



MOUNT COLUMBUS SCHOOL
DAKSHINPURI, NEW DELHI – 62
CLASS X

WORKSHEET (APRIL)

ENGLISH

I. Answer the following questions in 30–40 words each:

1. The dusting of snow on account of the crow helped make the poet's day better. How do you think the crow's droppings might have impacted the poet?
2. Comment on the reactions and feelings of Lencho and Nelson Mandela when they faced challenges in their lives.
3. Why did Mrs. Pumphrey believe Tricki was seriously ill? What does it tell us about her relationship with her pet?
4. How do Anil's initial reaction to Hari Singh's cooking and his subsequent actions reflect Anil's evolving relationship with Hari Singh?
5. Why does the poet say, 'I've tasted of desire/I hold with those who favour fire'?

II. Read the following extract and answer the following questions:

1. He should be lurking in shadow,
Sliding through long grass
near the water hole
Where plump deer pass.

i According to the extract, the poet wishes for the tiger to be 'sliding' through the foliage as this would

- a) assist in keeping the prey unsuspecting of the predator's sound.
- b) aid in camouflaging the presence of the predator before it rushes in.
- c) help the predator pounce on the prey comfortably without getting tired.
- d) Support the predator's vision as it eyes its prey.

ii Which fact DOES NOT connect with the significance of the water hole for the tiger?

- a) Many tigers chase prey into the water and holds the victim's head under water until it drowns.
- b) Prey feed in the water on water-lilies, and often wander into the middle of the water hole, where they are vulnerable and easy for the tiger to kill.
- c) Prey that has quenched its thirst ensures consumption of hydrated meat for the tiger.
- d) Chasing the panicked prey from shallow to deep water where the tiger grabs it.

iii Pick the option that DOES NOT use 'lurking' correctly to fill in the blank.

- a) The thug was _____ in the alley late evening, for unsuspecting passers-by.
- b) The hyena was _____ in its den after a good meal.
- c) The detective cautioned her team about the _____ dangers likely to impact the case.
- d) The prejudices _____ beneath the surface create misunderstandings.

iv 'shadow' here, refers to the shadow of

- a) the tiger.
- b) long grass.
- c) water hole.
- d) deer

v Pick the phrase that DOES NOT suggest that the forest in the extract is lush.

- a) long grass
- b) the water hole
- c) plump deer
- d) lurking in shadow

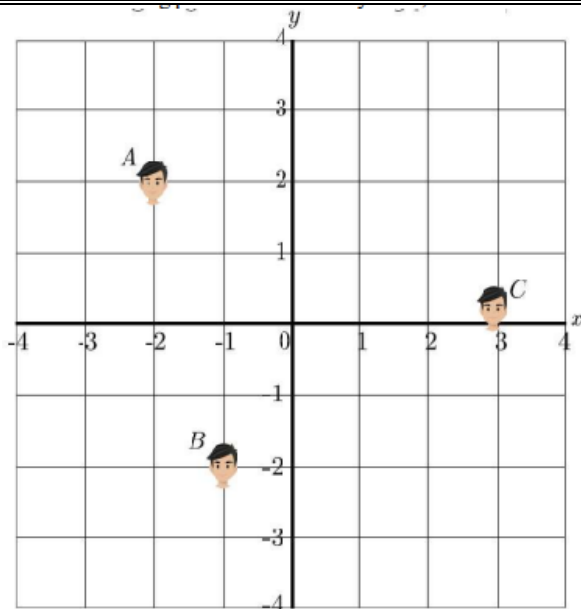
HINDI

निम्नलिखित प्रश्नों के उत्तर लिखिए-

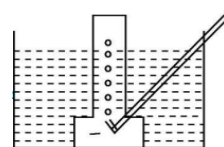
1. संसार में सुखी व्यक्ति कौन है और दुखी कौन ? यहाँ 'सोना' और 'जागना' किसके प्रतीक हैं ? इसका प्रयोग यहाँ क्यों किया गया है ? स्पष्ट कीजिए।
2. कबीर जी की साखियाँ जीवन के लिए अत्यंत उपयोगी हैं। प्रस्तुत पाठ में दी गई कबीर जी की साखियों से जिन जीवन – मूल्यों की झलक मिलती है , उनका उल्लेख कीजिए।
3. कबीर जी अपनी साखी के द्वारा भ्रमित लोगों के बारे में क्या कहते हैं ?
4. ' हम घर जाल्या आपणाँ ' से कबीर जी का क्या तात्पर्य है ? इससे क्या सीख देने का प्रयास किया गया है ?
5. मीरा ऊँचे-ऊँचे महलों और बीच-बीच में खिड़कियों की कल्पना क्यों करती है?
6. मीरा श्री कृष्ण का दर्शन और सामीप्य पाने के लिए क्या उपाय करती हैं?
7. मैदान का आकर्षण छोटे भाई को कहाँ ले जाता था और क्या-क्या करवाता था? क्या आप के साथ भी ठीक वैसे ही होता है जैसे छोटे भाई के साथ होता था?
8. बड़े भाई साहब ने तत्कालीन शिक्षा प्रणाली की जिन कमियों की ओर संकेत करते हुए अपने फेल होने के लिए उसे उत्तरदायी ठहराने की कोशिश की है, उससे आप कितना सहमत हैं? अपने विचार लिखिए।
9. बड़े भाई साहब ने जिंदगी के अनुभव और किताबी ज्ञान में से किसे और क्यों महत्पूर्ण कहा है ?
10. आपके क्षेत्र में पानी की समस्या बहुत बढ़ गई है। नगर निगम के अधिकारी को पत्र लिखकर समस्या का समाधान करने का अनुरोध कीजिए।

MATHEMATICS

- Q1.If the distance between the points $(x, -1)$ and $(3, 2)$ is 5, then find the value of x .
- Q2. Find the distance between the points $(p, -q)$ and $(-p, q)$.
- Q3. Points A $(-1, y)$ and B $(5, 7)$ lie on a circle with centre O $(2, -3y)$. Find the values of y .
- Q4. Find the value of x for which the distance between the points R $(2, -4)$ and Q $(x, 4)$ is 5 units.
- Q5. Find the ratio in which the line segment joining the points $(6, 4)$ and $(1, -7)$ is divided by x -axis.
- Q6. Find the relation between x and y if points $(2, 1)$ (x, y) and $(7,5)$ are collinear.
- Q7.Prove that $\sqrt{2} + \sqrt{3}$ is irrational.
- Q8. Find the largest number that divides 2053 and 967 leaving a remainder of 5 and 7 respectively.
- Q9. Show that n^2-n is divisible by 2 for every positive integer.
- Q10. The line segment AB joining the points A $(3, -4)$ and B $(1, 2)$ is trisected at the points P $(p, -2)$ and Q $(5/3, q)$. Find the values of p and q .
- Q11. Find the centre of a circle passing through $(5, -8)$, $(2, -9)$ and $(2, 1)$.
- Q12. Aditya, Ritesh and Damodar are fast friend since childhood. They always want to sit in a row in the classroom. But teacher doesn't allow them and rotate the seats row-wise every day. Ritesh is very good in maths and he does distance calculation every day. He consider the centre of class as origin and marks their position on a paper in a co-ordinate system. One day Ritesh make the following diagram of their seating position marked Aditya as A, Ritesh as B and Damodar as C.



- What is the distance between A and B?
- What is the distance between B and C?
- A point D lies on the line segment between points A and B such that $AD:DB = 4 : 3$. What are the coordinates of point D?
- If the point $P(k, 0)$ divides the line segment joining the points $A(2, -2)$ and $B(-7, 4)$ in the ratio $1 : 2$, then find the value of k .



Q13. Find the ratio between the LCM and HCF of 5, 15, and 20.

Q14. Two alarm clocks ring their alarms at regular intervals of 50 seconds and 48 seconds. If they first beep together at 12 noon, at what time will they beep again for the first time?

Q15. Can we have any $n \in \mathbb{N}$, where 12^n ends with the digit zero?

SCIENCE

CH- CHEMICAL REACTION AND EQUATION

1. What type of reaction is represented by the following equation? $2\text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{PbO} + 4\text{NO}_2 + \text{O}_2$

- | | |
|---------------------------|--------------------------|
| A) Combination reaction | B) Displacement reaction |
| C) Decomposition reaction | D) Double displacement |

2. Rancidity is caused due to:

- | | |
|-----------------|-------------------------------|
| A) Fermentation | B) Oxidation of fats and oils |
| C) Dehydration | D) Reduction of fats |

3. Which of the following is an exothermic process?

- | | |
|---------------------------|--------------------------|
| A) Photosynthesis | B) Melting of ice |
| C) Burning of natural gas | D) Electrolysis of water |

4. Assertion (A) White silver chloride turns grey in sunlight.

Reason (R) : Copper reacts with zinc sulphate to form copper sulphate and zinc is deposited.

Following question 4 have two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below:

- 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.

5. A metal is treated with dil H_2SO_4 , the gas evolved is collected by the method shown in the figure.

Answer the following:

- Name the gas.
- Give chemical reaction for the experiment.
- Is the gas soluble or insoluble in water?
- Is the gas lighter or heavier than air?

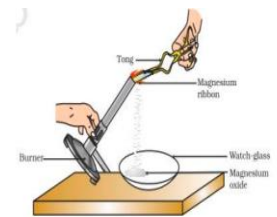
6. Why is more hydrogen gas collected than oxygen in the electrolysis of water
7. Observe the figure and write the type of the reaction and mention nature of the product.
8. In the reaction: $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + 2\text{H}_2\text{O}$
Identify the oxidising agent and reducing agent.
9. When silver chloride is exposed to sunlight, it turns grey. Identify the type of reaction, write a balanced chemical equation for the reaction and give one use of this reaction.

CH- LIFE PROCESS

- Q1 In which part of the alimentary canal is bile poured for digestion?
- A) Stomach B) Small intestine C) Large intestine D) Oesophagus
- Q2. Which blood vessel carries oxygenated blood from the lungs to the heart?
- A) Pulmonary artery B) Aorta C) Pulmonary vein D) Vena cava
- Q3. What is the primary mode of nutrition in Amoeba?
- A) Autotrophic B) Holozoic C) Saprotrophic D) Parasitic
- Q4 What is the function of the diaphragm in the human respiratory system?
- Q5. Explain why low haemoglobin level cause fatigue?
- Q6. Read the following passage and answer the questions that follow:

A person with kidney failure undergoes dialysis treatment. During dialysis, the patient's blood is filtered to remove waste products and excess fluids.

- i. What is the primary function of the kidneys in the human body?
- ii. Why is dialysis necessary for patients with kidney failure?
- iii. What would happen if the kidneys fail to filter waste products from the blood?
- iv. Name one other organ that helps in filtration and purification of blood.



SOCIAL SCIENCE

I. Define-

- a. Ethnic
- b. Majoritarianism
- c. Civil War
- d. Community government

II. Answer the following questions.

- a. Which ethnic group in Belgium has the largest population?
- b. Which ethnic group is in majority in Sri Lanka?
- c. Name the two sub groups of Tamils in Sri Lanka.
- d. Name the country which has lost peace due to majoritarianism.
- e. Name the organs of the government of India.

III. Multiple choice questions.

1. Which one of the following was not a demand of the Sri Lankan Tamils?
 - i. Recognition of Tamils as an official language
 - ii. Regional autonomy
 - iii. Equality of opportunity in jobs
 - iv. Reservation of seats in Parliament
2. Sri Lankan Tamils refers to which of the following?
 - i. Tamil Muslim
 - ii. Tamil native of the country
 - iii. Tamil whose forefathers came from India
 - iv. Tamil Hindu
3. Which of the following is an example of horizontal sharing of power?
 - i. Power sharing between different states
 - ii. Power sharing between different organs of the government
 - iii. Power sharing between different levels of the government
 - iv. Power sharing between different political parties

4. Division of powers between higher and lower levels of government.
 - i. Horizontal distribution
 - ii. Parallel distribution
 - iii. Vertical division
 - iv. Diagonal division
5. The community government in Belgium is elected by which of the following group.
 - i. People belonging to one language community
 - ii. All the citizens
 - iii. All the community leaders
 - iv. All the leaders
6. The word 'ethnic' signifies which of the following concept.
 - i. Different religions
 - ii. Social division on shared culture
 - iii. A violent conflict between opposite groups
 - iv. A careful calculation of gain and loss
7. Belgium shifted from a unitary form of government to:
 - i. Democratic
 - ii. Federal
 - iii. Authoritarian
 - iv. none of the above
8. Which types of government does the Belgium have?
 - i. Federal
 - ii. Communist
 - iii. Unitary
 - iv. Central
9. In federalism, power is divided between various constituent units and:
 - i. Central authority
 - ii. states
 - iii. Both (i) and (ii)
 - iv. None of the above
10. Which countries follow the unitary system of government?
 - i. Belgium, Spain and India
 - ii. USA Japan and Belgium
 - iii. United Arab Emirates, China and Sri Lanka
 - iv. France, Germany and India
11. In federal system, central government cannot order the:
 - i. Principal
 - ii. Local government
 - iii. State government
 - iv. None of the above
12. A system of government in which power is divided between a central authority and various constituent unit of the country is called
 - i. Federalism
 - ii. Communalism
 - iii. Socialism
 - iv. Democracy
13. State government has powers of its own for which it is not answerable to the:
 - i. Central government
 - ii. Judiciary
 - iii. Both (i) and (ii)
 - iv. None of the above
14. Which country is an example of coming together federation?
 - i. Belgium
 - ii. USA
 - iii. Sri Lanka
 - iv. India

ARTIFICIAL INTELLIGENCE

1. What is Artificial Intelligence?
2. Name the first stage of the AI Project Cycle.
3. What is Problem Scoping?
4. Define Data Collection.
5. What is meant by Data Exploration?
6. What is Modelling in AI?
7. What is Evaluation in AI Project Cycle?
8. Write any one ethical concern in AI.
9. What is Bias in AI?
10. Expand the term "AI".
11. List the five stages of the AI Project Cycle.
12. Explain the term "4Ws Problem Canvas".
13. Differentiate between Structured and Unstructured Data.
14. Why is data important in AI?
15. What is Data Visualization? Give one example.

INFORMATION TECHNOLOGY

Section A: Multiple Choice Questions (MCQs)

1. Libre Office Writer is a:
 - a) Spreadsheet software
 - b) Word processing software
 - c) Presentation software
 - d) Database software
2. The default file extension of LibreOffice Writer is:
 - a) .doc
 - b) .txt
 - c) .odt
 - d) .xls
3. Which menu is used to insert a table?
 - a) File
 - b) Insert
 - c) View
 - d) Tools
4. Shortcut key to save a document:
 - a) Ctrl + P
 - b) Ctrl + S
 - c) Ctrl + C
 - d) Ctrl + X
5. Which option is used to check spelling?
 - a) Insert
 - b) Tools
 - c) Format
 - d) View
6. Header appears:
 - a) At the bottom of the page
 - b) In the middle
 - c) At the top of the page
 - d) Nowhere
7. Which feature is used to find and replace text?
 - a) Copy
 - b) Paste

- c) Find & Replace
 - d) Undo
8. Which alignment makes text equal on both sides?
- a) Left
 - b) Right
 - c) Center
 - d) Justify

Section B: Short Answer Questions

1. What is LibreOffice Writer?
2. What is the difference between Save and Save As?
3. What is Toc in LibreOffice
4. What is a style?
5. What is the use of header and footer?
6. What is track changes?
7. What is the function of template