

Dear Students,

Holidays have always been a butterfly phase of a year for all of us but this year it's far from the conventionalities due to the pandemic. So rewiring the concept of summer holidays & yet keeping the brilliant prismatic effects, our facilitators have framed an enriching holiday homework to replenish the fuel for your innovative thoughts & revive the spirits-academia productively utilizing your hourglass & kicking doldrums away.

So don your creativity- cape with the crown of innovation & be optimistic. So get.....set.....fly. We look forward to your co-operation.

Happy Holidays

Make a short film of 2-3 mins on the journey of "Covid" which should include a rational analysis of its hazardous impact & the counter efforts of Corona warriors to dislodge "Corona Catalogue".

Use various algorithmic digital tools(graph/ pictures/animations etc) to accentuate your explanation. # The film should be analysed/ explained in your voice .

Use different transition/ sound effects (apps from playstore) to make the realization subtle. #Utilize various media platforms to extract the required portions for the film- project.

Be innovative to justify your analysis. The film- project should be sent on the respective teacher's hum personal wall with your name & class clearly mentioned.

HINDI:

ENGLISH:

1. प्रकृति को जो कुछ भी हम देते हैं , प्रकृति हमें वही लौटाती है । इस तथ्य को ध्यान में रखकर

निम्नलिखित बिंदुओं को आधार बनाकर एक सचित्र परियोजना का निर्माण कीजिए ।

ऑक्सीजन

प्लास्टि**क**

(चित्रों का रेखांकन भी किया जा सकता है)

कराए गए पाठ्यक्रम को दोहराइए ।

निर्देशः गृहकार्य -1. हिन्दी भाषा के Register में किया जाएगा ।

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	aths: Solve the following questions in your maths assignment register
	DR. VIRENDRA SWARUP PUBLIC SCHOOL, KANYANPUR
	Class: 10 th (2021-22)
	MATHEMATICS WORKSHEET
Caso S	CHAPTER: POLYNOMIAL, LINEAR EQUATION IN TWO VARIABLES
1. Rea	id the case study and answer the following questions:
Real n	umbers are extremely useful in everyday life. That is probably one of the main reasons we all learn how
to cou	nt and add and subtract from a very young age. Real numbers help us to count and to measure out
quantit	ties of different items in various fields like retail, buying, catering, publishing etc. Every normal person
uses re	ear numbers in his daily life. After knowing the importance of real number, try and improve your edge about them by answering the following questions no real life based situations
i.	Three people go for morning walk together from the same place. Their steps measure 80cm, 85cm and
	90cm respectively. What is the minimum distance travelled when they meet at first time after starting
	the walk assuming that their walking speed is same?
	a) 6120 cm b) 12240 cm c) 4080 cm d) none of these
11.	members. The two groups have to march in the same number of columns. What is the maximum
	number of columns in which they can march?
	a) 9 b) 6 c) 27 d) 29
;;;	Two tankers contain 768 litres and 420 litres of fuel respectively. Find the maximum capacity of the
111.	container which can measure the fuel of either tanker exactly.
	a) 1 litres b) 7 litres c) 12 litres d) 18 litres
iv.	The dimensions of a room are 8m 25cm; 6m 75cm and 4m 50cm. Find the length of the largest
	a) 1m 25cm b) 75cm c) 90cm d) 1m 35cm
V.	Pens are sold in a pack of 8 and notepads are sold in a pack of 12. Find the least number of packs of
	each type that one should buy so that there are equal number of pens and notepads. $a_1 + b_2 + b_3 + b_4 + b_4 + b_2 + b_3 + b_4 $
	a) $5 \operatorname{and} 2 = 0) 2 \operatorname{and} 5 = 0) 5 \operatorname{and} 4 = 0) 4 \operatorname{and} 5$
Solve	the following questions:
	If α and β are the roots of $ax^2 - bx + c = 0$ ($a \neq 0$) then calculate $\alpha + \beta$. Calculate the zeroes of the polynomial $p(x) = 4x^2 - 12x + 9$
\mathbf{Y} 3.	If the sum of the zeroes of the quadratic polynomial $3x^2 - kx + 6$ is 3, then find the value of k.
4 .	If -1 is a zero of the polynomial $f(x) = x^2 - 7x - 8$, then calculate the other zero.
5.	If zeroes of the polynomial $x^2 + 4x + 2a$ are a and 2/a then find the value of a.
6.	Find all the zeroes of $f(x) = x^2 - 2x$. Find the zeroes of the guadratic polynomial $\sqrt{3}x^2 = 8x + 4x/3$
	Find a quadratic polynomial, the sum and product of whose zeroes are 6 and 9 respectively.
	Hence find the zeroes.
9.	Find the quadratic polynomial whose sum and product of the zeroes are 21/8 and 5/16
10	respectively.
10.	. What should be added to the polynomial $x^3 - 3x^2 + 6x - 15$ so that it is completely divisible by x
	-3.

- 12. If m and n are the zeroes of the polynomial $3x^2 + 11x 4$, find the value m/n + n/m.
- 13. If p and q are the zeroes of polynomial $f(x) = 2x^2 7x + 3$, find the value of $p^2 + q^2$.
- 14. Find the condition that zeroes of polynomial $p(x) = ax^2 + bx + c$ are reciprocal of each other.
- 15. Find the value of k if x -1 is a zero of the polynomial $p(x) = kx^2 4x + k$.
- 16. If α and β are the zeroes of a polynomial $x^2 4\sqrt{3x} + 3$, then find the value of $\alpha + \beta \alpha\beta$.
- 17. Find the values of a and b, if they are the zeroes of polynomial $x^2 + ax + b$.
- 18. If α and β are the zeroes of the polynomial $f(x) = x^2 6x + k$, find the value of k, such the $\alpha^2 \beta^2 = 40$.
- 19. If one of the zeroes of the quadratic polynomial $f(x) = 14x^2 42k^2x 9$ is negative of the other, find the value of 'k'.
- 20. If one of the zero of the polynomial $2x^2 + 3x + \lambda$ is 1/2, find the value of λ and the other zero.
- 21. If α and β are zeroes of the polynomial $f(x) = x^2 x k$, such that $\alpha \beta = 9$, find k
- 22. If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of $2x^2 5x 3$, find the value of p and q.
- 23. If α and β are zeroes of $x^2 (k-6)x + 2(2k-1)$, find the value of k if $\alpha + \beta = \frac{1}{2} \alpha \beta$.
- 24. Verify whether 2,3 and 1/2 are the zeroes of the polynomial $p(x) = 2x^3 11x^2 + 17x 6$
- 25. If the sum and product of the zeroes of the polynomial $ax^2 5x + c$ are equal to 10 each, find the value of 'a' and 'c'.
- 26. If one of the zero of a polynomial $3x^3 8x + 2k + 1$ is seven times the other, find the value of k
- 27. Quadratic polynomial $2x^2 3x + 1$ has zeroes as α and β . Now form a quadratic polynomial whose zeroes are 3α and 3β .
- 28. If α and β are the zeroes of the polynomial $6y^2 7y + 2$, find a quadratic polynomial whose zeroes are $1/\alpha$ and $1/\beta$
- 29. Show that $\frac{1}{2}$ and $-\frac{3}{2}$ are the zeroes of the polynomial $4x^2 + 4x 3$ and verify relationship between zeroes and coefficients of the polynomial.
- 30. Find the zeroes of the quadratic polynomial $x^2 2\sqrt{2x}$ and verify the relationship between the zeroes and the coefficients.
- 31. Find the zeroes of the quadratic polynomial $5x^2 + 8x 4$ and verify the relationship between the zeroes and the coefficients of the polynomial
- 32. If α , β and Υ are the zeroes of the polynomial $6x^3 + 3x^2 5x + 1$, then find the value of $\alpha^{-1} + \beta^{-1}$.
- 33. Polynomial $x^4 + 7x^3 + 7x^2 + px + q$ is exactly divisible by $x^2 + 7x + 12$, then find the value of p and q.
- 34. If α and β are the zeroes of the polynomial $p(x) = 2x^2 + 5x + k$ satisfying the relation, $\alpha^2 + \beta^2 + \alpha\beta = 21/4$, then find the value of k
- 35. If α and β are the zeroes of the polynomial(x) = $3x^2 + 2x + 1$, find the polynomial whose zeroes

are $\frac{1-\alpha}{1+\alpha}$ and $\frac{1-\beta}{1+\beta}$

Note: Solve the following questions in your physics register

DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR Class: 10th (2021-22) PHYSICS WORKSHEET CHAPTER: ELECTRICITY

<u>1. Case Study</u>: Read the case study and answer the following questions:

b) 2A

The rate of flow of charge is called electric current. The S.I unit of electric current is Ampere (A). The direction of flow of current is always opposite to the direction of flow of electrons in the circuit.

The electric potential is defined as the amount of work done in bringing a unit positive test charge from infinity to a point in the electric field. The amount of work done in bringing a unit positive charge from one point to another point in an electric field is defined as potential difference.

$$V_{AB} = V_B - V_A = W_{BA}/q$$

The S.I unit potential and potential difference is volt.

- If 2C of charge is flowing through a conductor in 100s, the current in the circuit is:
 - a) 20A

i.

c) 0.2A

d) 0.02A

- ii. Which of the following is true?
 - a) Current flows from positive terminal of the cell to the negative terminal of the cell outside the cell.
 - b) The negative charge moves from lower potential to higher potential.
 - c) The direction of flow of current is same as the direction of the positive charge.
 - d) All of these
- iii. The potential difference between the two terminals of a battery if 100 joules of work is required to transfer 20 coulombs of charge from one terminal of the battery to the other is:
 a) 50 V
 b) -5 V
 c) 0.5 V
 d) 500 V

iv. The number of electrons flowing per second in a conductor if 1A current is passing through it a) 6.25×10^{20} b) 6.25×10^{19} c) 6.25×10^{18} d) 6.25×10^{-19}

The voltage can be written as

- a) Work done x charge x time
- b) Work done/ current x time
- c) Work done x time / current
- d) Work done x charge

2. Assertion: When a battery is short circuited, the terminal voltage is zero. **Reason:** In short circuit, the current is zero.

a) Both A and R are true and R is the correct explanation of A

- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false.
- d) A is false but R is true
- e) Both A and R are false

3. Assertion: In an open circuit, the current passes from one terminal of the electric cell to another. **Reason:** Generally, the metal disc of a cell acts as a positive terminal

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of
- c) A is true but R is false
- d) A is false but R is true
- e) Both A and R are false

4. A student says that the resistance of two wires of same length and same area of cross-section is same. This statement is correct if

a) Both wires are of different material.

- b) Both wires are made of same material and are at different temperature.
- c) Both wires are made of same material and are at same temperature.
- d) Both wires are made of different materials and are at the same temperature.

5. State the factors that affect the resistance of a conductor. Write the mathematical expression

6. The heating element glows, while the cord does not. Explain your answer giving suitable reason.

7. If the length of a wire is halved and its cross-sectional area is doubled, then what would be the resistance of the wire?

8. A piece of wire of resistance 20Ω is drawn out so that its length is increased to twice its original length. Calculate the resistance of the wire in the new situation.

9. The value of current (I) flowing through a conductor for the corresponding values of potential difference (V) are given below

I (ampere)	0.5	1.0	1.5	2.0	2.5
V (volts)	1.0	1.5	2.0	2.5	3.0

Plot a graph between V and I. Also calculate resistance.

10. A p.d of 20 V is needed to make a current of 0.04 A flow through a wire. What p.d is needed to make a current of 500mA flow through the same wire?

11. A wire of length 10m is cut into two equal parts. Calculate the resistivity of the two parts.

12. How many electrons are needed to form 1C of charge?

13. A battery of 10V carries 20,000C of charge through a resistance of 10Ω . Calculate the work done in 5 seconds in carrying charges.





4. Assertion : Walls of the intestine has numerous villi. **Reason** : These villi increase the surface area for digestion. 5. Assertion : Mitochondria help in photosynthesis. **Reason** : Mitochondria have enzymes for dark reaction. 6. Assertion : Lipases help in emulsification of fats. Reason : Lipases hydrolyses fats and oils. 7. Assertion : HCl converts pepsinogen into active enzyme pepsin. **Reason** : Pepsin converts protein into proteoses and peptones. 8. **Assertion** : Autotrophic nutrition occurs in green plants. **Reason** : Green plants self-manufacture their food. 9. Assertion : Liver is known as the smallest gland of the body. **Reason** : It secretes salivary amylase. 10. **Assertion** : Carbohydrate digestion mainly takes place in small intestine. **Reason** : Pancreatic juice contains the enzyme lactase. **IV. DIRECTION** : Each question contains statements given in two columns which have to be matched. Statements (A, B, C, D) in column I have to be matched with statements (p, q, r, s) in column II. 1. Column I Column II (p) The increase in cell size and/or number (A) Nutrition. (B) Synthesis. (q) The movement of materials within the cell or within the organism. (C) Growth. (r) The process of obtaining food (D) Transport. (s) Combining small molecules to create larger more complex molecules. 2. ColumnI ColumnII (p) The structure is the site where the chemical Breakdown of proteins first (A) Stomach. occurs. (B) Large intestine. (q) This organ absorbs most of the water from the undigested food. (r) This organ is the section of the alimentary canal where most of the food is (C) Small intestine. absorbed into the blood. (D) Excretion. (s) This organ secretes the chemical bile, which is used to emulsify fats. 3. Column I Column II (Region of digestive system) (Digestive Organ) (A) Mouth (p) Pancreatic juice (B) Stomach (q) Intestinal juice (C) Duodenum (r) Gastric juice (D) Small intestine (s) Saliva 4. Column I Column I (A) Pancreas (p) This organ secretes the chemical enzymes amylase, protease and lipase. (q) This is a storage site for faeces before being egested (B) Rectum. from the body. (C) Oesophagus (r) This tub<mark>e structure transports food from the oral cavity to the</mark> stomach. (D) Oral cavity (s) The structure where mechanical digestion of food first occurs. Note : Do the given worksheet in your Chemistry Register.

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M	DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR
	SESSION : 2021-22
Data	WORKSHEET NO. : F Subject: CHEMISTRY Class : Y
Name	Subject: CHEIVIISTRY Class : A Roll No :
	1. Which of the following reactions involve the combination of two elements?
	a) CaI+ CO ₂ \Box CaCO ₃ b) 4Na +O ₂ \Box Na ₂ O
	b) $SO_2+1/2O_2\squareSO_3$ d) NH ₄ +HCl□NH ₄ Cl
	2. Which of the following is a physical change?
	a) formation of curd from milk b) ripening of fruits
	c) getting salt from seawater d) burning of wood
	3. Student added diffue HCI to a test tube containing zinc granules and made the following observations:
	a) zinc surface became dull and black b) a gas evolved which burns with a pop sound
	c)the solution remained colourless d)the solution remained green in colour
	4. A balanced chemical equation is in accordance with
	a) Avogadro's law b) law of multiple proportionc) law of conservation of mass
	d)law of gaseous volumes
	5. The equation $Cu + x HNO_3$ $\Box Cu(NO_3)_2 + yNO_2 + 2 H_2O$, the values of x and y are
	a) 3 and 5 b) 8 and 6
	c) 4 and 2 d) 7 and 1
	6. $Zn + H_2SO_4 - H_2$, the given reaction is
	a) decomposition reaction c) combination reaction d) synthesis reaction
	7 In the givenequation Na ₂ CO ₃ + xHCl $[NaCl + CO2 + H2O3, the value of x is$
	a) 1 b) 2 c) 3 d) 4
	8. When calcium carbonate is heated, it decomposes to form and gas.
	9. Electrolysis of water is a decomposition reaction.
	10. The new substances produced in a reaction are called
	11. The digestion of food in the body is an example of reaction.
	12. In a reaction two or more substances combine to form a new substance.
	13. which one of the following is a chemical change- burning of wax, melting of wax?
	15. Write the complete balanced equation for the following reaction:
	Sodium hydroxide + sulphuric acid
	16. Name and state the law which is kept in mind when we balance chemical equations.
	17. State the main difference between an exothermic and an endothermic reaction.
	18. What happens chemically when quicklime is added to water filled in a bucket?
	19. Why is respiration considered as exothermic reaction?
	20. Magnesium ribbon is cleaned before being burnt. Why?
	21. Write balanced chemical equation for the following reactions-
	a) Hydrogen suipnide burns in air to give water and suiphur dioxide.
	barium sulphate
22	2. Give one example of each-
100	a) Chemical reaction showing evolution of gas.

b) Change in colour of a substance during chemical reaction.

23. Translate the following statements into chemical equations and then balance them:

- a) Hydrogen gas combines with nitrogen to form ammonia.
 - b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide.
 - c) Potassium reacts with water to give potassium hydroxide and hydrogen gas.
- 24. Identify the type of each of the following reaction:
 - a) A reaction in which a single product is formed from two or more reactants
 - b) The reaction mixture becomes warm.
 - c) An insoluble substance is formed
 - d) External surface of the container in which reaction takes place becomes cold.
- 25. Solid calcium oxide was taken in a container and water was added slowly to it.
 - a) Write the observations.
 - b) Write the chemical formula of the product formed.
- 26. Balance the following chemical equations:
 - a) $KOH + H_3 PO_4 ---- \Box K_3 PO_4 + H_2O$
 - b) $FeS+O_2----\Box Fe_2O_3 + SO_2$
 - c) Al+O₂----□ Al₂O₃
 - d) $NH_3 + O_2 - \Box NO + H_2O$
 - e) Na+Cl₂----[]NaCl
 - f) $ZnS+AlP---\Box Zn_3P_2+Al_2S_3$
 - g) C₂H₆+ O₂---□ CO₂
 - h) KOH+ HBr--- \Box KBr+ H₂O
 - i) HCl+ NaOH---- DNaCl+ H2O
 - j) $P_4 + O_2 P_2O_5$

27. DIRECTION : Each of these questions contains an Assertion followed by Reason. Read them carefully and answer the question on the basis of following options. You have to select the one that best describes the two statements.

- (a) If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.
- (b) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.
- (c) If Assertion is correct but Reason is incorrect.
- (d) If Assertion is incorrect but Reason is correct

Assertion : Corrosion of iron is commonly known as rusting.
 Reason : Corrosion of iron occurs in presence of water and air.
 Assertion : The following chemical equation, is a balanced chemical equation.

$C_2H_2 + \frac{7}{2}O_2 \rightarrow 2CO_2 + 3H_2O$

Reason : In a balanced chemical equation, the total number of atoms of each element may or may not equal on both side of the equation.

3. Assertion : Photosynthesis is considered as an endothermic reaction.

Reason : Energy gets released in the process of photosynthesis

- 4. Assertion (A) : A chemical reaction becomes faster at higher temperatures.
- Reason (R) : At higher temperatures, molecular motion becomes more rapid
- 5. Assertion : The balancing of chemical equations is based on law of conservation of mass. Reason : Total mass of reactants is equal to total mass of products

28. State True or False:

1. A complete chemical equation represents the reactants, products and their physical states symbolically.

2. The reaction of nitrogen and hydrogen gives ammonia. This is an example of a decomposition reaction.

3. A magnesium ribbon burns with a dazzling flame in air (oxygen) and changes into a white substance, magnesium oxide.

4. A chemical reaction cannot be reversed.

5. The number of atoms of each element is conserved in any chemical reaction.

SOCIAL STUDIES :

Project Work Manual for Disaster Management Choose to be any authority on Disaster Management, such as a village Sarpanch ,District Magistrate, Police Inspector or Fire Services Officer. Formulate laws or rules to be followed in a disaster for the most vulnerable groups. Study the available precautions and Rules-Fire Safety. Prepare a manual for your department's officials to follow in an emergency .It should include rules to follow for health, safety, relief availability and distribution, law and order etc. Make separate pages for each.

- Project should be developed and presented in this order
 - 1. Cover page showing project title ,schools name, students name, class and section and academic session(year)
 - 2. List of contents with page number (approx...7 pages)
 - 3. Acknowledgements: Acknowledging institution, offices and people who have helped.
 - 4. Project Overview: Purpose ,aim, methodology and experience while doing the project.
 - 5. Chapters with relevant headings.
 - 6. Summary and conclusions based on findings.
 - 7. Bibliography should have the title, pages referred ,author, publisher ,year of publication and if a website, the name of the website with a specific link which have been used.

NOTE: Only eco friendly material to be used.

