



DAV NUPPL Public School
NUPPL Township, Ghatampur, Kanpur Nagar, UP – 209206
Summer break Assignment (Session: 2024-25)

Class :X

HINDI

अपठित गद्यांश

पर्यावरण का हमारे जीवन में बहुत महत्त्व है। मनुष्य एक पल भी इसके बगैर नहीं रह सकता। भारत के ऋषि-मुनि जानते थे कि प्रकृति जीवन का स्रोत है और पर्यावरण के समृद्ध और स्वस्थ होने से ही हमारा जीवन भी समृद्ध और सुखी होता है। वे प्रकृति की दैवी शक्ति के रूप में उपासना करते थे और उसे 'परमेश्वरी' भी कहते थे। उन्होंने पर्यावरण पर बहुत गहरा चिंतन किया। जो कुछ पर्यावरण के लिए हानिकारक था, उसे आसुरी प्रवृत्ति कहा और जो हितकर था उसे दैवी प्रवृत्ति माना। भारत के पुराने ग्रंथों में वृक्षों और वनों का चित्रण पृथ्वी के रक्षक वस्तुओं के रूप में किया गया है। उनको संतान की तरह पाला जाता था और हरे-भरे पेड़ों को अपने किसी स्वार्थ के लिए काटना पाप कहा जाता था। अनावश्यक रूप से पेड़ों को काटने पर दंड का विधान भी था। मनुष्य यह समझता है कि समस्त प्राकृतिक संपदा पर केवल उसी का आधिपत्य है। हम जैसा चाहें इसका उपभोग करें। इसी भोगवादी प्रवृत्ति के कारण मानव ने इसका इस हद तक शोषण कर लिया है कि अब उसका अस्तित्व ही संकट में पड़ गया है। वैज्ञानिक बार-बार चेतावनी दे रहे हैं कि प्रकृति और पर्यावरण की रक्षा करो, अन्यथा मानव जाति नहीं बच पाएगी। भारतीय संस्कृति में वृक्षों की रक्षा के महत्त्व को 'तुलसी' और 'पीपल' के उदाहरण से समझा जा सकता है। इन जीवनोपयोगी वृक्षों की देवी-देवता के समान ही पूजा की जाती है। पर्यावरण की दृष्टि से वृक्ष को परम रक्षक और मित्र बताया गया है। यह हमें अमृत प्रदान करता है, दूषित वायु को स्वयं ग्रहण करके हमें प्राणवायु देता है, मरुस्थल का नियंत्रक होता है, नदियों की बाढ़ को रोकता है और जलवायु को स्वच्छ बनाता है। इसलिए हमें वृक्षमित्र होकर जीवनयापन करना चाहिए।

क. भारत के ऋषि-मुनि जानते थे कि प्रकृति जीवन का स्रोत है क्योंकि-
कथन पढ़कर सही विकल्प का चयन कीजिए-

कथन:

- (i) पर्यावरण के समृद्ध होने से जीवन सुखी होगा।
- (ii) पर्यावरण में जीवन को स्वस्थ रखने की शक्ति निहित है।
- (iii) ऋषि-मुनि प्रकृति को आधुनिक बनाना चाहते थे।
- (iv) शहर बसाने के लिए जंगल हटाने होंगे।

विकल्प:

- (अ) कथन (i) सही है।
- (ब) कथन (i) व (ii) सही हैं।
- (स) कथन (ii) व (iii) सही हैं।
- (द) कथन (iii) व (iv) सही हैं।

ख. गद्यांश में 'आसुरी प्रवृत्ति' का क्या आशय है?

(अ) राक्षसी प्रवृत्ति (ब) मानवता की विनाशक प्रवृत्ति (स) पर्यावरण के लिए अहितकर प्रवृत्ति (द) हानिकारक प्रवृत्ति

ग. पर्यावरण प्रदूषण का क्या कारण है?

(अ) मनुष्य प्रकृति पर अपना एकाधिकार मानता है। (ब) वह प्रकृति के दोहन का प्रयास करता है।

(स) यह जीवन की सुखमयता के लिए स्वार्थी हो जाता है। (द) वह प्रकृति के संरक्षण का प्रयास नहीं करता।

घ. वृक्ष को सच्चा मित्र मानने का कारण नहीं है।

(अ) छाया और फल देना

(ब) पर्यावरण को शुद्ध रखना

(स) दूषित वायु को हटाकर प्राणवायु देना (द) मनुष्य को पवित्रता प्रदान करना
ड. कथन (A) और कारण (R) को पढ़कर उपयुक्त विकल्प चुनिए-

कथन (A): जो कुछ पर्यावरण के लिए हानिकारक था, उसे आसुरी प्रवृत्ति कहा।

कारण (R): ऋषि-मुनि प्रकृति की दैवी शक्ति के रूप में उपासना करते हैं।

(अ) कथन (A) गलत है, किंतु कारण (R) सही है।

(ब) कथन (A) और कारण (R) दोनों ही गलत हैं।

(स) कथन (A) सही है और कारण (R) कथन (A) की सही व्याख्या है।

(द) कथन (A) सही है, किंतु कारण (R) कथन (A) की सही व्याख्या नहीं है।

पाठ: 1 'सूर के पद'

1. गोपियों द्वारा उद्धव को भाग्यवान कहने में क्या व्यंग्य निहित है ?
2. गोपियों ने किन-किन उदाहरणों के माध्यम से उद्धव को उलाहने दिए हैं?
3. 'मरजादा न लही' के माध्यम से कौन-सी मर्यादा न रहने की बात की जा रही है?
4. गोपियाँ अब धैर्य क्यों रखना चाहती हैं?
5. गोपियों ने कृष्ण को राजधर्म की बात क्यों याद दिलाई?
6. गोपियों ने स्वयं को अबला और भोली कहा है। आपकी दृष्टि से उनका ऐसा कहना कितना उपयुक्त है ?

पाठ: 2 तुलसीदास (राम-लक्ष्मण, परशुराम संवाद)

1. धनुष टूटने पर श्रीराम द्वारा परशुराम को जो उत्तर दिया गया उसके आधार पर राम की चारित्रिक विशेषताएँ लिखिए।
2. 'न त मारे जैहहिं सब राजा' -परशुराम के मुँह से ऐसा सुनकर लक्ष्मण की क्या प्रतिक्रिया रही?
3. परशुराम ने अपनी कौन-कौन-सी विशेषताओं द्वारा लक्ष्मण को डराने का प्रयास किया?
4. परशुराम ने अपने फरसे की क्या-क्या विशेषताएँ बताई ?
5. लक्ष्मण और श्रीराम के वचनों में मुख्य अंतर क्या था?
6. तुलसी के भाषा सौंदर्य पर दस पंक्तियाँ लिखिए।
7. 'राम-लक्ष्मण-परशुराम संवाद' पाठ में निहित संदेश स्पष्ट कीजिए।
8. लक्ष्मण ने वीर योद्धा की क्या-क्या विशेषताएँ बताई ?

व्याकरण

1. राकेश 'आठवीं' कक्षा में पढ़ता है।
(अ) विशेषण, संख्यावाचक, आवृत्तिसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
(ब) विशेषण, परिमाणवाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
(स) विशेषण, संख्यावाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
(द) विशेषण, निश्चयवाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य
2. बिल्ली गाड़ी के 'नीचे' बैठी हैं।
(अ) अव्यय, संबंधबोधक, 'गाड़ी से संबंध
(ब) अव्यय, योजक
(स) अव्यय, योजक, बिल्ली और गाड़ी को जोड़ रहा है
(द) अव्यय, क्रिया विशेषण
3. अभिषेक 'किसे' देख रहा है?
(अ) सर्वनाम, स्त्रीलिंग, बहुवचन, कर्म कारक

- (ब) सर्वनाम, पुल्लिंग, एकवचन, करण कारक
 (स) सर्वनाम, पुल्लिंग, प्रश्नवाचक, कर्ताकारक
 (द) सर्वनाम, प्रश्नवाचक, एकवचन, कर्म कारक
4. घोड़ा 'तेज' दौड़ रहा है।
 (अ) अव्यय, कालवाचक क्रियाविशेषण
 (ब) अव्यय, रीतिवाचक क्रियाविशेषण, 'दौड़ना' क्रिया की विशेषता
 (स) अव्यय, स्थानवाचक क्रियाविशेषण, 'दौड़ना' क्रिया की विशेषता
 (द) इनमें से कोई नहीं
5. गरीब 'मजदूर' बहुत परिश्रम कर रहा है।
 (अ) विशेषण, गुणवाचक, पुल्लिंग, एकवचन, विशेष्य-मजदूर
 (ब) संज्ञा, संख्यावाचक, पुल्लिंग, बहुवचन
 (स) विशेषण, , जातिवाचक, पुल्लिंग, एकवचन
 (द) इनमें से कोई नहीं
6. कल मेरे पापा दिल्ली 'गए'।
 (अ) क्रिया, सकर्मक, एकवचन, पुल्लिंग, भूतकाल, कर्मवाच्य
 (ब) क्रिया, सकर्मक, बहुवचन, स्त्रीलिंग, वर्तमानकाल, कर्तृवाच्य
 (स) क्रिया, अकर्मक, बहुवचन, पुल्लिंग, भविष्यत्काल, कर्तृवाच्य
 (द) क्रिया, अकर्मक, एकवचन, पुल्लिंग, भूतकाल, कर्तृवाच्य
7. 'दीपक' बाजार जा रहा है।
 (अ) संज्ञा, जातिवाचक, बहुवचन, पुल्लिंग, समंध कारक, 'जा रहा है' क्रिया का कर्ता
 (ब) संज्ञा, व्यक्तिवाचक, एकवचन, पुल्लिंग, कर्ता कारक, 'जा रहा है' क्रिया का कर्ता
 (स) संज्ञा, जातिवाचक, एकवचन, पुल्लिंग, कर्म कारक
 (द) इनमें से कोई नहीं।
8. वाह! कितना सुन्दर मोर है।
 (अ) अव्यय, विस्मयादिबोधक, शोक सूचक
 (ब) अव्यय, संबंध बोधक, शोक सूचक
 (स) क्रिया विशेषण, काल वाचक, मोर की विशेषता बता रहा
 (द) अव्यय, विस्मयादिबोधक, हर्ष सूचक
9. "एक दिन मैंने ऐसी पतंग उड़ाई, ऐसी ऊँची पतंग उड़ाई उड़ते – उड़ते वह देव लोक में पहुँच गयी।" इस पंक्ति में कौन सा अलंकार प्रयुक्त हुआ है।
10. "बूढ़े पीपल ने आगे बढ़कर जुहार की।" इस पंक्ति में प्रयुक्त अलंकार का नाम लिखिए।
11. "चित्रकूट जनु अचल अहेरी।" में कौन सा अलंकार है?

अनुच्छेद

- (क) महानगरीय जीवन : अभिशाप या वरदान • महानगरीय जीवन • अभिशाप क्यों • वरदान
 (ख) (ख) यदि मैं शिक्षा मंत्री होती/होता • वर्तमान शिक्षा नीति • बदलाव की आवश्यकता • नई नीति

(ग) प्राकृतिक आपदाएँ • कौन – कौन सी • बचाव • आपदा प्रबंधन प्रश्न

पत्र

1. चेत्रई निवासी मित्र श्रीधरन को ग्रीष्मावकाश में रानीखेत-नैनीताल की यात्रा के लिए आमंत्रित कीजिए।

(अथवा)

निकटस्थ डाकपाल को पत्र लिखकर सूचित कीजिए कि पहली जून से 30 जून तक आपकी डाक डाकघर में ही सँभाली जाए, क्योंकि उन दिनों आप घर पर नहीं होंगे।

ENGLISH

Reading Skills

1. Read the passage carefully.

World Conservation Day is celebrated internationally to increase awareness about the best practices needed to protect our natural resources. The Earth is supplied with a limited number of resources that we all rely upon, like water, air, soil, and trees. The World Nature Conservation Movement is a great opportunity to celebrate the progress we've made and determine to take action, wherever needed. It is time to remind ourselves that we need to give back to nature instead of just using resources without thinking about conservation. There is a need to replenish and recycle the resources we consume from nature.

Our forests, rivers, oceans, and soils provide us with the food we eat, the air we breathe, and the water we irrigate our crops with. We also rely on them for numerous other goods and services. We depend on them for our health, happiness and prosperity. We have a cycle of biodiversity that needs proper conservation.

The population explosion remains one of the major reasons why natural resources are getting depleted at a very fast rate. Technological advancement and luxurious lifestyles have led to several environmental problems like global warming, ozone layer depletion, river water pollution, and deforestation, which threaten the planet's future.

Humans, animals, marine creatures, and the environment, all need to be protected and conserved for the planet's future well-being. There are many examples of conservation. One is a programme to try to preserve wetlands, or a programme to try and save old buildings. Another example is an attempt to minimise the amount of electricity used by turning off lights when leaving a room, or an attempt to turn off the running tap to avoid wastage of water. There are lots of examples like these which need implementation.

Following these small steps in our daily lives, we can help to maintain the balance of nature, thereby saving humankind from the kinds of natural disasters we may face shortly.

Nature also has a profound impact on our minds and our behaviour, helping reduce anxiety, brooding, and stress and increasing our attention, capacity, creativity, and ability to connect with other people. So, there is a need to save nature if we want to save life as the two are interconnected and need each other. If we hurt or destroy the environment, surely, we will be ruined. We must create awareness among family members, and try and practise a sustainable lifestyle to protect and conserve nature.

Based on your understanding of the passage, answer the following questions. [10x1=10]

- (i) Complete the sentence by choosing the appropriate option.
There is an urgent need to conserve our natural resources because
- we are aimlessly using the natural resources and not replenishing them.
 - they will be replaced by man-made resources.
 - serious efforts are needed to cut down the consumption of these resources.
 - we must become alert before it is too late.
- (ii) In the opinion of the writer, which are the primary natural resources without which our life is not possible?
- (iii) In Paragraph – 1, the writer talks about ‘celebrating the progress’. Explain.
- (iv) The writer would not agree with the given statements based on Paragraph – 6, **EXCEPT**
- Stress can be relieved by working overtime.
 - Nature can affect man’s emotional well-being.
 - Lifestyle cannot be changed permanently.
 - Destruction of the environment is a temporary measure undertaken by man.
- (v) In the context of the given passage, what is the synonym of ‘replenish’ (Paragraph – 1)?
Choose the correct option.
- scarcity
 - restore
 - reconcile
 - minimize
- (vi) List two ways in which forests and rivers help mankind.
- (vii) How can the solutions suggested in Paragraph 4 be best described?
- unrealistic
 - short-term
 - practical
 - challenging
- (viii) Why is it fair to say that population explosion remains one of the major reasons why natural resources are getting depleted rapidly?
- (ix) Complete the given sentence with an appropriate reference concerning the following:
The writer quotes the example of family awareness to _____ (Paragraph – 6).
- (x) Select the most suitable title for the above passage
- Ways to Save the Environment
 - Save Nature, Save Life
 - Nature: A Pharmacy
 - Nature: A Food Factory

Section – B

Grammar and Creative Writing Skills

2. Answer to the given questions.

[10x1=10]

- Fill in the blank by using the correct option to complete the following:
We were _____ luggage, so we couldn’t run to catch the train.
 - weighed down
 - weighed up
 - weighed along
 - weighed in
- Read the conversation between Alok and Mohit and complete the sentence by reporting Mohit’s reply correctly.
Alok: Why did you get into a fight with Manu?
Mohit: Manu made some offensive allegations.
Alok enquired of Mohit why he had got into a fight with Manu. Mohit replied that _____.
- Identify the error and supply the correction for the following note in a passenger’s flight instruction manual:

Note: Passengers will not reach the airport late to avoid a fine equivalent to 5% of the basic fare.

Use the given format for your response.

Error	Correction

iv. Complete the given narrative, by filling in the blank with the correct option:

Riju _____ from fever since last Wednesday.

(a) suffered (b) will suffer (c) suffer (d) has been suffering

v. The doctor said, "Take rest."

Reported Speech:

(a) The doctor was advised me to take rest.

(b) The doctor advised me to take rest.

(c) The doctor said me to take rest.

(d) The doctor says me to take rest.

vi. Select the option that identifies the error and supplies the correction for the following traffic advisory:
Whoever drove a motor vehicle without a safety belt or carries passengers without seat belts will be fined.

Option Number	Error	Correction
a.	drove	drives
b.	or	nor
c.	without	within
d.	fine	celebrated

vii. Fill in the blank with the correct option to complete the note of appreciation by the Head of an organisation.

It is good to know that _____ registration forms were received this time for our event, as compared to the previous year.

(a) these

(b) most

(c) much

(d) more

viii. Rishi asked Ali the question given below. Report Rishi's question:

Could you give me some advice on how I could be a better school captain?

ix. Fill in the blank by using the correct form of the word in the bracket, for the given portion of a letter:

Subject: Request for Approval

Dear Sir

This is to respectfully submit that I _____ (seek) approval for organising a tree plantation drive to be undertaken by the club.

x. "Do you want some sweets?", asked my friend.

Reported Speech:

(a) My friend asked me if I want some more sweets.

(b) My friend asked me whether I wanted some more sweets.

(c) My friend asked me that I wanted some more sweets.

(d) My friend said to me if I wanted some more sweets.

xi. Select the correct option to fill in the blank for a given line, from a health magazine.

You _____ eat to live, not live to eat.

- (a) can
- (b) might
- (c) will
- (d) should

xii. Identify the error in the given sentence, from a school magazine report and supply the correction.

While much needs to be done to transform our education system to meet the needs of all types of students, it is equally important to teach our children the art of take stress in their strides.

Use the given format for your response.

Error	Correction
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- 3. Though the number of children who are educated is increasing, they have poor communication skills. This is a matter of great concern. Write a Letter in 120-150 words to the Editor of a national daily expressing your concerns on the matter and suggesting ways of improving the reading habits of children. You are Jayant/Jayanti.
- 4. You are Aditi/Arjun, a concerned citizen of your city. Draft a Letter to the Editor of a local newspaper addressing the issue of inadequate waste management and suggesting measures for a cleaner environment. (Word Limit: 100-120)

Creative Work

- 1. Create a portfolio file for the academic session 2024-2025.

SCIENCE

Chapter-Electricity

MCOs

- 1. Electrical resistivity of a given metallic wire depends upon
(a) its length (b) its thickness (c) its shape (d) nature of the material
- 2. What is the maximum resistance which can be made using five resistors each of $1/5 \Omega$?
(a) $1/5 \Omega$ (b) 10Ω (c) 5Ω (d) 1Ω
- 3. What is the minimum resistance which can be made using five resistors each of $1/5 \Omega$?
(a) $1/5 \Omega$ (b) $1/25 \Omega$ (c) $1/10 \Omega$ (d) 25Ω
- 4. A cylindrical conductor of length l and uniform area of crosssection A has resistance R . Another conductor of length $2l$ and resistance R of the same material has area of cross section
(a) $A/2$ (b) $3A/2$ (c) $2A$ (d) $3A$
- 5. In an electrical circuit two resistors of 2Ω and 4Ω respectively are connected in series to a $6 V$ battery. The heat dissipated by the 4Ω resistor in $5 s$ will be
(a) $5 J$ (b) $10 J$ (c) $20 J$ (d) $30 J$
- 6. An electric kettle consumes $1 kW$ of electric power when operated at $220 V$. A fuse wire of what rating must be used for it?
(a) $1 A$ (b) $2 A$ (c) $4 A$ (d) $5 A$

Assertion & Reason based question:

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

d) A is false but R is true.

1. Assertion (A): When the resistances are connected end-to-end consecutively, they are said to be in series.

Reason (R): In case the total resistance is to be increased, then the individual resistances are connected in series.

2. Assertion (A): Copper and aluminium are two metal which are most commonly used for current electricity.

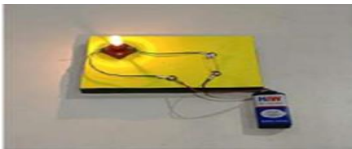
Reason (R): Conductors are those substances in which electric charge can flow freely.

3. Assertion (A): When a resistance wire is stretched so as to make its length double, its resistance becomes 4 times of its original value.

Reason (R): Resistance of a conductor is directly proportional to its length and inversely proportional to its cross section area.

Case Study Based Question:

Read How do we express electric current? Electric current is defined by the amount of charge flowing through a particular area in unit time. In other words, it is the rate of flow of electric charges. In circuits using metallic wires, electrons constitute the flow of charges. However, electrons were not known at the time when the phenomenon of electricity was first observed. So, electric current was considered to be the flow of positive charges and the direction of flow of positive charges was taken to be the direction of electric current. Conventionally, in an electric circuit, the direction of electric current is taken as opposite to the direction of the flow of electrons, which are negative charges.



(i) If a net charge Q , flows across any cross-section of a conductor in time t , then the current I , through the cross-section is given by which formula?

(ii) What is the SI unit of electric charge? It is equivalent to how many numbers of electrons?

OR

The electric current is expressed in which unit? Define the unit used to measure electric current.

Answer the following question:

1. What is the commercial unit of electrical energy? Represent it in terms of joules.
2. A current of 1 ampere flows in a series circuit containing an electric lamp and a conductor of 5Ω when connected to a 10 V battery. Calculate the resistance of the electric lamp.
3. Now if a resistance of 10Ω is connected in parallel with this series combination, what change (if any) in current flowing through 5Ω conductor and potential difference across the lamp will take place? Give a reason.
4. State Ohm's law. How can it be verified experimentally? Does it hold good under all conditions? Comment.
5. What is electrical resistivity of a material? What is its unit? Describe an experiment to study the factors on which the resistance of conducting wire depends.
6. How will you infer with the help of an experiment that the same current flows through every part of the circuit containing three resistances in series connected to a battery?
7. How will you conclude that the same potential difference (voltage) exists across three resistors connected in a parallel arrangement to a battery?
8. What is Joule's heating effect? How can it be demonstrated experimentally? List its four applications in daily life.

Ch- Our Environment

Q1. The decomposers in an ecosystem:

1. Convert inorganic material to simple forms
2. Convert organic materials to inorganic forms
3. Convert inorganic materials into organic compounds
4. Do not breakdown organic compounds

Q2. Organisms of a higher trophic level which feed on several types of organisms belonging to a number of lower trophic levels constitute the:

1. Ecosystem
2. Food web
3. Ecological pyramid
4. Food chain

Q3. The excessive exposure of humans to ultraviolet rays results in:

1. Damage of immune system
 2. Damage to lungs
 3. Skin cancer
 4. Peptic ulcers
- (i) and (ii)
 - (ii) and (iv)
 - (i) and (iii)
 - (iii) and (iv)

Q4. Which of the following is the best method to dispose of biological wastes from hospitals?

1. Lanfill
2. Recycling
3. Incineration
4. Composting

Answer the following questions.

1. Explain the difference between a food web and a food chain?
2. Define biological magnification.
3. Why is the ozone layer important for organisms?
4. What do you understand by biodegradable substances and non-biodegradable substances?
5. Why are biodegradable substances important for the environment?
6. How is the increase in demand for energy affecting our environment adversely?
7. Why are bacteria and fungi called decomposers? List any two advantages of decomposers to the environment.
8. How is ozone formed in the upper atmosphere? Why is the damage of ozone layer a cause of concern to us? State a cause of this damage.
9. Construct an aquatic food chain showing four trophic levels.
10. Explain the phenomenon of “biological magnification” How does it affect organisms belonging to different trophic levels particularly the tertiary consumers?
11. What happens when higher energy ultraviolet radiations act on the oxygen at the higher level of the atmosphere?
12. In the given food chain if the amount of energy at the fourth trophic level is 4 kJ, what will be the energy available at the producer level? Grass → Grasshopper → Frog → Snake a. 4 kJ b. 40 kJ c. 400 kJ d. 4000 kJ
13. Which of the following chemicals causes depletion of the ozone layer? a. Carbon tetrachloride b. Methane c. Chloro fluorocarbon d. Carbon monoxide
14. In the following food chain, plants provide 500J of energy to rats. How much energy will be available to hawks from snakes? Plants ———> Rats ———> Snakes ———> Hawks
15. Why are bacteria and fungi called decomposers? List any two advantages of decomposers to the environment.
16. Give two ways by which biodegradable substance can affect our environment.
17. Give two ways by which non-biodegradable substance can affect our environment.

18. How do you think we can contribute in controlling the ozone depletion?
19. Name the main source of energy in self- sustaining ecosystem?
20. Which of the following belong to the same trophic level: spider, crop, hawk, snail and lizard?
21. Define (a) CFC (b) Bio-magnification (c) Ecosystem
22. Give some ways that we can practice to protect our environment.
23. Give reasons:
24. (a) Use of Kulhads was not environment friendly idea.
(b) Disposable paper cup are better than plastic cups.
25. Vegetarian food habits help us in getting more energy. Justify

Assertion Reason Based Questions:

Assertion: Polythene bags and plastic containers are nonbiodegradable substances.

Reason: They can be broken down by microorganisms in natural simple harmless substances.

Assertion: The concentration of harmful chemicals is lowest in human beings.

Reason: Man is at the apex of the food chain.

Assertion: The aquarium needs regular cleaning.

There are no Microbes to clean the water in the aquarium, therefore, it needs to be regularly cleaned.

Case-based questions.

1. Waste management is essential in today's society due to an increase in population, the generation of waste is getting doubled day by day. Moreover, increasing waste affects the lives of many people waste management is the managing of waste by disposal and recycling of it. more waste management needs proper techniques keeping in mind the environmental situations 4 instances there are various methods and techniques by which the waste is disposed of you must have come across the 5Rs to save the environment: refuse reduce reuse purpose and recycle.

1. What are 5R's?
2. Why waste management is important?
3. Why it is necessary to separate the wastes?
4. What do you understand by waste management

Creative work

Roll no. 1-7: Make a working model of Human Respiratory system.

Roll no. 8-14: Make a 3D model showing ozone layer depletion.

Roll no. 15-21: Make a 3D model of Heart showing pumping of blood.

Roll no. 22-28: Make a model of food chain and food web.

Physics:

Q1. As the demand for energy has increased, so has the number of alternatives for its production. One such alternative is a biogas plant.(Roll No: 1-20)

What to do :

1. Explore and find out the biogas plants located in different parts of India.
2. Research out the various raw materials used, and the components used in setting up a Biogas Plant.
3. Study the cost of setting up the plant.
4. List down the benefits of using biogas plants. (Prepare 400- 500 words report on the topic)

Where to do: A4 size sheets

Parameters: 1. Accuracy 2. Relevance 3. Presentation

Q2. Do practice manual questions of chapter- Electricity (3 marks and 5 marks) and sample periodic paper 1 in Science notebook. (Roll no: 21-40)

Chemistry:

1. Show that Aluminum is an active metal by experimenting on it. (Roll no: 1-20)

What to do:

- a) watch video DEMIC for reference.
- b) Perform two activities based on the video with aluminum foil and click photographs while doing so.
- c) Note down the observations.

Where to do: On a 4 size sheet write your views, paste photographs showcasing the usage of Aluminum foil and also write about its role in creating pollution in the environment.

2. Do practice manual questions of chapter- Chemical Reactions and Equations (3 marks and 5 marks) and sample periodic paper 1 in Science notebook.(Roll no:21-40)

MATHEMATICS

Chapter : Statistics

1. Find the value of f_1 from the following data, if its Mode is 65:

Class	Frequency
0-20	6
20-40	8
40-60	f_1
60-80	12
80-100	6
100-120	5

2. Weekly income of 600 families is given below.

Income in Rs/-	Frequency
0-1000	250
1000-2000	190
2000-3000	100
3000-4000	40
4000-5000	15
5000-6000	5

Find Mean, Median and Mode

3. Convert the following frequency distribution to a more than type cumulative frequency distribution

Class	Frequency
0-20	5
20-40	9
40-60	12
60-80	8
80-100	6

4. The Median of the distribution given below is 14.4. Find the values of x and y, if the sum of frequency is 20.

Class	Frequency
-------	-----------

0-6	4
6-12	x
12-18	5
18-24	y
24-30	1

5. Find 'p' if the Mean of the given data is 15.45.

Class	Frequency
0-6	6
6-12	8
12-18	p
18-24	9
24-30	7

6. Calculate Mode of the following data:

Class	Frequency
0-20	8
20-40	10
40-60	12
60-80	6
80-100	3

7. Find the Mean, Median and Mode of the following distribution:

Class	Frequency
0-10	4
10-20	4
20-30	7
30-40	10
40-50	12
50-60	8
60-70	5

8. Find the Mean, Median and Mode of the following distribution:

Class	Frequency
100-120	12
120-140	14
140-160	8
160-180	6
180-200	10

Chapter : Pair of Linear Equations

1. For what value of k will the pair of equations have no solution?

$$3x + y = 1$$

$$(2k-1)x + (k-1)y = 2k + 1$$

2. Solve x and y :

$$\frac{5}{x-1} + \frac{1}{y-2} = 2; \quad \frac{6}{x-1} + \frac{3}{y-2} = 1$$

3. A man travels 600 km partly by train and partly by car. It takes 8 hrs and 40 minutes if he travels 320 km by train and the rest by car. It would take 30 minutes more if he travels 200 km by train and the rest by car. Find the speed of the train and the car separately.
4. The sum of the digits of a two digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. Find the number.
5. Solve for x and y :

$$4x + \frac{y}{3} = \frac{8}{3}; \quad \frac{x}{2} + \frac{3y}{4} = -\frac{5}{2}$$

6. Solve the following pair of equations

$$\frac{10}{x+y} + \frac{2}{x-y} = 4; \quad \frac{15}{x+y} - \frac{5}{x-y} = -2$$

7. Find the values of a and b for which the following pair of linear equations has infinitely many solutions:

$$2x + 3y = 7; \quad (a + b)x + (2a - b)y = 21$$

8. The sum of the numerator and the denominator of a fraction is 4 more than twice the numerator. If 3 is added to each of the numerator and the denominator, their ratio becomes 2:3. Find the fraction.
9. A number consists of two digits. When the number is divided by the sum of its digits, the quotient is 7. If 27 is subtracted from the number and the digits interchange their places, find the number.

Chapter : Quadratic Equations

1. The difference of squares of two natural numbers is 45. The square of the smaller number is four times the larger number. Find the numbers.

2. Find the roots of the following equations:

$$\frac{1}{x+4} - \frac{1}{x-7} = \frac{11}{30}$$

3. A person on tour has ₹4200 for his expenses. If he extends his tour for 3 days, he has to cut down his daily expenses by ₹70. Find the duration of the tour.
4. The sum of the areas of the two squares is 640 m^2 . If the difference in their perimeters be 64m, find the sides of the two squares.
5. Three consecutive positive integers are such that the sum of the square of the first and the product of the other two is 46. Find the integers.
6. A girl is twice as old as her sister. four years hence, the product of their ages will be 160. Find their present ages.
7. In a flight of 2800 km, an aircraft was slowed down due to bad weather. Its average speed is reduced by 100 km/h and time increased by 30 minutes. Find the original duration of the flight.

CREATIVE HOME WORK

1. GROUP ACTIVITY:

- ❖ Make a mathematical table calendar showcasing the life history or the contributions of Mathematicians of the 20 countries participating in G-20 summit 2023.

GUIDELINES:

- The class will be divided into groups comprising 7 members each on the basis of roll numbers i.e., 1-7, 8- 14, etc. (4 groups from class). Each child has to select two countries from 20 participating countries.
 - Each group will have a leader who will coordinate with the group members, so that the work is completed and submitted on time.
Each group will collect and present their work in one single Spiral File.
2. Prepare MCQ questions and answer from chapter 1 to 4. Each chapter 5 questions. (all students)

SOCIAL SCIENCE

History (Chapter - The Rise of Nationalism in Europe)

Question Answer-

1. What do you understand by the term Nation State?
2. What is meant by the term 'Absolutism'?
3. Explain the measures and practices introduced by the French revolutionaries to create a sense of collective identity among the French people.
4. 'Language too played an important role in developing nationalist sentiments'. Explain.
5. Describe any three economic hardships faced by Europe in the 1830s.
6. Why was the period of 1848 considered as a phase of the revolution of the liberals in Europe? Explain.
7. What was the importance of the Act of Union 1707?

Assertion and Reason-

Direction- In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- A. Both Assertion (A) and Reason (R) are true and the reason is the correct explanation of Assertion.
 - B. Both Assertion (A) and Reason (R) are true but reason is not the correct explanation of Assertion.
 - C. Assertion (A) is true but Reason (R) is false.
 - D. Assertion (A) is false but Reason (R) is true
8. **Assertion-** The French Revolution was an influential event that marked the age of revolutions in Europe.
Reason- The French Revolution transferred the sovereignty from the people to the monarch.
9. **Assertion -** Mazzini's relentless opposition to monarchy and his vision of democratic republics frightened the conservative.
Reason- Metternich described Mazzini's as 'the most dangerous enemy of social order'.

10. **Read the given extract and answer the following questions:**

Secret societies sprang up in many European states to train revolutionaries and spread their ideas. To be revolutionary at this time meant a commitment to oppose monarchical forms that had been established after the Vienna Congress, and to fight for liberty and freedom. Most of these revolutionaries also saw the creation of nation-states as a necessary part of this struggle for freedom. One such individual was the Italian revolutionary Giuseppe Mazzini. He subsequently founded two more underground societies, first, Young Italy in Marseilles, and then, Young Europe in Berne, whose members were like-minded young men from Poland, France, Italy and the German states. Mazzini believed that God had intended nations to be the natural units of mankind. So, Italy could not continue to be a patchwork of small states and kingdoms. It had to be forged into single unified republic within a wider alliance of nations. This unification alone could be the basis of Italian liberty. Following his model, secret societies were set up in Germany, France, Switzerland and Poland. Mazzini's relentless opposition to monarchy and his vision of democratic republics frightened the conservatives. Metternich described him as 'the most dangerous enemy of our social order'.

- A. Why did secret societies come up in Europe?
- B. Who was Giuseppe Mazzini?
- C. Name the two organizations founded by Giuseppe Mazzini.
- D. How was Giuseppe Mazzini involved in the unification of Italy?

Political Science (Chapter- Power Sharing)

Assertion and Reason-

Direction- In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- A. Both Assertion (A) and Reason (R) are true and the reason is the correct explanation of Assertion.
 - B. Both Assertion (A) and Reason (R) are true but reason is not the correct explanation of Assertion.
 - C. Assertion (A) is true but Reason (R) is false.
 - D. Assertion (A) is false but Reason (R) is true
1. **Assertion** - Power can be shared among governments at different levels.
Reason - Power may also be shared among different social groups.
 2. **Assertion** - Brussels has a separate government in which both the communities have equal representation.
Reason - The French speaking people accepted equal representation in Brussels.
 3. **Assertion** - The distrust between Sinhala and Tamil community turned into white spread conflict in Sri Lanka.
Reason - 1956 Act recognised Sinhala as the only official language

Question Answer-

4. How did the feeling of alienation develop among the Sri Lankan Tamils?
5. Explain any three majoritarian measures adopted by the Sri Lankan Government to establish Sinhala supremacy.
6. What is Civil War?
7. Compare the different ways in which the Belgians and the Sri Lankans have dealt with the problem of cultural diversity.
8. Why is Power Sharing desirable?
9. **Read the following source and answer the following questions:**

The Belgian leaders took a different path. They recognised the existence of regional differences and The Belgian leaders. Between 1970 and 1993, they amended their constitution four times so as to work out an arrangement that would enable everyone to live together within the same country. The arrangement they worked out is different from any other country and is very innovative. Here are some of the elements of the Belgian model. Constitution prescribes that the number of Dutch and French-speaking ministers shall be equal in the central government. Some special laws require the support of the majority of members from each linguistic group. Thus, no single community can make decisions unilaterally. Many powers of the central government have been given to the state governments of the two regions of the country. The state governments are not subordinate to the central government.

Brussels has a separate government in which both communities have equal representation. The French speaking people accepted equal representation in Brussels because the Dutch-speaking community has accepted equal representation in the central government. Apart from the central and the state government, there is a third kind of government. This 'community government' is elected by people belonging to one language community - Dutch, French and German speaking - No matter where they live.

This government has the power regarding cultural, educational and Language-related issues. You might find the Belgian model very complicated. It indeed is very complicated, even for people living in Belgium.

But these arrangements have worked well so far. They helped to avoid civic strife between the two major communities and a possible division of the country on linguistic lines. When many countries of Europe came together to form the European Union, Brussels was chosen as its headquarters.

- A. Which is the third kind of governance in Belgium?
- B. Who elects the third kind of government?
- C. Why is the Belgium model unique?

Geography (Chapter - Resources and Development)

Question Answer-

1. "In India, some resources are rich in certain types of resources but deficient in some other resources". Do you agree with statement? Support your answer with any three examples.
2. Why is it essential to have resource planning? Explain any three reasons.
3. Suggest ways to conserve energy resources in India.
4. Suggest ways to improve the usage of solar energy.
5. Suggest and explain any three ways to protect land from degradation in various states of India.
6. Distinguish between red soil and laterite soil stating any three points of distinction.
7. Why is soil considered as a resource? Explain with five arguments.

Assertion and Reason-

Direction- In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

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 - B. Both Assertion (A) and Reason (R) are true but reason is not the correct explanation of Assertion.
 - C. Assertion (A) is true but Reason (R) is false.
 - D. Assertion (A) is false but Reason (R) is true
8. **Assertion** - Planning is the widely accepted strategy for judicious use of resources.
Reason - It is important in a country like India, which has enormous diversity in the availability of resources.
 9. **Assertion** - Proper discharge and disposal of industrial waste can reduce land degradation in sub urban areas.
Reason - In the state of Punjab, Haryana, Western Uttar Pradesh, over-irrigation is responsible for land degradation.
 10. **Assertion** - Land is a natural resource of utmost importance.
Reason - It supports natural vegetation, wildlife, human life, economic activities, transport and communication systems.

11. Read the following source and answer the following questions:

We have shared our land with the past generations and will have to do so with future generations too. Ninety-five percent of our basic needs for food, shelter and clothing are obtained from the land. Human activities have not only brought about the degradation of land, but have also aggravated the pace of natural forces to cause damage to the land. Some human activities such as deforestation, overgrazing, mining and quarrying too have contributed significantly to land degradation. Mining sites are abandoned after excavation work is complete leaving deep scars and traces of overburdening. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha deforestation due to mining has caused severe land degradation. In states like Gujarat, Rajasthan, Madhya Pradesh and Maharashtra, overgrazing is one of the main reason for land degradation. In the states of Punjab, Haryana, and Western Uttar Pradesh, over-irrigation is responsible for land degradation due to water logging leading to an increase in salinity and alkalinity in the soil. The mineral processing like the grinding of limestone for the cement industry and calcite and soapstone for the ceramic industry generate a huge quantity of dust in the atmosphere. It retards the process of infiltration of water into the soil after it settles down on the land. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

- A. With whom do we share our land?
- B. Name two Indian states which are deforested due to mining and overgrazing activities which have contributed to the land degradation as well.
- C. Name two activities that lead to land degradation.

Economics (Chapter – Development)

Question Answer-

1. "Average income is useful for comparison but it may hide disparities." Support the statement with suitable arguments.
2. Explain the factors on which the quality of life depends.

3. How is the criteria used by the UNDP different from the World Bank for measuring the development of a country? Explain.
4. "For development, people look at a mix of goals". Support the statement with three suitable examples.
5. Explain reasons why the state of Haryana with a very high per capita income has a very low literacy rate.
6. What is development? Why do different people have different developmental goals? Explain with four examples.
7. Suggest any three ways to maintain body mass index (BMI).
8. 'The issue of sustainability is important for development.' Examine the statement.
9. Suggest any three ways to improve public facilities in India.

Assertion and Reason

Direction- In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- A. Both Assertion (A) and Reason (R) are true and the reason is the correct explanation of Assertion.
 - B. Both Assertion (A) and Reason (R) are true but reason is not the correct explanation of Assertion.
 - C. Assertion (A) is true but Reason (R) is false.
 - D. Assertion (A) is false but Reason (R) is true
10. **Assertion** - Different people have different development goals.
Reason - People want freedom, equality, security and respect.
 11. **Assertion** - Normally, your money cannot buy you a pollution free environment or ensure you that you get unaltered medicine.
Reason - money may also not be able to protect you from infectious diseases, unless the hole of your community takes preventive steps.
 12. **Assertion** - Money is the sole parameter to measure development.
Reason - Money is an important parameter of development.

ARTIFICIAL INTELLIGENCE

Chapter 1: Intoduction to AI-Foundational concepts

MCQ

1. Which of the following is the type of data used by NLP applications?
a. Numerical data. b. Graphical data. c. Images d. Text and speech.
2. Which of the following are considered as domains of AI?
a. Data science. b. Functions. c. Algorithms. d. NLP.
3. Data includes _____
a. Facts and graphs. b. Numbers and information.
c. Observation and measurement. d. All of the above.
4. Self driving car is an example of _____
a. NLU b. NLP c. NLG. d. CV.
5. _____ is analogous to human brain and its functionality.
a. Neural network. b. Autonomous system. c. Algorithm. d. All of the above.
6. _____ Is a subset of. Machine learning.
a. Artificial intelligence. b. Deep learning. c. Inner learning. d. Outer learning.
7. _____ is a personal digital assistant.
a. Alexa. b. Siri. c. Google Assistant. d. All of the above.

Subjective type

1. What do you understand by linguistic intelligence?
2. Define AI?
3. How does machine become artificially intelligent?
4. Mention four examples of machines which are smart but not AI?
5. How does learning and adapting help AI in improvising itself?
6. Explain how AI works in the following areas
 - i. Google Search Engine

ii. Voice Assistant

iii. E-commerce Website

7. How has AI changed the gaming world?
8. Why is training with data important in AI devices?
9. How can AI be integrated with non AI technologies? Explain with examples.
10. What do you understand by Machine Learning?
11. What do you understand by Deep Learning?
12. What are the three domains of AI?
13. Name any two examples of Computer vision?
14. Name any two examples of Data Science?
15. Name any two examples of NLP?
16. What do you understand by data privacy?
17. Is the data collected from various applications ethical? Justify your answers.
18. What do you understand by AI Bias. Explain with example?

Creative work

Find a problem statement around you related to an SDG goal. Collect data from through primary source or secondary source and generate insights through visualizations.(Group project as discussed in classroom)