THE PUNJAB PUBLIC SCHOOL, NABHA SUMMER HOLIDAYS HOMEWORK-2020 UPCOMING CLASS IX (SESSION 2020-2021)

ਜਮਾਤ–9ਵੀਂ

ਵਿਸ਼ਾ–ਪੰਜਾਬੀ

ਨੋਟ :-ਲਿਖਾਈ ਸਾਫ਼ ਅਤੇ ਸੁੰਦਰ ਕਰੋ।

- 1. ਤੁਸੀ ਆਪਣੀਆਂ ਛੁੱਟੀਆਂ ਕਿਵੇਂ ਬਿਤਾਈਆਂ? ਲਗਭਗ 500 ਸ਼ਬਦਾਂ ਵਿੱਚ ਉਲੇਖ ਕਰੋ।
- 2. ਵਿਦਿਆਰਥੀ "ਕਰ ਭਲਾ ਤਾਂ ਹੋ ਭਲਾ" ਵਿਸ਼ੇ ਉੱਪਰ ਕੋਈ ਮੌਲਿਕ ਕਹਾਣੀ ਲਿਖਣਗੇ।
- 3. ਕਿਸੇ ਵਿਆਕਰਨ ਪੁਸਤਕ ਵਿੱਚੋਂ ਕੋਈ 50 ਮੁਹਾਵਰੇ ਲਿਖੋ।
- 4. ਆਪਣੀ ਪਸੰਦ ਦੇ ਕੋਈ 4 ਵਿਸ਼ਿਆਂ ਉੱਪਰ ਲੇਖ ਲਿਖੋ।
 - ਛੁੱਟੀਆਂ ਦੇ ਕੰਮ ਲਈ ਨਵੀਂ ਫਾਇਲ ਦੀ ਵਰਤੋਂ ਕੀਤੀ ਜਾਵੇ।

IX HINDI

नोट:- प्रोजेक्ट वर्क के लिए केवल फाईल बनाएँ ।

<u>निबंध—रचना</u>

- 1 आजकल वातावरण कुछ ऐसा बन गया है कि अपराधी मनुष्य अपराध करने के बाद डरता, घबराता, क्षमा—याचना नहीं करता बल्कि उलटे धमकाता भी है। अतः उलटा चोर कोतवाल को डाँटे के कथन के आधार पर एक कहानी लिखिए।
- 2 कल्पना कीजिए कि आप किसी विदयालय के प्रधानाचार्य बन गए हैं। इस रूप में आप किस तरह कर्त्तव्यों को पूरा करेंगे?
- 3 'विदयार्थी जीवन में अनुशासन का महत्त्व' विषय पर प्रस्ताव लिखिए।
- 4 'खोदा पहाड़ निकली चुहिया'- एक मौलिक कहानी लिखिए।
- 5 'अंधों में काना राजा'-एक मौलिक कहानी लिखिए।
- 6 'न रहेगा बाँस न बजेगी बाँसुरी'–एक मौलिक कहानी लिखिए।

<u> पत्र–लेखन</u>

- 1 किसी शैक्षिक भ्रमण पर जाने की अनुमति माँगते हुए अपने पिता जी को एक पत्र लिखिए।
- 2 अपने विद्यालय के पुस्तकालय के लिए कुछ बाल पत्र–पत्रिकाएँ तथा मनोरंजक पुस्तकें भिजवानें के लिए चिल्ड्रेंस बुक ट्रस्ट, नई दिल्ली के प्रबंधक को एक पत्र लिखिए।

SUBJECT: PHYSICS

- 1) Go through the power point presentation thoroughly and solve the questions given in presentation.
 - <u>Physics1D.ppt</u>
- 2) Do written practice of ray diagrams for Reflection through Convex and Concave Mirrors
- 3) Go through the power point presentation thoroughly and solve the assignment followed:
 - <u>PhysicalScience161SoundandLight.pptx</u>
 - <u>EnergyLightandSoundExam.docx</u>
- 4) Solve the following questions based on the power point presentation:
 - <u>MOTIONINONEDIMENSIONnotebook.docx</u>

SUBJECT: CHEMISTRY

Introduction : Chemistry is the branch of science concerned with the substances of which matter is composed, the investigation of the properties and reactions and the use of such reactions to form new substances.

The language of chemistry includes the symbol of elements , molecular formula , valencies of an elements, molecular masses and others basics terms of chemistry.

Topic (A)

Symbol: It is defined as the short hand notation of an elements or abbreviations used to refer the names of elements. For example Hydrogen (H) Sodium (Na) symbol of cobalt is Co not CO.

Significance of symbol:

- (a) It represent a specific element.
- (b) It represent one atom of an element
- (c) It represent number of times of amn atom is heavier than one atomic mass unit taken as standards.

Topic (B)

Atomicity: A set of atoms together to form molecules of element or the number of atoms in molecules is called atomicity (OR) It is defined as the total number of atoms that constitute a molecule. For example, each molecule of oxygen (O_2) is composed of two oxygen atoms. So atomicity of oxygen is 2. In older contexts, the term atomicity is sometimes used in the same sense as valency.

On the basis of atomicity, molecules can be classified as :

- Monoatomic-composed of 1 atom e.g. He, Ne, Ar (all noble gases are monoatomic)
- Diiatomic composed of 2 atoms e.g. H₂ , N₂ , O₂
- Triatomic composed of 3 atoms e.g. O₃
- Polyatomic-composed of 3 or more atoms e.g. P₄, S₈

All metals and some other elements, such as carbon do not have a simple structure but consist of a very large and indefinite number of atoms bonded together. Their atomicity cannot be determined and is usually considered as 1

Atomicity Of First 20 Elements

Atomic Number	Element	Atomicity
1	Hydrogen	2
2	Helium	1
3	Lithium	1
4	Beryllium	1
5	Boron	1*
6	Carbon	1
7	Nitogen	2
8	Oxygen	2
9	Fluorine	2
10	Neon	1
11	Sodium	1
12	Magnesium	1
13	Aluminium	1

14	Silicon	1**
15	Phosphorous	4
16	Sulfur	8
17	Chlorine	2
18	Argon	1
19	Pottasium	1
20	Calcium	2

CHEMISTRY.... Continue

	Multiple Choice questions	
	Q. H is the chemical symbol f	or which element?
	Helium	Hydrogen
	Mercury	
•	Q. Na is the chemical symbol	for which element?
	Sodium	Nitrogen
	Neon	
•	Q. K is the chemical symbol for	or which element?
	Krypton	Potassium
	Knox	
•	Q. Ca is the chemical symbol	for which element?
	Carbon	Chlorine
	Calcium	
•	Q. Fe is the chemical symbol	for which element?
	Freon	Iron
	Flourine	
•	Q. C is the chemical symbol for	or which element?
	Calcium	Chlorine
	Carbon	
	Q. N is the chemical symbol f	or which element?
	Sodium	Nitrogen
	Nickel	
	Q. O is the chemical symbol f	or which element?
	Osmium	Odell
	Oxygen	
•	Q. Si is the chemical symbol f	or which element?

CHEMISTRY.... Continue

C:	:
20	
-	

Sodium

Sulfur

• Q. He is the chemical symbol for which element?

Heehaw Helfion

Helium

Fill in the blanks

- (a) Dalton used symbolfor oxygen andfor hydrogen.
- (b) Valency of hydrogen isand oxygen is
- (c) Symbolic expression for molecules is called.....
- (d) Noble gases areatomic.

Topic (C)

Radicals: The radicals are the atoms and group of atoms having positive and negative charges. These are of two types

- > Acidic Radicals : These are negatively charged species.
- > Basic Radicals : These are Positively charged species.

Examples of radicals are Na⁺ Cl⁻ SO₄²⁻ NO₃⁻

CHEMISTRY.... Continue

Complete the following table.

Acid Radicals Basic Radicals	Chloride Cl ⁻	Nitrate (NO₃ ⁻)	Sulphate SO4 ²⁻	Carbonate CO3 ²⁻	Hydroxide OH ⁻	Phosphate PO4 ³⁻
Magnesium Mg ²⁺	MgCl ₂	Mg(NO ₃) ₂	MgSO ₄	MgCO ₃	Mg(OH) ₂	$Mg_3(PO_4)_2$
Sodium Na $^+$						
Zinc Zn ²⁺						
Silver Ag ⁺						
Ammonium NH₄ ⁺						
Calcium Ca ²⁺						
Iron (II) Fe ²⁺						
Potassium K^+						

Topic (D)

Molecular Masses: It is defined as the sum of atomic masses of an elements present in a given molecules.

Example . Molecular mass of water (H_2O) is 18 and (NaOH) is 40.

 H_2O > Atomic mass of Hydrogen is 1 and atomic mass of oxygen is 16 then simply add these atomic masses of both the elements

1(2)(H) + 16(O)= 18

NaOH > atomic mass of sodium(Na) is 23 , oxygen (O) 16 , hydrogen (H) 1, then simply add these atomic masses of all elements

23(Na) + 16(O) + 1(H) = 40.

Q. Calculate the molecular masses of following compounds. (Atomic Masses are as Mg=24 , Cl=35.5 , C=12 , H=1 , O=16 , N=14 , S=32) MgCl₂, C₆H₁₂O₆, NH₃, HNO₃, H₂SO₄ , HCl

How to solve percentage composition of given element in compounds

Formulla used: <u>Given mass of element × 100</u>

Molecular Mass of Compound

Example: Calculate the percentage composition of Hydrogen in H₂O.(given mass of H is 2)

Then Percentage Composition of Hydrogen = <u>Given mass of Hydrogen</u> \times 100 = <u>2 \times 100</u> = 11.11

Molecular mass of water 18

Calculate the percentage composition of oxygen in given compounds.

NaOH , Mg(OH)₂ , $C_6H_{12}O_6$, H_2SO_4 , NH₃

Topic (E)

Chemical Formula: It is a symbolic representation of number of atoms present in a molecule of substance.

The significance of chemical formula is very important to finding information about chemical compounds as it tells about the element and number of substances

Example. As $C_6H_{12}O_6$ is the chemical formula of glucose and it represent 6 carbon 12 hydrogen and 6 oxygen atom and 1 molecule of glucose.

Q> Give the Chemical formula of following compounds and also represent the number of atoms and molecules present in each case.

- Ammonium Chloride
- Ferrous Chloride
- Ferric Chloride
- Magnesium Hydroxide
- Zinc carbonate
- Aluminum Trioxide
- Sulphuric Acid

- Washing Soda
- Baking Soda
- > Methane
- > Hydrogen Sulphide.
- > Ammonia
- > Marble
- Hydrogen Chloride

<u>Chemical Equation and its significance</u>: Chemical equation is the symbolic representation of a chemical reaction in the form of symbols and formulae, wherein the reactant entities are given on the left-hand side and the product entities on the right-hand side. The coefficients next to the symbols and formulae of entities are the absolute values of the stoichiometric numbers. The first chemical equation was diagrammed by Jean Beguin.

Balancing of Chemical equation : Chemical equation should be balanced to follow the law of conservation of mass as the number of elements in reactant side is equal to number of element in product side,

Example: As the burning of methane would be balanced by putting a coefficient of 1 before the CH_4 :

 $1 \text{ CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

Since there is one carbon on each side of the arrow, the first atom (carbon) is balanced.

Looking at the next atom (hydrogen), the right-hand side has two atoms, while the lefthand side has four. To balance the hydrogen's, 2 goes in front of the H₂O, which yields

 $1 \text{ CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2 \text{ H}_2\text{O}$

Inspection of the last atom to be balanced (oxygen) shows that the right-hand side has four atoms, while the left-hand side has two. It can be balanced by putting a 2 before O_2 , giving the balanced equation:

 $CH_4 + 2 \text{ O}_2 \rightarrow CO_2 + 2 \text{ H}_2O$

This equation does not have any coefficients in front of CH_4 and CO_2 , since a coefficient of 1 is dropped.

Balancing Chemical Equations

Balance the equations below:



16 equation from above chart

16.K + MgBr₂.....>KBr +Mg

Practice writing chemical equations from word problems and balancing equations. Examples:

- 1. Ammonium nitrate decomposes explosively to form nitrogen, oxygen, and water vapor.
- 2. Carbon dioxide and water reacts together to produce glucose in presence of sunlight.
- 3. Lead(II) nitrate undergo heating to form lead oxide , nitrogen dioxide and oxygen gas.
- 4. Phosphorous reacts with oxygen gas to produce diphosphorous pentoxide.

5. When calcium comes in contact with water, calcium hydroxide and hydrogen gas is produced.

6. When Calcium carbonate reacts with Hydrogen Chloride to form calcium chloride , carbon dioxide gas and water

7. Sodium hydroxide reacts with Hydrogen Chloride to form sodium chloride and water

8. Mercury (II) oxide decomposes to produce mercury and oxygen.

9. Zinc hydroxide reacts with phosphoric acid (H3PO4) to produce zinc phosphate and water.

10. Sulfur dioxide and oxygen combine to produce sulfur trioxide.

SUBJECT ENGLISH

a) Write composition (300-350) words on the following topics:

1) A little knowledge is a Dangerous Thing.

2) A weekly market scene

3)Describe a Sunday evening which you can never forget.

4) A visit to a village for your cousin's wedding

b) 1. Write a letter on your friend inviting him to join yyou in an excursion to a place of historical importance during the next holidays.

2.Write a letter to the Editor of a newspaper showing your concern for the lack of safety of children in the school buses n vans.

3.)Write a letter to your cousin qho has recently shifted with his parents to Delhi from a village telling him what he should do to adjust himself to city life.

4) Write a letter to the Chief Minister to your state, complaining about the lack of drinking water facilities in your àrea.

c) Write 50 Words of your choice and give their Antonyms.

d) Write 50 words of your choice and give their Synonyms. The Punjab Public School, Nabha

Holidays Home- Work (2020)

SUBJECT: GEOGRAPHY

Students are requested to read following topics. All these topics are available on line and also draw neat and labeled diagrams related to the chapters.

- 1. Earth as a Planet.
 - a. <u>For Reading</u>: The Earth as unique planet, Shape and size of the Earth, Earth as a home of mankind and the conditions that exist here.
- 2. Latitudes and Longitudes.

<u>Draw diagrams</u> of Earth's Grid, The main five parallels of Latitudes, The Climatic Zones of the Earth.

For Reading: Concept of Latitude and Longitude, International Date Line and World Time Zones

3. Rotation and Revolution.

<u>For Diagrams</u>: Perihelion and Aphelion, The Inclination of Earth's Axis, Summer Solistice and Winter Solistice.

<u>For Reading</u>: Effects of Rotation and Revolution, Farrel's Law, Coriolis effect, Seasonal changes and their effects on temperature.

4. Earth's Structure:

For Diagram: Earth's Stucture.

For Reading: About the Interior of the Earth, its layers, Temperature.

5. Map of the World:

Mark and name all the Oceans and seas on the Physical map of the world. Pacific Ocean, Atlantic Ocean, Indian Ocean, Southern Ocean, Indian Ocean. Mediterranean Sea, Black Sea, Red Sea, Caspian Sea, Caribbean Sea. Mountains: Rockies, Andes, Himalayas, Applachians, Alps, Great Dividing Range and Drakensberg.

Plateaus: Canadian Shield, Brazilian Highland, Tibetan Plateau, Iranian Plateau, Labrador Plateau, Pantagonian Plateau, Mangolian Plateau, African Rift valley.

Instructions:

- 1. For Diagram students will maintain a separate note book.
- 2. Pencils/colours will be used for the diagrams.
- 3. Proper labeling will be done.
- 4. Appropriate information will also be written along with the diagrams.
- 5. For map use appropriate colours. Light Blue for water bodies and brown for mountains and plateaus.

SUBJECT: BIOLOGY

Investigatory project Report: Prevalence of acute and chronic diseases in children. GUIDELINES:

Observation table:

- 1. How many people suffered from acute diseases during last three months?
- 2. How many people suffered from chronic diseases during the same period?
- 3. How many students took antibiotics?

Name some five antibiotics and explain their mode of action.

Describe any two examples of chronic and acute diseases under following headings:

Disease name, causative agent, vectors (if any), symptoms and their preventions and control.

Question -2

Make a project report on Biofuels , including:

³⁄₄ What are biofuels? ³⁄₄ How are they made? ³⁄₄ Pros and cons of biofuels.

Question 3

Make a report on genetic engineering including: 3/4information on gene cloning .3/4 what is biotechnology, 3/4 application of biotechnology

SUBJECT: MATHEMATICS

- 1. Find the square root of number 2, 3, 5, 7, 10, 11, 12, 13, 14 and 15 (by long division method).
- 2. Write all the formulae done in Class VIII
- 3. A die is thrown once, find the probability of getting :
 - a a prime number
 - b a number greater than 3
 - c a number other than 3 and 5
 - d a number less than 6
 - e a number greater than 6
- 4. Three identical coins are tossed together, what is the probability of getting :
 - a all heads
 - b exactly two heads
 - c exactly one head
 - d no head
- 5. Three solid cubes of edges 6cm, 10 cm, and x cm are melted to form a single cube of edge 12 cm, find the value of x.
- 6. The dining hall of a hostel 75m long, 60m broad and 16m high. It has five doors 4m by 3m each and four windows 3m by 1.6m each. Find the cost of :
 - a papering its walls at the rate of Rs 12 per m².
 - b carpeting its floor at the rate of Rs 25 per m^2 .
- 7. The sum of the radius and the height of a cylinder is 37 cm and the total surface area of the cylinder is 1628 cm². Find the height and the volume of the cylinder.
- 8. The total surface area of a cube is 216 cm², find its volume.
- 9. A wire, when bent in the form of a square encloses an area of 196 cm². If the same wire is bent in the form of a circle, find the area of the circle.
- 10. The length of the diagonals of a rhombus is in the ratio 4:3. If its area is 384 cm^2 , find its side.
- 11. A path of uniform width, 2.5m, runs around inside of a rectangular field 30m by 27m. Find the area of the path.
- 12. The base of an isosceles triangle is 12cm and its perimeter is 32 cm. Find the area of the triangle.
- 13. Construct a parallelogram whose diagonals are 5.5 cm and 6 cm respectively and the angle between them is 60°.
- 14. Construct a quadrilateral ABCD with AB = 3.8cm, BC = 4.2 cm, CD = 4cm, $\angle B = 60^{\circ}$ and $\angle C = 75^{\circ}$.
- 15. PQRS is a parallelogram whose diagonals intersect at M. If $\angle PMS = 54^\circ$, $\angle QSR = 25^\circ$ and $\angle SQR = 30^\circ$, find:(1) $\angle RPS$ (2) $\angle PRS$ (3) $\angle PSR$

- 16. The ratio between the interior angle and the exterior angle of a regular polygon is 2:1. Find:
 - (1) each exterior angle of a polygon (2) number of sides in a polygon
- 17. The interior angles of a pentagon are in the ratio 4:5:6:7:5. Find each angle of the pentagon.
- 18. Solve and graph the solution set on the number line: $8x 8 \le -24$; $x \in Z$.
- 19. Solve: $\frac{2}{2}x + 8 < 12$; $x \in W$.
- 20. 6(6x-5) 5(7x-8) = 12(4-x) + 1
- 21. The difference of two numbers is 3 and the difference of their square is 69. Find the numbers.
- $14x^2 + x 3$ 22. Factorise:
- $x^{2} y^{2} 3x 3y$ 23. Factorise:
- 24. Factorise: $(0.7)^2 (0.3)^2$ 25. If $a^2 + \frac{1}{a^2} = 23$, find $a + \frac{1}{a}$
- 26. Multiply: (2x + 3y)(2x - 3y)
- $(a b + c)^{2}$ 27. Expand:

28. Subtract
$$3x^3 - 2x^2y + xy^2 - y^3$$
 from $4x^3 - 3x^2y - 7xy^2 + 2y^3$

- 29. If the C.P. = Rs 980 and S.P. = Rs940, find the profit or loss percent?
- 30. If the S.P. = Rs 1254 and loss = Rs 32, find the cost price?
- 31. Amina buys a book for Rs 275 and sells it at a loss of 15%. How much does it sell it for?
- 32. Find the cube of 2a + 3b.
- 33. Evaluate: $(a + 1)(a - 1)(a^{2} + 1)$
- 34. Divide $(x^6 8)$ by $(x^2 2)$
- 35. One tap can fill a cistern in 3 hours and the waste pipe can empty the full cistern in 5 hours. In what time will the empty cistern be full, if the tap and the waste pipe are kept open together?
- 36. 4 men or 6 women earn Rs 360 in one day. Find, how much will:
 - (1) a man earn in one day?
 - (2) a women earn in one day?
 - (3) 6 men and 4 women earn in one day?
- 37. Find the amount and the compound interest on RS 24,000 for 2 years at 10% per annum compounded annually.
- 38. A certain sum of money at simple interest amounts to Rs 3825 in 4 years and to Rs 4050 in 6 years. Find the rate percent and the sum.
- 39. The number 8000 is first increased by 20% and then decreased by 20%. Find the resulting number.
- 40. In an election between two candidates, one candidate secured 43% of the total votes polled and lost the election by 4900 votes. Find the total number of votes polled.

41. If A = {6, 7, 8, 9}, B = {4, 6, 8, 10} and C = {x : $x \in N, 2 < x \le 7$ }, find :

(3) B-(A-C) (4) A-(BUC) (5) B-B (1) A-B (2) B-C

- 42. Find the cube root of -2.744
- $[(64)^{-2}]^{-3} \div [\{(-8)^2\}^3]^2$ 43. Simplify:
- 44. Insert seven rational numbers between 2 and 3.
- 45. Students of a small school use different modes of travel to school as shown below:

Mode	Bus	Car	Bicycle	Auto	On foot

Number of	142	98	50	34	16
students					

Draw a bar graph to represent the above data.

SUBJECT:COMPUTER

Learn the following concept and make notes of the following topics using ExtraMarks – The Learning App

- 1. Concept of Objects
- 2. Introducing Classes
- 3. Computing and Ethics

#go-to-school Extramark 3 THANK YOU FOR SIGNING UP! Activation code for your school Punjab Public School is GTS-PN1800 Share this code with your students to allow them full access of Extramarks - The Learning App, IIT JEE and NEET. How to activate The Learning App

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