

Holiday homework for Winter Break

CLASS X – ENGLISH

- 1. SOLVE UNSEEN PASSAGE-3**
- 2. ARTICLE WRITING-** (1 CLEAN INDIA CAMPAIGN, 2 BOOKS- OUR BEST COMPANION, 3 INDIA'S PROGRESS AFTER INDEPENDENCE, 4 BENEFITS OF LOCKDOWN 5. WOMEN EDUCATION)
- 3. READING LESSONS AND POEMS AND PREPARE QUESTIONS AND ANSWERS –** GLIMPSES OF INDIA, MADAM RIDES THE BUS, THE SERMON AT BENARAS, THE MAKING OF A SCIENTIST, THE NECKLACE, THE HACK DRIVER, BHOLI
- 4. READING NEWS PAPERS DAILY.**
- 5. LETTER WRITING**
 - (i) Write a letter to the editor of a newspaper, highlighting the importance of online classes for students.
 - (ii) Write a letter to the editor to publish the importance of covid warriors)
- 6. PROJECT WORK IN FILE IN TEN-FIFTEEN PAGES -1** TOURIST PLACES OF INDIA (BROCHURE), GAUTAM BUDDHA LIFE SKETCH, WEDDING CEREMONY RITUALS
- 7. JUMBLED SENTENCES-25**

CLASS-X

WINTER HOLIDAY HOME WORK

CH.4: QUADRATIC EQUATIONS

WORKSHEET-1

- General form of Quadratic equation is ($a \neq 0$)-
 - (a) $ax^2 + bx + c$
 - (b) $ax^2 + bx + c = 0$
 - (c) $ax + b = 0$
 - (d) $ax + b = 0$
- Which is a Quadratic equation?
 - (a) $x + \frac{1}{x} = 4$
 - (b) $x(x-2)$
 - (c) $(x+1)^2 = x^2 - 3x + 5$
 - (d) $x^2 - \sqrt{x} - 5 = 0$

3. Determinant of the quadratic equation is given by-
- (a) $b^2 + 4ac$ (b) $\sqrt{b^2 - 4ac}$
(c) $\sqrt{b^2 - 4ac}$ (d) $b^2 - 4ac$
4. Condition for Equal root of a quadratic equation is-
- (a) $D > 0$ (b) $D \leq 0$
(c) $D = 0$ (d) None of these
5. If the roots of the quadratic equation $2x^2 + kx + 2 = 0$ are equal, the value of 'k' is-
- (a) 16 (b) 4
(c) ± 4 (d) -16
6. If the Sum and Product of a quadratic equation are -4 and -12 then quadratic equation is -
- (a) $x^2 + 4x - 12 = 0$ (b) $x^2 - 4x + 12 = 0$
(c) $x^2 - 4x - 12 = 0$ (d) None of these
7. If quadratic equation $x^2 + px + 1 = 0$ has real and distinct roots the 'p' is-
- (a) $2 < p < -2$ (b) $p < 2$ (c) $p > 2$ (d) $2 \leq p \leq -2$
8. The roots of the quadratic equation $3x^2 - 2\sqrt{6}x + 2 = 0$ are-
- (a) $\frac{\sqrt{2}}{3}, \frac{\sqrt{2}}{3}$ (b) $\frac{2}{3}, \frac{2}{3}$ (c) $\sqrt{\frac{2}{3}}, \sqrt{\frac{2}{3}}$ (d) $-\sqrt{\frac{2}{3}}, \sqrt{\frac{2}{3}}$
9. Determinant of the quadratic equation $3x^2 - 2x - 5 = 0$ is-
- (a) 56 (b) 64 (c) 60 (d) -56
10. Quadratic equation $ax^2 + bx + c = 0$ will have real roots if-
- (a) $D > 0$ (b) $D < 0$
(c) $D = 0$ (d) $D \geq 0$
-

11. Check whether following quadratic equations has real roots. If yes, then find them by completing square method.

(a) $x^2 - 2x - 8 = 0$ (b) $3x^2 + 2x + 1 = 0$ (c) $2x^2 - 5x + 3 = 0$

12. Solve:-

(a) $\frac{1}{x+2} - \frac{1}{x} = 3$, $x \neq -2$ and $x \neq 0$

(b) $a^2x^2 + (a^2 - b^2)x - b^2 = 0$

12. Find the roots of the following quadratic equations, if they exist, using the quadratic formula:

(a) $x^2 + 4x + 5 = 0$ (b) $4x^2 + 4\sqrt{3}x + 3 = 0$

13. If (-5) is the root of the quadratic equation $2x^2 + px - 15 = 0$ and the equation $p(x^2 + x) + k = 0$ has equal roots, then find values of 'p' and 'k'.

14. Find 'k' so that $(k-12)x^2 + 2(k-12)x + 2 = 0$ has equal root. ($k \neq 12$)

15. Find the nature of the roots of the following quadratic equations-

(a) $5x^2 - 3x + 2 = 0$ (b) $2x^2 - x - 6 = 0$ (c) $x^2 + 6x + 9 = 0$

WORKSHEET-2

1. A two-digit number is such that the product of two digit number is 35. When 18 is added to this number the digits change their places. Find the number.
2. A motorboat whose speed is 9 km/h in still water goes 12 km downstream and come back in total time 3 hours. Find the speed of the stream.
3. Rajesh takes 10 days less than time taken by Manish to finish a piece of work .If they together can finish the work in 12 days, find the time taken by Manish to finish the work alone.

4. Two pipes running together can fill a cistern in $2\frac{8}{11}$ minutes. If one pipe takes 1 minutes more than the other to fill the cistern, find the time taken by each pipe to fill the cistern alone.
5. Rs.6500 were equally divided among certain number of students. Had there been 15 more students, each would have got Rs.30 less. Find the original number of students.
6. In a class test, the sum of Raman's marks in Mathematics and science is 25. Had he got 5 marks more in Mathematics and 3 marks less in English, the product of their marks would have been 140. Find his marks in the two subjects.
7. The diagonal of a rectangular field is 40 metres more than the shorter side. If the longer side is 20 metres more than the shorter side, find the sides of the field.(Ans. 60 m. 80m)
8. Mohan is 30 years older than his son. If the sum of reciprocal of their ages is $\frac{4}{45}$.find their ages.
9. There are three consecutive positive integers such that the sum of square of first and product of other two is 154.Find the integers.
- 10.The difference of squares of two numbers is 45 .The square of smaller number is four times the larger number. Find the numbers.

Answers:

WORKSHEET-1

1.(b) 2.(a) 3.(d) 4. (C) 5.(c) 6.(a) 7.(a) 8.(c) 9.(b) 10.(d)

11 (a) 4,-2. (b) No roots (c) $\frac{3}{2}$, 1

12 (a) $\frac{-3+\sqrt{3}}{3}$, $\frac{-3-\sqrt{3}}{3}$ (b) -1, $\frac{b^2}{a^2}$

13. 7, $\frac{7}{4}$. 14. k=14

15..(a) .No real roots (b) .Real and Distinct roots

(c) Real and equal roots..

WORKSHEET-2

1. 57 2. 3 km/h 3. 30 days 4. 5min,6 min

6. 15 and 10 7. 80m & 60 m. 8. 15years and 45 years

9. 8,9,and 10 10. 9 and 6

केन्द्रीय विद्यालय क्रमांक- 4 जयपुर(2021-22)

कक्षा – दसवीं

हिन्दी

शीतकालीन अवकाश गृहकार्य

- 1- शिक्षक दिवस के उपलक्ष्य में अपने आदरणीय शिक्षक को प्रेषित करने हेतु एक संदेश लिखिए ।
- 2- अपनी ऑनलाइन पढ़ाई के बारे में बताते हुए अपने पिताजी को एक पत्र लिखिए ।
- 3- आपके मौहल्ले में लोग भारत सरकार द्वारा कोरोना संकट में बचाव को लेकर जारी नियमों का पालन नहीं कर रहे हैं । इसकी जानकारी थानाध्यक्ष को देते हुए उचित कार्रवाई हेतु पत्र लिखिए ।
- 4- निम्नलिखित विषयों पर 150 शब्दों में एक अनुच्छेद लिखिए –
 - (1) ऑनलाइन अध्ययन के लाभ और हानि
 - (2) आत्मनिर्भर भारत : मजबूत भारत की मजबूत पहल
- 5- अपने किसी मनपसंद प्रोडक्ट (उत्पादक) के लिए 25 से 50 शब्दों में एक विज्ञापन तैयार कीजिए ।
- 6- क्षितिज भाग -2 में लखनवी अंदाज, माननीय करुणा की दिव्य चमक और कृतिका में माता का आंचल, जॉर्ज पंचम की नाक ,साना साना हाथ जोड़ी पाठों के प्रश्न उत्तर द्वितीय सत्र की हिंदी की कॉपी में लिखें।

Class –X Science

Make a PowerPoint presentation for internal assessment Term -2 from chapter- 16 Management of natural resources and upload it on Google classroom.

Class 10th

Social Studies

1. Complete the pending work of following chapter's and learn them properly-
 - A) Nationalism in India
 - B) Manufacturing Industries
 - C) Money and Credit
2. Complete your project work (if not submitted yet)

शीतकालीन अवकाश गृहकार्य

2021-22 कक्षा-10 (संस्कृत)

1. षष्ठः पाठः, सप्तमः पाठः, अष्टमः पाठः नवमः पाठः च (इन पाठों के प्रश्नों के उत्तर याद करें तथा याद करके उनको संस्कृत की नोटबुक में लिखें।)
2. अपनी स्वेच्छा से विषय चुनकर फाइल में दो औपचारिक तथा दो अनौपचारिक पत्र लिखें।
3. चित्रवर्णनम् –पांच चित्र फाइल में चिपकाकर उनका वर्णन पांच-पांच वाक्य संस्कृत में लिखकर करें।
4. अनुच्छेदलेखनम्- मम परिचयः, मम विद्यालयः, शेमुषी मम प्रियपुस्तकम् ,संस्कृतस्य महत्त्वम् इन विषयों पर पांच-पांच वाक्य संस्कृत में लिखें।

Class – X Science

- prepare a brief write up on any one concept of the **Chapter – 16 Management of natural resources**: Conservation and judicious use of natural resources. Forest and wild life; Coal and Petroleum conservation. Examples of people’s participation for conservation of natural resources. Big dams: advantages and limitations; alternatives, if any. Water harvesting. Sustainability of natural resources.
- Complete the following activities (any two) on A4 size paper .
[Click here for science activities](#)
- Prepare innovative Model for Science Exhibition.
- Theme for Science exhibition:- **“Technology and Toys”**
Sub themes are as below-
 1. Eco friendly materials
 2. Health and cleanliness
 3. Software and apps
 4. Transport
 5. Environmental and climate changes
 6. Mathematical modelling
- Solve the following NCERT ~~Exemplar~~ questions in science notebook and learn them.
 - 1 [Electricity \(Questions\)](#)
[Electricity \(Answers\)](#)

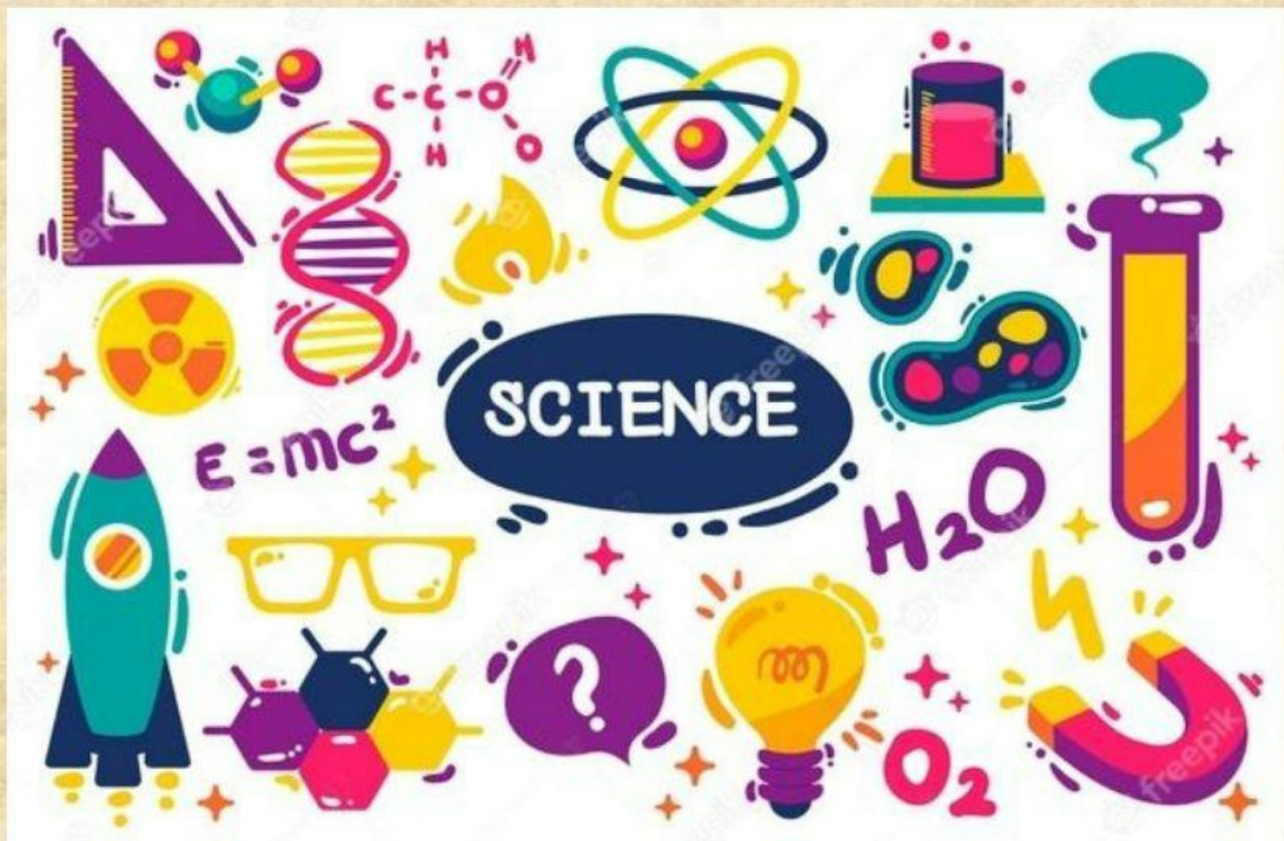
 - 2 [Heridity \(Questions\)](#)
[Heredity \(Answers\)](#)

Complete the work assigned during Winter Break and submit it on 03/01/2022.

PORTFOLIO

CLASS X

SUB- SCIENCE




Activities to be done
















Chapter 1 Chemical equations and reactions

Objective	Categorize the given reactions as (combination/ decomposition) based on the reactants & products of a chemical reaction.
Prerequisite	Identify the changes that a reaction mixture undergoes during a chemical reaction, what are reactants, what are products
Material Required	Test tubes, boiling tube, distilled water, burner, sugar, iron fillings, sulphur powder
Vocabulary	<p>Combination Reaction: A reaction in which a single product is formed from two or more reactants is known as a combination reaction.</p> <p>Decomposition Reaction: A reaction in which a single substance decomposes to give two or more substances.</p>

Procedure	<p>Procedure 1:</p> <ol style="list-style-type: none"> 1. Take a small amount of iron fillings and sulphur powder in a boiling tube. 2. Heat the boiling tube strongly over the flame of a burner or spirit lamp and observe changes. <p>Procedure 2:</p> <ol style="list-style-type: none"> 1. Take about 2 g sugar crystals in a dry boiling tube. (Note the colour of the crystals.) 2. Heat the boiling tube over the flame of a burner or spirit lamp and observe changes. 																					
Reflection Questions	<table border="1"> <thead> <tr> <th>Reaction No.</th> <th>Materials used</th> <th>Chemicals used</th> <th>Describe the reactants (number of reactants)</th> <th>Procedure</th> <th>Describe the products (number of products)</th> <th>Type of reaction</th> </tr> </thead> <tbody> <tr> <td>Calcium Oxide + water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Heating Sugar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Reaction No.	Materials used	Chemicals used	Describe the reactants (number of reactants)	Procedure	Describe the products (number of products)	Type of reaction	Calcium Oxide + water							Heating Sugar						
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Text to real world connection	<p>Propane is a fuel used to provide heat for some homes. It is stored in large tanks as shown here. Can you predict the chemical equation for burning of propane?</p> 
Beyond the classroom	What type of reaction takes place inside the human and plant cells?

Chapter 2 Acid bases and salts

Material required	Red cabbage juice, 10 solutions used in everyday life (vinegar, water, baking soda, soap, bleach, floor cleaner, lemon juice, apple juice-etc.)															
Procedure	<p><u>Cabbage Juice Rainbow</u></p> <ol style="list-style-type: none"> Pour some cabbage juice in each solution until a colour change is seen. (Acids turn the cabbage juice redder, and bases turn the cabbage juice blue, yellow or green, depending on the pH.) <p>Results of adding cabbage juice to solutions of different pH values:</p> <table style="width: 100%; text-align: center;"> <tr> <td>Red</td> <td>Purple</td> <td>Blue</td> <td>Green</td> <td>Yellow</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Acidic pH below 7</td> <td>pH 7</td> <td>pH 8-9</td> <td>pH 10-11</td> <td>pH 11-13</td> </tr> </table> <p>(Source: https://www.teachengineering.org/activities/view/cub_air_lesson06_activity1)</p> <ol style="list-style-type: none"> Once the colour change is seen, setup the solutions to form a rainbow of solutions. 	Red	Purple	Blue	Green	Yellow						Acidic pH below 7	pH 7	pH 8-9	pH 10-11	pH 11-13
Red	Purple	Blue	Green	Yellow												
																
Acidic pH below 7	pH 7	pH 8-9	pH 10-11	pH 11-13												
Reflection questions	<ol style="list-style-type: none"> Gather information about other naturally occurring visual and olfactory acid-base indicators. 															

Chapter 3 Metals and non metals

Material required	Case study prints
Procedure	<p>Students to read the following case study in pairs:</p> <p>No cans currently in wide use are composed primarily or wholly of tin; that term rather reflects the nearly exclusive use in cans, until the second half of the 20th century, of <u>tinplate steel</u>, which combines the physical strength and relatively low price of steel with the <u>corrosion</u> resistance of tin. Depending on contents and available coatings, some canneries still use tin-free steel. In some local dialects, any metal can, even aluminium, might be called a "tin can". Use of <u>aluminium</u> in cans began in 1957. Aluminium is less costly than tin-plated steel but offers the same resistance to corrosion in addition to greater <u>malleability</u>, resulting in ease of manufacture; this gave rise to the two-piece can, where all but the top of the can is simply stamped out of a single piece of aluminium, rather than laboriously constructed from three pieces of steel.</p> <p>In modern times, the majority of food cans in the UK have been lined on the inside with a plastic coating. The coating prevents acids and other substances from corroding the tin or aluminium of the can.</p>
Reflection questions	<ol style="list-style-type: none"> Do you think it is a good idea to coat cans with plastic on the inside? What could be the possible advantages or disadvantages? Compare the utility of steel and aluminium cans for food storage in terms of food safety, cost and accessibility.

Chapter 6 Life process

1. Draw a diagram of the human excretory system, digestive system , respiratory system and human heart in the A 4 sheet and label the parts.
2. Write down the function of each of the parts of these systems.
3. How engineered water filters work and how the knowledge for designing such technology is derived from nature and science
4. How do you think astronauts eat and digest food in space?
5. Draw a design of the dialysis machine which act as artificial blood filtration units when the human kidney stops functioning properly.

Chapter 10 Reflection of light/ scattering of light

Material required	Shallow container, small mirror
Procedure	<p>Make your own rainbow</p> <ol style="list-style-type: none"> 1. Pour some water in a container and dip the mirror in an inclined position in it. 2. Position this in such a manner that the mirror faces the sun. 3. Adjust the angle of the mirror so as to observe a rainbow on a white sheet of paper. <div> </div> <p>(Source: http://www.arvindguptatoys.com/toys/rainbow.html)</p>

Reflection questions	<ol style="list-style-type: none"> 1. Which property of light is rainbow formation based on? 2. Why is the rainbow not visible on polluted skies? 3. Sometimes, only three or four colours of the rainbow are visible. Why?
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