KENDRIYA VIDYALAYA GAURIBIDANUR

HOLIDAY HOME WORK (SUMMER VACATION)

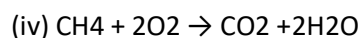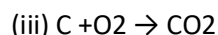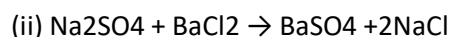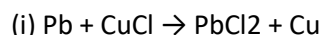Subject-science.   Class - 10th

Instructions: All questions are compulsory

: Do question (1-12) in science home work note book.

Q1.Electrolysis of water is a decomposition reaction. The mole ratio ofhydrogen and oxygen gases liberated during electrolysis of water is
(a)1:1.   (b)2:1.   (c)4:1.   (d)1:2
Q2. Which among the following is double displacement reactions?
(i) $Pb + CuCl \rightarrow PbCl_2 + Cu$
(ii) $Na_2SO_4 + BaCl_2 \rightarrow BaSO_4 + 2NaCl$
(iii) $C + O_2 \rightarrow CO_2$
(iv) $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$
(a) (i) and(iv)   (b) (ii)only.   (c) (i) and(ii)   (d) (iii) and(iv)

Q3.What is the chemical formula for marble?
a)CaO.   b)Ca(OH)   c)$CaCO_3$.   d)$CaCl_2$
Q4. What is the chemical formula for quicklime?
a)CaO.   b)Ca(OH)2.   c)CaCO.   d)$CaCl_2$

Q5.The speed of light in a transparent medium is 0.6 times as that of its speed in vacuum.What is the refractive index of themedium?

(a)1.0.   (b)1.33.   (c)1.55.   (d)1.66
Q5. Does refractive index vary with colour of light?
(a) yes.   (b) no.   (c)sometime.   (d)depend on the colour of light

Q6.Assertion (A): When a concave mirror is held under water, its focal length will increase.
Reason (R): Thefocal length of a concave mirror is independent of the medium in which it is placed.
Q 7 Assertion (A): Refractive index has no unit.
Reason (R): The refractive index is a ratio of two similar quantities.

Q8 Draw all the Ray diagrams of image formed by concave mirror.

Q9.Draw all the ray diagram of defects of Eye .

Q10.Assertion(A):Calcium hydroxide when reacts with carbondioxide gives calcium carbonate and water.

Reason (R) : On heating calcium carbonate, decomposition reaction takes place.
Q11.Assertion (A):Decomposition of vegetable matter into compostis an example of exothermic

reactions.

Reason (R) : Exothermic reaction are those reactions in which heat is absorbed.

Q12 complete your lab manual of science of given experiments .

Q13.Collect information about corrosion and rancidity that occur in our daily life and write down on chart paper.

Q14.Make a model of human respiratory system using 2 liters mineral water bottles
as thoracic cavity , balloons as lungs ,drinking straw as bronchi and plastic bag as a diaphragm.

Q15.Write down previous year cbse questions of ch-1 chemical reaction and equation or ch- light reflection and refraction and human eye and colorful world (10yr) in your holiday homework notebook.

ENGLISH Holidays Homework

I) Answer the following questions:

1) How does the story 'Mrs. Packletide's Tiger' expose the vanity and superficial values of high society through the characters of Mrs. Packletide and Miss Mebbin? Support your answer with examples from the text.

2) In The Frog and the Nightingale, how does the frog exploit the nightingale's innocence, and what message does Vikram Seth convey about blind trust and self-doubt?

3) How do Nicola and Jacopo embody the values of hard work, sacrifice, and love for family in Two Gentlemen of Verona? Illustrate with references from the story.

II) You are Rahul/Radha, a student of Class 10, Green Valley School, Mumbai. You are concerned about the increasing consumption of junk food among school students. Write a letter to the Principal, requesting to organize an awareness program on the harmful effects of junk food.

III) You are Ankit/Ankita. You recently read about the importance of sleep for good health. Write an article for your school magazine in about 120–150 words on the topic "The Importance of Sleep."

        *You may use the following hints:

*Essential for body and brain.

*Helps in growth, repair, memory.

* Lack of sleep – health problems, poor concentration.

*Tips for better sleep – fixed schedule, no screens, calm environment.

IV)

Report the dialogues to complete the paragraph that follows.

Rohit: I have bought a new DSLR camera.

Mohit: What will you do with this?

Rohit: I will click beautiful pictures with this camera.

Rohit told Mohit that (a) _____ .As Mohit was not aware of it, so he asked (b) _____ _____. To this, Rohit answered that he would click beautiful pictures with that camera.

Read the dialogue given below and complete the paragraph that follows.

Nathen : I could not call my English tutor.

Mother : Have you cancelled today's class ?

Nathen : His phone is dead and there is no other way to contact him.

Nathen told his mother that (a) _____ . Mother asked him whether (b) _____ . Nathen replied that (c) _____ way to contact him.

V) As Aarushi, a student of class IX, write an email, in 50 words, to the Principal of your school, requesting him/her for a change your section from IX-A to IX-B.

Include a reason why you desire the change.

You may copy the given template to write your email.

From:

To

Cc: ssc@xvzschool.com

Date : April 10, 2024, 07:05 PM

Subject:

VI) Write a factual description, in not more than 100 words, of an English Notebook that you have to submit to your teacher.

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Subject: Mathematics

Solve the following problems:

1.Find a quadratic polynomial whose zeroes are 5 + √2 and 5 - √2.

2.If α and β are the zeroes of the quadratic polynomial ax2+bx+c, show that:

α+β=−b/a, αβ=c/a.

3.Find a quadratic polynomial whose one zero is 5 and product of zeroes is 30.

If alpha and beta are the zeroes of t αhe polynomial x2+ 6x + 9, then form a polynomial whose zeroes are – α and –β.

4.Find the zeroes of the quadratic polynomial 6x2 – 3 – 7x and verify the relationship between the zeroes and the coefficients of the polynomial.

5Find a quadratic polynomial whose sum and product of the zeroes are 4 and -5 respectively. Verify the relation between the zeroes and the coefficients.

6.If α and β are the zeroes of the polynomial

3x2−5x+2

7 find the value of:

(i) α + β

(ii) αβ

(iii) α2+β2

8) Also verify the relation between zeroes and coefficients.

What is the degree of the polynomial:

(a) $2x^3 - 5x + 12$

(b) $x^5 + 2x^4 - x^3 + x$

9) Define a polynomial. Give an example of a quadratic and cubic polynomial.

10) If α and β are the zeroes of the quadratic polynomial $ax^2 + bx + cax^2 + bx + c$, show that:

$\alpha + \beta = -b/a$, $\alpha\beta = c/a$.

Solve the following pairs of linear equations:

a) $2x + 3y = 12$, $x - y = 1$

b) $3x + 4y = 10$, $2x - 2y = 2$

c) $x + y = 7$, $x - y = 3$

12) The sum of the digits of a two-digit number is 9. If the digits are reversed, the number is increased by 27. Find the number.

13) Draw the graphs of the equations:

. $x + y = 4$ and $x - y = 2$, Find the point of intersection.

14) Plot the following pair of equations on a graph and find whether the lines .   intersect or not: $2x - y = 1$, $4x - 2y = 2$

15) How do you check if a given pair of

equations is consistent or inconsistent?

16) Give one example of a pair of equations which has:

(i) Unique solution

(ii) No solution

(iii) Infinitely many solutions.

17) Prove that $\sqrt{5}$ is irrational number.

18) State the fundamental theorem of arithmetic

19) Find the HCF and LCM of 96 and 404 using prime factorization.

20) If HCF(a, b) = 12 and LCM(a, b) = 180, find a and b, given a = 36.

ARTIFICIAL INTELLIGENCE (CODE-417)

SUMMER HOLIDAY HOME WORK MAY-JUNE 2025

CLASS: X

Date: 29/04/2025

I Multiple Choice questions

1. What is intelligence?

a) Ability to act

b) Ability to infer and retain information for adaptive behaviors

c) Ability to run fast

d) Ability to hear and see

2. What makes machines intelligent according to AI concepts?

a) Their speed

b) Their ability to mimic human intelligence

c) Their design

d) Their weight

3. Which of the following is NOT a part of AI?

a) Data Science

b) Machine Learning

c) Deep Learning

d) Mechanical Engineering

4. What is an example of Machine Learning?

a) A self-driving car learning from its environment

b) A calculator

c) A washing machine

d) A smart refrigerator

5. What does AI aim to mimic?

a) Human intelligence

b) Animal instincts

c) Machine operations

d) Physical strength

6. What is Deep Learning?

a) A subset of data collection

b) A subset of Machine Learning using vast amounts of data

c) AI that only processes data

d) A non-intelligent system

II Assertion and Reasoning questions

Q1.

Assertion (A): Artificial Intelligence can mimic human decision-making.

Reason (R): AI systems are programmed to think and feel like humans.

Both A and R are true, and R is the correct explanation of A.

Both A and R are true, but R is not the correct explanation of A.

A is true, but R is false.

A is false, but R is true.

Q2.

Assertion (A): Data is the core fuel for Artificial Intelligence systems.

Reason (R): AI learns and improves by analyzing data patterns.

Both A and R are true, and R is the correct explanation of A.

Both A and R are true, but R is not the correct explanation of A.

A is true, but R is false.

A is false, but R is true.

Q3.

Assertion (A): AI is used only in robotics and gaming.

Reason (R): Robotics and gaming are the only areas where decision-making is required.

Both A and R are true, and R is the correct explanation of A.

Both A and R are true, but R is not the correct explanation of A.

A is true, but R is false.

Both A and R are false.

Q4.

Assertion (A): AI systems require human supervision to function properly.

Reason (R): Most AI systems are trained using supervised learning methods.

Both A and R are true, and R is the correct explanation of A.

Both A and R are true, but R is not the correct explanation of A.

A is true, but R is false.

A is false, but R is true.

Q5.

Assertion (A): Narrow AI refers to AI systems that are designed for specific tasks.

Reason (R): Narrow AI cannot perform general intelligence tasks like humans.

Both A and R are true, and R is the correct explanation of A.

Both A and R are true, but R is not the correct explanation of A.

A is true, but R is false.

A is false, but R is true.

III Answer the following questions:

1. What is Artificial Intelligence (AI)?

2. What distinguishes AI from traditional automation?

3. What is Machine Learning (ML) and how is it related to AI?

4 What is Deep Learning (DL)?

5. What role does AI play in everyday applications?

6. How does AI contribute to recommendation systems?

7. What is the importance of data in AI?

8. What ethical concerns arise with the use of AI?

9. What is AI bias, and how does it occur?

10. How does AI affect the future of jobs?

11. What is the role of AI in education?

12. What is the difference between AI, ML, and DL?

13. How do smart assistants like Siri and Alexa use AI?

14. What are some examples of AI in computer vision?

15. What is the importance of AI ethics in AI development?

16. Explain how AI works in Google Search Engine and E-commerce websites

17. How has AI changed the gaming world?

18. Why training with information/Data is important in Artificial Intelligent devices?

19. How can AI be integrated with non-AI technologies? Explain with the help of an example.

20. How AI helps in giving you personalized experience online?

  NOTE:

The home work should be written on AI Home Work book(100pages A4 size book)

Write the heading as AI Summer Holiday Home Work and the date is 2/5/2025

Write the index without fail and the book should be binded with brown wrapper.

The home work should be submitted on 23/6/2025 by all the students without fail

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Social science summer holiday homework

1) Who headed the constitutional monarchy installed by a liberal revolutionaries in 1830

2) What was result of rise in population in Europe in the first half of the 19th century

3) Describe the three steps taken by the French Revolutionary is to create a sense of collective identity among the French people

4) Explain how Ireland was incorporated into the United Kingdom in 1801

5) What use did the conservative hold

6) How did the culture play an important role in creating the idea of nation in Europe explain with fine examples

7) explain the unification of Italy mention the major leaders and events involved

8) describe the process of German unification under the leadership of ottoman bismark

9) compare the political conditions of France Germany and Italy before unification

10) How did the balcon issue became one of the major reason for the first world war ?

11) explain a significance of language in developing National sentiments in Europe

12) how did the Nepalan is called contribute to the rise of nationalism

13) describe the role of machining in unified Italy

14) what were the main features of conservative set up in 1815

How did the revolution of 1830 and 1848 contribute to the spread of nationalism

15) explain briefly ;

a) development

b) per capita income

c) life expectancy

16) read the following and make
    a) power sharing   b) development

c)sectors of Indian economy

d) resources and development

e) Nationalism in India