perpendicular to both  $\vec{a}$  and  $\vec{b}$ , and  $\vec{c} \cdot \vec{d} = 15$ .
6. A line passes through  $(2, -1, 3)$  and is perpendicular to the lines  $\vec{r} = (\hat{i} + \hat{j} - \hat{k}) + \lambda(2\hat{i} - 2\hat{j} + \hat{k})$  and  $\vec{r} = (2\hat{i} - \hat{j} - 3\hat{k}) + \mu(\hat{i} + 2\hat{j} + 2\hat{k})$ . Obtain its equation in vector and Cartesian form.
7. Show that the lines  $\frac{x-1}{3} = \frac{y-1}{-1}$ ,  $z + 1 = 0$  and  $\frac{x-4}{2} = \frac{z+1}{3}$ ,  $y = 0$  intersect each other. Also find their point of intersection.
8. Find the shortest distance between the following pair of lines :
$$\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}; \quad \frac{x-2}{3} = \frac{y-4}{4} = \frac{z-5}{5}$$
9. Find the shortest distance between the following pair of lines :
$$\frac{x-6}{1} = \frac{y-2}{-2} = \frac{z-2}{2}; \quad \frac{x+4}{3} = \frac{y}{-2} = \frac{z+1}{-2}.$$
10. Find whether the lines  $\vec{r} = (\hat{i} - \hat{j} - \hat{k}) + \lambda(2\hat{i} + \hat{j})$  and  $\vec{r} = (2\hat{i} - \hat{j}) + \mu(\hat{i} + \hat{j} - \hat{k})$  intersect or not. If intersecting, find their point of intersection.
11. Solve the following linear programming problem graphically: Maximize:  $Z = 7x + 10y$   
Subject to the constraints:  $4x + 6y \leq 240, 6x + 3y \leq 240, x \geq 0, y \geq 0$
12. Solve the following linear programming problem graphically  
Maximize:  $Z = 34x + 45y$ , Subject to the constraints:  $x + y \leq 300, 2x + 3y \leq 70, x \geq 0, y \geq 0$
13. Solve the following linear programming problem (L. P. P.) graphically:  
Minimize  $Z = 5x + 10y$  Subject to the constraints:  $x + 2y \leq 120, x + y \geq 60, x - 2y \geq 0, x \geq 0, y \geq 0$
14. Solve the following linear programming problem (L. P. P.) graphically:

Minimize  $Z = 3x + 9y$  Subject to the constraints:  $x + 3y \leq 60$ ,  $x + y \geq 10$ ,  $x \leq y$ ,  $x \geq 0$ ,  $y \geq 0$

15. Solve the differential equation:  $\frac{dy}{dx} - \frac{y}{x} + \operatorname{cosec} \frac{y}{x} = 0$  given that  $y = 0$ , when  $x = 1$
16. Solve the differential equation:  $\frac{dy}{dx} + 2y \tan x = \sin x$ , given that  $y = 0$ , when  $x = \frac{\pi}{3}$ ,
17. Solve the differential equation:  $x \frac{dy}{dx} = y - x \tan\left(\frac{y}{x}\right)$
18. Find the general solution of the differential equation  $\frac{dy}{dx} = \frac{y^2}{xy - x^2}$

Find the general solution of t

### Holiday HW of Chemistry of std XII

#### Q.1 - Learn and write the differences between-

Min & Max boiling azeotropes, \_\_\_\_\_ Primary & secondary cell

Order & Molecularity, \_\_\_\_\_ Molarity & Molality, \_\_\_\_\_  $SN^1$  and  $SN^2$  reactions

Outer orbital complex & Inner orbital complex

#### Q.2 - Learn and write chemical equation for distinction test between-

Methanol & Ethanol, \_\_\_\_\_ Pentanone-2 & Pentanone-3, \_\_\_\_\_ Phenol & Benzoic acid

$CH_3CHO$  &  $CH_3COCH_3$  \_\_\_\_\_ Phenol and Propane-1-ol Ethanal and Benzaldehyde

#### Q.3 - Learn and write short notes on-

Stephen Reduction, \_\_\_\_\_ Clemmensen Reduction, \_\_\_\_\_ Wolf Kishner Reduction|

Reimer Tiemann Reaction, \_\_\_\_\_ Williamson synthesis, \_\_\_\_\_ Gatterman reaction

Hoffman Bromamide Reaction, \_\_\_\_\_ Carbyl amine reaction, \_\_\_\_\_ Iodoform Test

Cannizaro Reaction, \_\_\_\_\_ Rosenmund Reduction, \_\_\_\_\_ Aldol condensation

#### Q.4-Write definition and mathematical expression for

a-Non ideal solution, \_\_\_\_\_ b-Kohlrausch's Law, \_\_\_\_\_ c-Henry's Law,

d-Faraday 1st & 2nd Law

#### Q.5 Learn and write reaction mechanism for-

a) Hydration of propene to yield propane-2-ol

b) Dehydration of propanol to yield propene

c) Dehydration of ethanol to yield ethoxyethane

d) Reaction of unsymmetrical with HI

#### Q.6 Learn and write working of -

a) lead storage battery

b) Fuel cell

c) Mercury cell

## PHYSICS

**Q1. Define current sensitivity and voltage sensitivity of a galvanometer. State the factors on which the sensitivity of a moving coil galvanometer depends.**

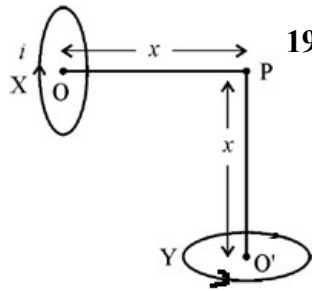
**Q2. Using Biot-Savart law, deduce an expression for the magnetic field on the axis of a circular current loop. Hence obtain the expression for the magnetic field at the centre of the loop**

**Q3. Derive an expression for the torque on a rectangular coil of area  $A$ , carrying a current  $I$  and placed in a magnetic field  $B$ . The angle between the direction of  $B$  and vector perpendicular to the plane of the coil is  $\theta$ .**

**Q4. An  $\alpha$ -particle and a proton of the same kinetic energy are in turn allowed to pass through a magnetic field  $B$ , acting normal to the direction of motion of the particles. Calculate the ratio of radii of the circular paths described by them.**

$$r = \frac{\sqrt{2mKE}}{qB}$$

**Q4. Two identical circular loops X and Y of radius  $R$  and carrying the same current are kept in perpendicular planes such that they have a common centre at  $P$  as shown in the figure. Find the magnitude and direction of the net magnetic field at the point  $P$  due to the loops.**



19. The differential equation  $\frac{dy}{dx} - y = \sin x$

## HISTORY

### PROJECT WORK

Prepare a Project work (Individual) of following topics. (Do it in preferably A4 size paper.)

7. The Indus valley civilization- Archaeological excavations and New perspectives ( For roll no. 01 to 04)
8. The History and legacy of Mauryan Empire ( For roll no. 05 to 08)
9. Comprehensive study of Mughal and Vijayanagar architecture ( For roll no. 09 to 12)
10. Comprehensive analysis of the Land Revenue Systems introduced by the Britishers in India ( For roll no. 13 to 16)
11. The Revolt of 1857- Causes; Planning and Coordination; Leadership, Vision of unity ( For roll no. 17 to 20)
12. Global legacy of Gandhian ideas ( For roll no. 21 to 24)

### MAP WORK

Prepare a Map work profile on the suitable map of the following map items:

3. Mature Harappansites: Harappa, Banawali, Kalibangan, Dholavira, Lothal, Mohanjodaro, Chanhudaro, Kotdiji
4. Territories under Babur, Akbar and Aurangzeb: Delhi, Agra, Panipat, Amber, Ajmer, Lahore, Goa
5. Main centres of the Revolt of 1857: Delhi, Meerut, Jhansi, Lucknow, Kanpur, Calcutta, Benaras, Jabalpur, Agra, Awadh
6. Important centres of the National Movement: Champaran, Kheda Ahmedabad, Amritsar, ChauriChaura, Lahore, Bardoli, Dandi, Bombay, Karachi

Answer the following questions.

- (E) How did Harappan civilization come to an end?
- (F) What were the main features of Mauryan administration?
- (G) Discuss whether the Mahabharata could have been the work of a single author.
- (H) Describe the factors that led to the growth of Puranic Hinduism in India During 6th century BCE.
- (I) Analyze the evidence for slavery provided by Ibn-Battuta.
- (J) Describe the teaching of Kabir.
- (K) Evaluate the importance of Amara Nayaka System in emergence of Vijayanagara Empire
- (L) Who were zamindars? What were their functions?
- (M) What explains the anger of the Deccan ryots against the moneylenders?
- (N) What were the social, economical religious and military causes of 1857 revolt?

NOTE:

Complete your Class work Home work Notebook

## **Geography**

1. Complete the practical work on 'Graphical representation of Data'
2. Learn and complete the notes and imp questions of the chapter 'Geographical perceptions on selected issues and problems'
3. Do all the map work given in the CBSE syllabus

## **ECONOMICS**

PROJECT WORK COMPLETION ( On given topic)

## **Business studies –**

PROJECT WORK COMPLETION

## **ACCOUNTANCY –**

PROJECT WORK COMPLETION

### **AUTUMN BREAK LIBRARY ACTIVITIES – 2023**

#### **Secondary and Senior Secondary**

1. E-Visit the web blog of your class and mention your likings.

<https://lmcbilaspur.wordpress.com/>

[www.kvbsp2020.in](http://www.kvbsp2020.in)

2. Read and write review of at least 2 Books or Magazines. Write it in your library copy.

3. E-Visit the CBSE Site [www.cbse.nic.in](http://www.cbse.nic.in) and see the CBSE Curriculum and question bank.

4. E-Visit the “WakeletProfile” and Library on Mobile of

Vidyalaya <https://wakelet.com/@RajeshSharmakvbilaspur>

r and mention your likings.

<https://linktr.ee/rajeshsharmakvbsp>

Dr. Rajesh Sharma  
Librarian