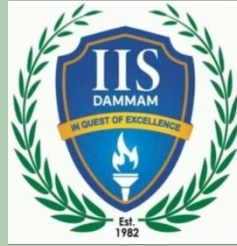


INTERNATIONAL INDIAN SCHOOL DAMMAM



STUDY MATERIAL

CLASS VI



“ Genius is seldom recognized for what it is: a great capacity for hard work.” - Henry Ford

Organized by Girls Middle Section

PREFACE

In the eloquent words of Arthur Schopenhauer, "Talent hits a target no one else can hit, genius hits a target no one else can see." These profound words encapsulate the essence of our annual Talent Search Exam (TSE) at the International Indian School Dammam (IISD). Each year, this event serves as a beacon, illuminating the path for middle school students to discover and showcase their exceptional abilities.

The primary objective of the Talent Search Exam is to unearth and celebrate the preeminence among our students. It is a platform that not only recognizes raw intelligence but also nurtures and hones academic skills, encouraging students to set ambitious goals for themselves. The TSE is more than just an examination; it is an inspiring journey that propels young minds toward intellectual excellence.

Our vision for the TSE goes beyond conventional assessments. We aspire to cultivate creative thinking, fortify reasoning power, sharpen mathematical abilities, and foster analytical thinking among our students. The world is dynamic, and to thrive in such an environment, it is imperative for our students to stay abreast of current events globally. The TSE equips them with this awareness, instilling in them the courage and confidence to navigate the path to excellence.

This Talent Search Study Material is crafted as a comprehensive manual, meticulously designed to be a guiding light for our young minds. It encompasses the detailed syllabus of all five subject areas, providing students with an invaluable resource to prepare for the challenges that lie ahead. The material is not just a compilation of facts and figures; it is a roadmap that empowers students to face the competition fearlessly, armed with knowledge and understanding.

As we embark on this intellectual odyssey with our students, we are confident that the TSE will serve as a catalyst for their growth and development. We extend our heartfelt gratitude to the educators, parents, and students whose collective efforts make this endeavor possible. May this journey be one of discovery, learning, and the realization of untapped potential.

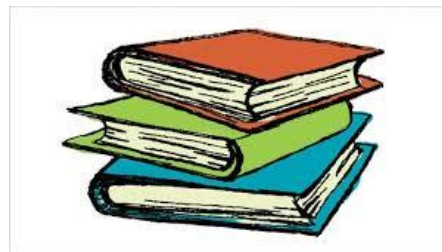
Let the pursuit of excellence begin!

**Shema Anas
Headmistress
Girl's Middle Section (Chief Organizer)**

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SYLLABUS @ A GLANCE

1. 40% of the questions will be from the given portions including study material.
2. 60% of the question will be general related to the subject.



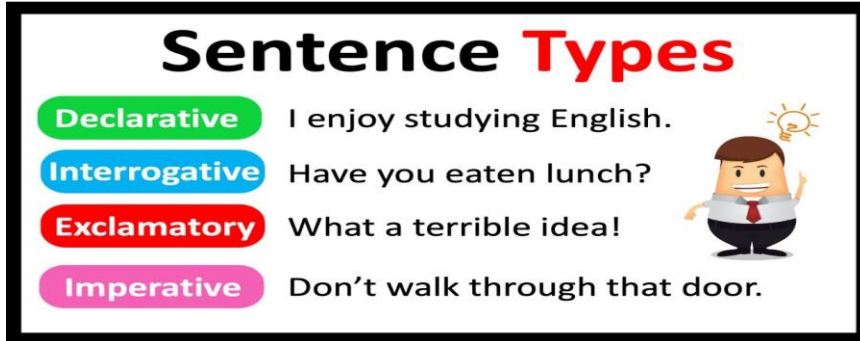
CLASS 6, TALENT SEARCH EXAMINATION PORTION 2023-24

SUBJECT	WEIGHTAGE	CLASS VI
ENGLISH	15	Kinds of Sentences, Order of Adjectives, Subject –Verb Agreement, Finite and Non- Finite Verbs, Active and Passive Voice, Idioms/ Expressions and Vocabulary (from all the lessons taught till December) and from the uploaded study material.
MATHS	25	L-6 Integers, L-8 Decimals, L-10 Mensuration, L-11 Algebra, Mental Math, Puzzles, Logical Reasoning, Patterns, Odd one out, Geometrical concepts, Math related GK and from the uploaded study material.
SCIENCE & TECH	25	L-4 Sorting of materials into groups, L-9 Living Organisms and their surroundings, L-10 Motion and Distance, L-12 Electricity and Circuits, L-13 Fun with Magnets, General questions from Science & Technology and from the uploaded study material.
SOCIAL SCIENCE	15	History L-7 From a Kingdom to an Empire. Geography L-4 Maps, L-5 Major Domains of the earth. Civics L-4 Panchayati Raj, L-5 Rural Administration and from the uploaded study material.
ENV/GK/ CUR. AFFAIRS	20	Awards, Events (Sports), Natural Disasters, People in News, Books and Authors, Nobel Prize, Inventions and Discoveries related to Computer to Technology, Current Affairs (Who’s Who) and from the uploaded study material.

1. KINDS OF SENTENCES

Sentence - A sentence is a group of words that makes complete sense. It starts with a capital letter. It contains a verb and a subject.

On the basis of their meanings, sentences can be broadly classified into four types:



i. Declarative/ Assertive Sentence

A sentence that states or declares something is a declarative sentence. It can be both positive and negative. Declarative sentences end with a full stop (.).

Positive sentences affirm a proposition.

Eg: The school reopens today.

He goes to school.

My favorite subject is English.

Negative sentences negate a proposition.

Eg: He cannot dance.

She is not well.

I don't like playing with dolls.

ii. Interrogative Sentence

A sentence that asks a question is called an interrogative sentence. An interrogative sentence can be a **wh** question and begins with words like what, when, why, who, where, which, whom, whose or how. It can also be a question which can be answered with **yes** or **no**.

An interrogative sentence ends with a question mark (?).

Eg: Which is the shortest route to the Central Railway Station?

Where do you live?

Did you complete your work?

iii. Exclamatory Sentences

Sentences that express strong feelings or emotions are called exclamatory sentences. They end with an exclamation mark (!). It usually begins with 'what' or 'how'.

Eg: What a beautiful sunset!

How careless you are!

How rudely she speaks!

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iv. Imperative Sentence

Sentences that express a command, request, order, advice, suggestion or warning are called imperative sentences. An imperative sentence ends with a full stop (.).

Eg: Please help me clean the table. (request)

Bring the box here. (command)

Never lose your patience. (advice)

Watch out, the floor is wet. (warning)

2. ORDER OF ADJECTIVES

In a sentence sometimes we use more than one adjective to describe a noun. When a number of adjectives are used together, the order depends on the function of the adjective.

Remember- the order:

n= number (any number, few, many, several, dozen etc.)

o= opinion/quality (beautiful, difficult, easy, sweet, sour,soft,hard,rough etc.)

s = size (tiny, big, small, gigantic, enormous etc.)

a = age (new, old young, ancient, any number of time – period etc.)

s = shape (oval, flat, round, circular, square etc.)

c = color (pink, blue, orange, black, white, yellow etc.)

o = origin (Indian, Chinese, American, Western etc.)

m = material (wood, plastic, paper, iron, rubber etc.)

p = purpose (sleeping, writing, reading, cooking etc.)

Examples:

i. My neighbor has a beautiful big white bulldog. [opinion-- size – color]

ii. I love that beautiful old big black car. [opinion---age---size--color]



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- iii. A disgusting pink plastic ornament is on the floor. [opinion – color – material]
- iv. An amazing new American movie is launched. [opinion – age – origin]
- v. A big blue Chinese sewing machine was on the table. [size – color—origin--purpose]
- vi. I bought three brown leather jackets. [number—color—material]

3. SUBJECT- VERB AGREEMENT

It is the grammatical rule, where the verb in a sentence must agree with the subject in number and person.

The General Rule is-

If the subject is singular then the verb is singular.

If the subject is plural then the verb is plural.

If the subject is a pronoun, the verb must agree with the person of the pronoun.

Verbs:

SINGULAR-----is/was/has/does/verb + s

PLURAL-----are/were/have/do/verb – s

SUBJECT + VERB + OBJECT
(noun/pronoun) (action word) (further describes noun/pronoun)

What is Subject-Verb Agreement?

- Subject-verb agreement means your subject and verb must match, or agree, in number.
 - If you have a singular subject, then you must use a singular verb.
 - The dog barks at every sound he hears.
 - If you have a plural subject, then you must use a plural verb.
 - The dogs bark at every sound they hear.



NOTE: The first person singular pronoun ‘I’ takes plural verb in all cases, except with the verb “be”.

Eg: I **am** not fond of junk food.

I **have** a dog named Bruno.

The first person Plural pronoun ‘we’ takes a plural verb in all the tenses.

Eg: We **are** leaving for Jaipur tomorrow.

We **practice** music for two hours every day.

The second person singular as well as plural pronoun ‘you’ takes a plural verb in all the tenses.

Eg: You **are** a handsome boy.

Are you all going to watch the match tomorrow?

SINGULAR SUBJECTS-

i. [he/she/it/single noun]

The cup **is** on the table.

The table **has** four legs.

He always **completes** his work on time.

It **is** a beautiful painting.

Maya’s sister **lives** in Canada

ii. [news, single mathematical number, name of a disease, fractions, distance, subject]

Good news **is** always welcome.

Today’s news **has** many new segments.

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Twenty-eight **was** my roll number in class. Forty thousand **is** my salary in this company.
Diabetes **is** a serious and chronic disease. Corona **has** taken many lives around the world.
Two-thirds of the lemonade **has** been finished. Half of the class **is** going to computer lab now.
Fifty miles **is** considered a long journey on a motorbike.
English **has** left a great impact on many.

iii. **[subject preceded by words like each/ no one/ every/ either/ neither/everyone/anyone/someone]**

Everyone **laughs** at her lame jokes. No one **is** coming for the movie.
Neither of the questions **is** easy. Anyone **is** going to the canteen?
Someone **was** talking in the exam room. Someone **needs** permission to enter.

iv. **[two subjects express one idea]**

Toast and Jam **is** very common breakfast.
Success and praise **was** her reward.
Rice and curry **is** my favorite dish.

v. **[this/that]**

This **is** my new school. That **is** his car.
That **was** once a beautiful palace. This **was** an almira which he turned into bookshelves.

PLURAL SUBJECTS

i. **[we/you/plural subjects]**

We **are** neighbors since fifteen years. You **are** my good friend.
My notebooks **are** missing from my bag. They **like** to play football.
The students **have** planned for a trip.

ii. **[two singular nouns or pronouns joined by a conjunction ‘and’]**

Pinki and Riya **go** to the park together.
Me and my mother **are** watching an old movie.
Ali and Raj **were** rewarded for their hard work.
My father and my brother **play** badminton every day.

iii. **[subject preceded by words such as- few/many/several/both/all/some]**

Several **have** joined the campaign.
Few of my friends **have** gone to Jordan.
Many students **learn** art and craft in our school.
Both Sam and Neerav **are** my colleagues.
Many girls **have** to complete their notes.
All of you are invited to the party.

NOTE: [Plural nouns or pronouns connected by words such as- or/nor/neither-nor/either-or/not only-but also----the Verb agree to the subject closest to it]

Neither my friends nor my brother **is** willing to help me.
Either she or her sisters **have** told the parents.
Not only her parents but also her class teacher **has** warned her.
Either your friends or Manoj **gets** the ticket to the show.

4. VERBS: FINITE AND NON- FINITE/ INFINITE

On the basis of whether a verb in a sentence shows any relationship with the subject, there are two categories of verbs.

Finite Verb- They agree with the subject of the sentence in terms of person and number, and also show tense.

Eg: She **calls** her brother by strange names.

We **called** the teacher to show her the decoration.

The verbs ‘calls’ and ‘called’ both show tense, and their form is influenced by the subjects ‘she’ and ‘we’ respectively. These verbs are *finite*.

Non- Finite or Infinite Verb- They are not governed by the rules of subject-verb agreement.

Eg: I think **sleeping** is a waste of time.

We saw him **speak** to the watchman.

The verbs ‘sleeping’ and ‘speak’ both are not affected by the number and person of the subject, and do not show tense. These verbs are *non-finite or infinite*

Finite Verbs	Infinite Verbs
Finite verbs mean the verbs which can change the form in accordance with the subject.	Infinite verbs is the verbs which do not change their form in accordance with the subjects.
<ul style="list-style-type: none">• I am a teacher. He is a teacher. They are teachers.• I play football. She plays football. We play football.	<ul style="list-style-type: none">• I am teaching students. He is teaching students. They are teaching students.• I am playing football. She is playing football. We are playing football.

Examples:

- i. Mona likes to play Kho-Kho.
likes- finite verb, to play- non-finite verb
- ii. We were going to the market.
were- finite, going- non-finite
- iii. Abdul enjoys watching movies.
enjoys- finite, watching- non-finite
- iv. I was painting a scenery.
was- finite, painting- non-finite
liked- finite, cooking- non-finite
- vi. Ravi went to drop his brother to school.
went- finite, to drop- non-finite
- vii. The waves kept hitting the rocks.
kept – finite, hitting non-finite

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viii. Suman is listening to her favorite songs.

Is- finite, listening- non-finite

5. ACTIVE AND PASSIVE VOICE

The voice of a verb is the form of the verb that indicates whether the subject of the sentence is performing the action or the subject is receiving the action. Verbs can be classified into two types of voices— **Active voice** and **Passive voice**

Active voice	Passive voice
<p>Tells us what a person or thing does. The subject performs the action (verb) on the object.</p> <p>Subject + verb + object</p> <p>Example:</p> <ul style="list-style-type: none"> Anna painted the house. The teacher always answers the students' questions. Ali posted the video online. 	<p>Tells us what is done to someone or something. The subject is being acted upon.</p> <p>Object + verb + subject</p> <p>Example:</p> <ul style="list-style-type: none"> The house was painted by Anna. The students' questions are answered by the teacher. The video was posted online by Ali.

Subject- doer of the action, object- receiver of the action

While changing a sentence from active to passive, remember:-

- The object of the verb in the active voice becomes the subject in the passive voice.
- The subject of the active voice is expressed as: by +agent in the passive voice.
- The form of the verb is changed according to the tense.

Example

AV- Naman kicked the ball.

PV- The ball was kicked by Naman.

Active and Passive Voice Rules For All Tenses:

TENSE	ACTIVE VOICE	PASSIVE VOICE
Simple Present Tense	Subject + V1+ object	Object + am/is/are + V3 + by + Subject
Simple Past Tense	Subject + V2 + Object	Object + was/ were +V3 +by + Subject
Simple Future Tense	Subject + shall/will +V1 + Object	Object + shall/will + be V3 + by + Subject
Present Continuous Tense	Subject + Is/are/am + V1 + ing + object	Object + Is/are/am + being + V3 + by + subject
Past Continuous Tense	Subject + was/were + V1 + ing + object	Object + was/were + being + V3 + by + subject
Present Perfect Tense	Subject + has/have + V3 + object	Object + has/have + been + V3) + by + subject

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Past Perfect Tense	Subject + had + V3 + object	Object + had + been + V3 + by + subject
Future Perfect Tense	Subject + shall have/will have + V3 + object...	Object + shall have/will have + been + V3 + by + subject

Note: When converting the active voice into passive voice or vice versa, there are changes in the form of verb and pronouns.

Examples:

i. AV- Mohan writes a book.

PV- A book is written by Mohan.(Simple Present Tense)

ii. AV- Riya bought a new bicycle.

PV- A new bicycle was bought by Riya.(Simple Past Tense)

iii. AV- I will send a card to my teacher.

PV- A card will be sent to my teacher by me.(Simple Future Tense)

iv. AV- Aadi is reading a book.

PV- A book is being read by Aadi(Present Continuous Tense)

v. AV- The boys were making pots.

PV- Pots were being made by the boys.(Past continuous Tense)

vi. AV- Rishabh has completed the project.

PV- The project has been completed by Rishabh.(Present Perfect Tense)

vii. AV- He had painted the wall.

PV- The wall had been painted by him.(Past Perfect Tense)

viii. AV- Rita will have learnt the poem by evening.

PV- The poem will have been learnt by Rita by evening.(Future Perfect Tense)

Change of Pronouns:

ACTIVE	PASSIVE
I	Me
You	You
We	Us
He	Him
She	Her
They	Them
It	It

6. LIST OF IDIOMS AND EXPRESSIONS, AND VOCABULARY (Prepare from the given portion)

Idiomatic expressions are group of words with established meaning unrelated to the meanings of individual words.

NOTE: Tense can be changed according to the sentence.

Idiom/ Expression

Meaning

i. read between the lines

look for or find a meaning that is not stated openly

ii. break the ice

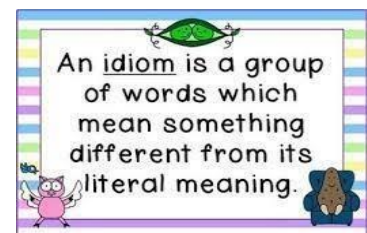
to say or do something to make people feel more relaxed at the beginning of a meeting or a party

iii .speak well off

praise someone

iv. sit on the fence

avoid making a decision or a choice



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v. foot the bill	pay the bill for something
vi. on cloud nine	very happy
vii. true to life	correctly representing real events or objects
viii. poke fun at	make fun of
ix. draw someone to one side	speak to someone in private, especially to advise or warn them about something
x. never mind	urge someone not to worry
xi. put off	delay
xii. keep up	move along with someone or something
xiii. call off	cancel
xiv. break down	stop working
xv. set out	begin a journey
xvi count on	depend
xvii beat a hasty retreat	flee
xviii. zero in	focus one's attention
xix. D-day	the day something special is going to take place
xx. ground zero	the starting point of something
xxi over the top	to an excessive degree

Fixed Expression

i. stand up for	Meaning speak up for or support
ii. a fraction of a second	very quickly
iii. all of a sudden	unexpectedly
iv. on the other hand	contrasting things
v. in depth	complete and detailed
vi. in vain	useless
vii. in common	similarities
viii. in good time	without being late.

Vocabulary: (Learn vocabulary from the given list)

<u>Word</u>	<u>Meaning</u>
i. sentenced	declared the punishment for an offender
ii. diverged	separated and went in two different directions
iii. good tidings	good news
iv. brooch	a decorative pin that women wear on their clothes
v. scuffle	a short fight or struggle
vi. standstill	a situation in which there is no movement or activity
vii. forbidden	not allowed
viii. endangered	at risk of dying out
ix. distraught	troubled
x. camouflaged	blended with the color of its natural surroundings

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xi. pounding	repeatedly hitting something or someone
xii. poacher	a person who illegally hunts animals and birds
xiii. tranquiliser	a medicine used to put somebody to sleep
xiv. defy	challenge
xv. haul	pull or drag with force

SUBJECT : MATHS

CH : 6 INTEGERS

(NOTE : Refer TB for details)

- Collection of all positive and negative numbers including zero are called integers. $\Rightarrow \dots, -4, -3, -2, -1, 0, 1, 2, 3, 4, \dots$ are integers.
- Zero is neither positive nor negative.
- On a number line, the number increases as we move towards right and decreases as we move towards left.
- Hence, the order of integers is written as $\dots, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, \dots$
- Therefore, $-3 < -2, -2 < -1, -1 < 0, 0 < 1, 1 < 2$ and $2 < 3$.
- NOTE: i) 0 is greater than all negative integers but it is lesser than all positive integers.
ii) 1 is the smallest positive integer.
iii) -1 is the largest negative integer.

Addition of Integers

To add two integers, the following rules should be followed:

- To add two positive integers, add them and put the positive sign. Eg : $(+3) + (+5) = (+8)$
- To add two negative integers, add them and put the negative sign. Eg : $(-3) + (-5) = (-8)$
- To add two integers, one positive and the other negative, subtract them and put the sign of the bigger integer.
[The bigger integer is decided by ignoring the signs of the integers.]
Eg : $(-3) + (+5) = (+2)$ and $(+3) + (-5) = (-2)$.

Subtraction of integers

To subtract an integer from another integer, it is enough to add the additive inverse of the integer that is being subtracted to the other integer.

$$\begin{aligned}\text{Eg : Subtract } (-4) \text{ from } (-10) &= (-10) - (-4) = (-10) + (\text{additive inverse of } -4) \\ &= (-10) + (+4) = (-6)\end{aligned}$$

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QUESTIONS

1. The successor of -6 is _____. (Ans : -5)
2. The predecessor of -14 is _____. (Ans : -15)
3. The integer which is 6 less than 2 is _____. (Ans : -4)
4. Which number will we reach if we move 4 numbers to the right of -2 on the number line ?
(Ans : +2)
5. The value $(-8) - (-10)$ is _____. (Ans : +2)
6. Compare $(-3) + (-6)$ _____ $(-3) - (-6)$. (Ans : less than)
7. The value of $(-9) + (+13)$ is _____. (Ans : +4)
8. Fill in the blanks :
_____ - 15 = -10 (Ans : +5)

CH : 8 DECIMALS

(NOTE: Refer TB for details)

Decimals are the numbers which consist of two parts ,a whole number and a fractional part separated by a decimal point. Eg : 12.5 is a decimal number.

- The number to the left of the decimal point represents a whole number, and
- The number to the right of the decimal point represents a fractional part.
- Every decimal number can be written as a fraction . Eg : $0.65 = \frac{65}{100}$

Comparing Decimals

Any two decimal numbers can be compared by comparing their whole part and decimal parts. (eg : $32.05 > 28.5$)

If the whole parts are equal then the tenth parts can be compared and so on. (Eg : $42.68 > 42.36$)

Using Decimals

Generally, decimals are used in money, length and weight.

Money

100 paise = 1 Rupee ,

1 paise = $\frac{1}{100}$ Rs = 0.01 **Rs**

Length

100 cm = 1 m , 1 cm = $\frac{1}{100}$ m = 0.01 m .

10 mm = 1cm , 1mm = $\frac{1}{10}$ cm = 0.1 cm.

1000 m = 1 km , 1m = $\frac{1}{1000}$ km = 0.001 km .

Weight

1000 gm = 1 kg

1 gm = $\frac{1}{1000}$ kg = 0.001 kg

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Addition of Decimal numbers.

To add the decimal numbers we can add them as whole numbers but the decimal will remain at the same place as it was in the given numbers. It means that we have to line up the decimal point in each number while writing them, and then add them as a whole number.

Eg : Add 1.234 and 4.1.

$$\begin{array}{r} 1.234 \\ + 4.1 \\ \hline 5.334 \end{array}$$

Subtraction of Decimal Numbers

Subtraction is also done as normal whole numbers after lining up the decimals of the given number.

Example

Subtract 243.86 from 402.10.

$$\begin{array}{r} \overset{3}{\cancel{4}} \overset{9}{\cancel{0}} \overset{11}{\cancel{2}} \overset{10}{\cancel{.1}} \overset{10}{\cancel{0}} \longrightarrow \text{Borrow as usual} \\ - 243.86 \\ \hline 158.24 \end{array}$$

QUESTIONS

- Which is greater 0.099 or 0.19 ? (Ans : 0.19)
- Express the following using decimals
 - 5 Rs 9 paise = _____Rs (Ans : 5.09 Rs)
 - 9m 7 cm = _____m (Ans : 9.07m)
 - 25 mm = _____ cm (Ans : 2.5 cm)
 - 7 km 5m = _____ km (Ans : 7.005 km)
 - 12 kg 20 g = _____ kg (Ans : 12.02 kg)
- What is to be added to 82.5 to get 90 ? (Ans : $90 - 82.5 = 7.5$)
- Sita brought fruits weigh 20 kg. Out of this 5 kg 50 g are apples and 4 kg are oranges and rest are bananas.What is the weight of bananas ?
(Ans : $20 - (5.05 + 4) = 20 - 9.05 = 10.95$ kg bananas)
- Find the sum of $280.68 + 28.5 + 38$. (Ans : 347.18)

CH : 10 MENSURATION

(NOTE : Refer TB for details)

Perimeter

If we go around the figure along its boundary to form a closed figure then the distance covered is the perimeter of that figure. Hence the Perimeter refers to the length of the boundary of a closed figure.

If a figure is made up of line segments only then we can find its perimeter by adding the length of all the sides.

A rectangle is a closed figure with two pairs of equal opposite sides.

Perimeter of a rectangle = Sum of all sides

$$= \text{length} + \text{breadth} + \text{length} + \text{breadth}$$

Thus, Perimeter of a rectangle = $2 \times (\text{length} + \text{breadth})$

Regular Closed Figure

Figures with equal length of sides and an equal measure of angles are known as **Regular Closed Figures or Regular Polygon**

- A polygon is a closed shape made up of line segments.

*Perimeter of Regular Polygon = Number of sides \times Length of one side

*Square is a regular polygon with 4 equal sides. Perimeter of a square = $4 \times$ length of a side

*An equilateral triangle is a regular polygon with three equal sides and angles. Perimeter of an equilateral triangle = $3 \times$ length of a side

*A regular pentagon is a polygon with 5 equal sides and angles. Perimeter of a regular pentagon = $5 \times$ length of one side

*A regular hexagon is a polygon with 6 equal sides and angles. Perimeter of a regular hexagon = $6 \times$ Length of one side

*A regular octagon is a polygon with 8 equal sides and angles. Perimeter of a regular octagon = $8 \times$ length of one side

Area

Area refers to the surface enclosed by a closed figure.

Area of a rectangle = (length \times breadth)

To find the length of a rectangle if breadth and area are given:

$$\text{Length} = \frac{\text{Area}}{\text{Breadth}}$$

To find the breadth of the rectangle if length and area are given:

$$\text{Breadth} = \frac{\text{Area}}{\text{Length}}$$

Area of a square = side \times side.

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QUESTIONS

1. The area of rectangle whose length is 15 cm and breadth is 6 cm is _____. (Ans : 90 cm²)
2. The side of a square is 6 cm . If its side is doubled , then its new perimeter is _____. (Ans : 4 x 12 = 48 cm)
3. Perimeter of a rectangle with length 12 cm and breadth 8 cm is _____. (Ans : 40 cm)
4. Perimeter of an equilateral triangle of length 9cm is _____. (Ans : 27 cm)
5. The perimeter of a regular pentagon is 100cm. The length of each side is _____ (Ans : 20 cm)
6. The perimeter of a rectangle is 170 m and its length is 50 m. What is its breadth? (Ans : 35)
7. A table top is covered with 25 squares of equal size. The side of the square is 3 cm. What is the area of the table top?
(Ans : Area of square = s x s = 3 x 3 = 9 sq cm . Area of 25 squares = 25 x 9 = 225 sq cm)
8. One side of a regular pentagon is 5 cm.Its perimeter is _____. (Ans : 5 x 5 = 25 cm)
- 9.The length and breadth of a rectangular plot are 900 m and 700 m respectively. If three rounds offence is fixed around the field at the cost of Rs. 8 per metre, what is the total amount spent?
(Ans : Perimeter = 2 (900 + 700) m = 2(1600) m = 3200m. Perimeter for 3 rounds fence = 3(3200) m = 9600 m. Total amount spent = 9600 x 8 = Rs. 76800)
- 10.A triangular wall hanging has sides measuring 50 cm, 35 cm and 75 cm. How much ribbon is required to give it a border? (Ans : Perimeter = 160 cm)

CH : 11 ALGEBRA

(NOTE : Refer TB for details)

Algebra is a part of mathematics in which the letter and symbols are used to represent numbers in equations. It helps us to study about unknown quantities.

Variable refers to the unknown quantities that can change or vary and are represented using the lowercase letter of the English alphabets. Eg : $3n + 1$, here n is the variable.

The value of a variable is not fixed. It can take different values.

Algebraic Expressions

An algebraic expression is an expression formed from any combination of numbers and variables by using the operations of addition, subtraction, multiplication and division.

Using different operations, we can form expressions with variables like $x - 2$, $x + 1$, $3n$, $2m$, p^4 , $2y + 5$, $3l - 7$, etc.

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Algebraic Expressions

	Statements in Words	Algebraic Expression
(a)	A number increased by 6	$x + 6$
(b)	A number decreased by 7	$x - 7$
(c)	12 th part of a number	$\frac{x}{12}$
(d)	4 times a number	$4x$
(e)	2 more than 4 times a number	$4x + 2$

Using Expressions Practically

Many statements described in ordinary language can be changed to statements using expressions with variables.

Eg : Write the expression of the situation : Sarita has 10 more marbles than Ameena .
(Ans: Let Ameena has x marbles . Sarita has $x + 10$ marbles).

EQUATION

An equation is a condition on a variable. It is expressed by saying that expression with a variable is equal to a fixed number.

An equation has two sides, LHS and RHS and between them is an equal sign (=). Eg : $x + 10 = 30$

The equation states that the value of the left-hand side (LHS) is equal to the value of the right-hand side (RHS).

If the LHS is not equal to the RHS, we do not get an equation.

For example, the statement $2n > 10$ or $2n < 10$ is not an equation.

Solution of an Equation

The value of the variable in an equation which satisfies the equation is called a solution of the equation. For example, $n = 2$ is a solution to the equation $2n = 4$, where $n = 3$ is not a solution of the equation $3n = 13$.

Transposing Method

To find the solution of the equation, we use transposing method.

Eg 1) $x + 10 = 30$, $x = 30 - 10$, $x = 20$ is the solution of the equation $x + 10 = 30$.

Eg 2) $2t + 3 = 7$, $2t = 7 - 3$, $2t = 4$, $t = \frac{4}{2}$, $t = 2$ is the solution of the equation $2t + 3 = 7$.

QUESTIONS

Write an expression for the following statement.

1. The sum of three times x and 11 . (Ans : $3x + 11$)
2. Raju s father s age is 5 years more than 3 times Raju s age. If Raju s age is x years, then father's age is _____. (Ans : $3x + 5$)
3. The sum of numbers a and b subtracted from their product is _____. (Ans : $ab - (a+b)$).

4. 7 subtracted from t . (Ans : $t - 7$)
5. 17 subtracted from ‘-y’. (Ans : $-y - 17$)
6. Write the statement for the expression :
 - a) $3mn + 5$. (Ans : 5 added to 3 times the product of m and n.)
 - b) $2n - 1$ (Ans : 1 is subtracted from the product of 2 and n)

Find the solution of the following equations .

1. $\frac{p}{4} = 12$ (Ans : $p = 48$)
2. $3n = 21$ (Ans : $n = 7$)
3. $t - 3 = 7$ ($t = 10$)
4. $2m - 5 = 5$ (Ans : $m = 5$)
5. $x + 20 = 70$ (Ans : $x = 50$)

PATTERNS IN MATHS

In Mathematics, a pattern is a repeated arrangement of numbers, shapes, colours and so on. The Pattern can be related to any type of event or object. If the set of numbers are related to each other in a specific rule, then the rule or manner is called a pattern. Sometimes, patterns are also known as a sequence. Patterns are finite or infinite in numbers.

Finite Patterns

A finite pattern is a finite sequence in which we know the first term and the last term.

For example: In pattern 3, 6, 9, 12, 15, the first term is 3 and the last term is 15.

Infinite Patterns

An infinite pattern is a sequence in which we know the first term, but we don't know the last term.

For example: In the pattern 3, 6, 9, 12, 15, 18,; the first term is 3 but we don't know where the pattern is going to stop.

Types of Patterns

There are 3 types of patterns:

- **Shape Pattern**

When a group of shapes are repeated, the pattern or sequence is known as a shape pattern.

Shape patterns follow a certain sequence or order of shapes, i.e., they are repeated. The shapes can be simple shapes like circles, squares, rectangles, triangles, etc., or other objects such as arrows, flowers, moons, and stars.



In the above pattern, the arrow rotates at 90° and changes its color. Or, we can say that each colored shape is repeated after 2 shapes.

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- **Letter Pattern**

A sequence that consists of letters or English alphabets is known as a letter pattern. A letter pattern establishes a common relationship between all the letters.

For example: A, C, E, G, I, K, M...

In the above pattern, one letter has been removed after every alphabet.

- **Number Pattern**

There are different types of number patterns:

- **Arithmetic Pattern**

In such a pattern, the sequences are based on the addition or subtraction of the terms.

Example 1: In the pattern 65, 64, 63, 62, 61, we are subtracting the consecutive numbers by 1 or each number gets decreased by 1.

- **Geometric Pattern**

A sequence of numbers that are based on multiplication and division is known as a geometric pattern.

Example 2: In the pattern given below, each number is divided by 5.

3125, 625, 125, 25, 5

- **Fibonacci Pattern**

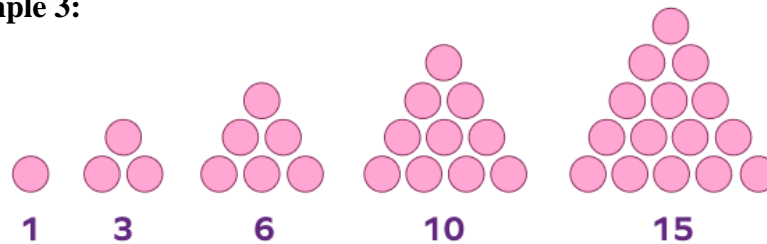
A sequence of numbers in which each number in the sequence is obtained by adding the two previous numbers together is known as the Fibonacci series or pattern. This sequence starts with 0 and 1. We add the two numbers to get the third number in the sequence.

The sequence 0, 1, 1, 2, 3, 5, 8, 13 is the Fibonacci pattern.

- **Triangular Number Pattern**

The representation of the numbers in the form of an equilateral triangle arranged in a series or sequence is known as a triangular number pattern.

Example 3:



The pattern can be described as $0 + 1 = 1$, $1 + 2 = 3$, $3 + 3 = 6$, $6 + 4 = 10$, $10 + 5 = 15$ and so on.

Example 4: Complete the pattern: AB, BC, CD, DE, _____, _____

Solution: The first term is the combination of the first and second alphabets. The second term is the combination of the second and third alphabets. The third term is the combination of third and fourth alphabets. The fourth term is the combination of fourth and fifth term.

Similarly, the next two terms will be EF and FG.

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ODD ONE OUT

Odd one out" is a phrase that is commonly used in mathematics where one number or value in a group is different from the others.

Picking the “**Odd one out**” is an activity designed to develop a learner’s observation, application, and analytical skills.

A puzzle (generally images) for the students to find out, with four answer options and in that any three of the options would be similar and the remaining option would be different.

The answer options would vary on the basis of colour, shape, size, quantity, category (vegetables, fruits, various types of things, vehicles, animals, and it goes on...)

To identify the odd, one out follows the following pattern:

- Observe the objects carefully.
- Describe the objects.
- Identify the similarities.
- Identify the one which is different or dissimilar.

Example 1: Choose the odd number.

(A) 4 (B) 6 (C) 9 (D) 10

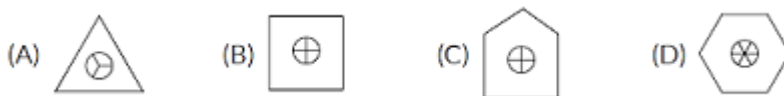
Answer: 9 is the ‘odd one out’ as it is an odd number and 4, 6, and 10 are even numbers.

Example 2: Choose the odd option.



Answer: ‘S’ is the ‘odd one out’ as it is written using a curved line and the other three letters are written using straight lines.

Example 3: Circle the odd one out in the following



Answer: Option C is the ‘odd one out’. In the other 3 images, the number of sides of the image is equal to the number of equal parts drawn inside the circle of the same image. Only in option C, the bigger image [Pentagon] has 5 sides but the circle inside the Pentagon has 4 equal parts.

Example 4: Choose the odd option.

(A) 9 – 4 (B) 6 – 1 (C) 8 – 3 (D) 7 – 1

Answer: 7-1 is the ‘odd one out’ as the result of subtraction fact 7 - 1 is 6. All the other 3 subtraction facts give a result as number 5.

TALENT SEARCH STUDY MATERIAL –CLASS VI

GEOMETRICAL CONCEPTS

Geometry is the branch of mathematics that deals with shapes, angles, figures, dimensions, and sizes of a variety of things we see in everyday life.

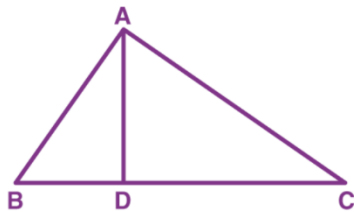
The word Geometry is derived from the Greek word 'geometron' is made of two words – 'Geo' means 'Earth' and 'Metron' means 'measurement'.

In a plane geometry two dimensional shapes such as triangles, squares, rectangles, circles are also called flat shapes. In solid geometry, three dimensional shapes such as cube, cuboid, cylinder, cone etc are also called solid shapes.

Basic Geometry terms: Point, line, line segment, ray, angle, collinear points, non collinear points, intersecting lines, parallel lines, perpendicular lines

Answer the following

1. A line segment is formed by joining _____. (two points)
2. ___ are created when two lines make an angle. (Rays)
3. _____ polygon has 10 sides. (Decagon)
4. The sum must be equal to _____ when two angles are classified as complementary angles. (90^0)
5. _____ has no equal angles and no equal sides. (scalene triangle)
6. If two or more points lie on the same line, they are called _____.(collinear points)
7. The lines that are equidistant from each other and never meet at any point are called _____.(parallel lines)
8. Two different lines in a plane having a common point are called _____.(Intersecting lines)
9. A collection of circles that has same centre but different radius are called _____.(concentric circles)
10. How many triangles in the given figure? (Ans-3)



GENERAL KNOWLEDGE

1. Who is the father of Mathematics? (Archimedes)
2. Who discovered zero? (Aryabhata)
3. Father of Geometry (Euclid)
4. Who invented equal sign (=) ? (Robert Recorde)
5. Who invented unknown or variable quantities x,y,z ? (Rene Descartes)
6. Who is known as the king of mathematics in India? (Srinivasa Ramanujan)
7. Who is known as Human Computer? (Shakuntala Devi)
8. Who discovered an easy method to find all the prime numbers? (Eratosthenes)

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9. National Mathematics Day is celebrated in India on _____. (22nd December)
10. The theme for International Day of Mathematics 2023 is _____. (Mathematics for everyone).

LOGICAL REASONING

Logical reasoning is a useful tool in many areas, including solving math problems. Logical reasoning is the process of using rational, systemic steps, based on mathematical procedure, to arrive at a conclusion about a problem. You can draw conclusions based on given facts and mathematical principles. Once you master the skill in solving math problems, you can use logical reasoning in a wide array of real-world situations.

STEPS TO SOLVE LOGICAL REASONING BASED QUESTIONS

1. Read and understand the information carefully.
2. Analyse critical logical information.
3. Think of all the possible solutions.
4. Compare the answer obtained with other possibilities.
5. Come to a correct logical conclusion.

EXAMPLES

1. A and B can do a work together in 18 days. A is three times as efficient as B. In how many days can B alone complete the work?
(A) 60 days (B) 72 days (C) 54 days (D) 64 days
Answer: B) 72 days
2. If 11 (170) 16, 11 (203) 19, then the value of (?) in 17 (?) 18 will be ___
(A)200 (B) 300 (C) 400 (D) None of these
Answer: B) 300
3. 4 years hence, the ratio of ages A and B will be 5: 7 and 6 years hence, the ratio of ages will be 11: 15, then and their present ages.
(A) 20 years,26 years (B) 18 years,28 years (C) 16 years,24 years (D) 12 years, 18 years
Answer: C)16 years, 24 years
4. What will come at the place (?) in the given series?
BZA, DYC, EXE, (?), JVI.
(A)HAG (B) HGJ (C) HWG (D) HYG
Answer: C) HWG

MENTAL MATHS:

Mental math is a group of skills that allow people to do math “in their head” without using pencil and paper or a calculator. It is useful in school and in everyday life. Mental math can help kids understand math concepts better and get to the answer faster. As the learner’s progress, they will be expected

TALENT SEARCH STUDY MATERIAL –CLASS VI

gradually to solve more and more complex problems. So, it is important that the techniques and skills that they use to achieve this are mastered at an early age.

EXAMPLES

1. The product of two numbers is 100 and their difference is 15. What are the numbers? (A) 20 and 5 (B) 25 and 10 (C) 30 and 9 (D) 10 and 50.
Answer: (A) 20 and 5.
2. What is the greatest remainder if the divisor is 7?
(A) 1, (B) 5, (C) 4, (D) 6.
Answer: (D) 6
3. $11:121::9:(?)$
(A) 18, (B) 81, (C) 27, (D) 45.
Answer: 81

PUZZLES

A maths puzzle is based on mathematical or numerical facts, rules, and objects, or whose solution requires strong mathematical reasoning, thought or consideration.

MATHS PUZZLES TRICKS

There are some tricks and tips that help in solving different types of puzzles. The below steps will help you in solving any type of puzzles in maths.

Step 1: Take a quick look at the question.

Step 2: Analyse the statements and patterns given in the puzzle

Step 3: Develop a general idea regarding the theme of the problem.

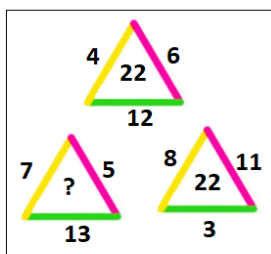
Step 4: Select the data that is giving you some concrete or accurate information out of complete details given.

Step 5: Apply the possibilities to the given conditions of the puzzle

Step 6: The best possibility that satisfies the given conditions will be the solution to the puzzle

EXAMPLES

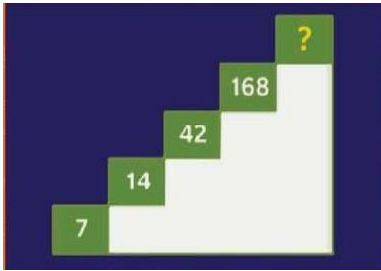
1. Solve the following puzzle.



Answer: 25

TALENT SEARCH STUDY MATERIAL –CLASS VI

2. Analyse the staircase and find the missing number.



Answer: 840

3. If you multiply me by any other number, the answer will always be the same. What number am I?

Answer: 0 (zero)

SUBJECT : SCIENCE & TECHNOLOGY

HUMAN ANATOMY & PHYSIOLOGY

Human Anatomy

The branch of biology that deals with the study of structure and parts of the human body is called Human Anatomy.

Physiology

Involves the study of chemical and physical functions carried out by organs and cells in a human body.

The Major Systems under Human Physiology are:

1. Skeletal system

The skeleton is a framework of bones, ligaments, and cartilage that gives the body shape.

Also, it provides a protective casing for vital organs in our bodies. Like the thoracic cage for lungs, the skull for the brain, etc.

Every adult human being has 206 bones in the body.

Orthopedics is the branch of medicine that focuses on the care of skeletal system.

2. Muscular system

Muscles are an inseparable part of our body and are attached to bone through the tendons. They help us in locomotion along with the bones, maintain posture, and help circulate blood throughout the body.

Tongue is the strongest muscle in our body.

Myology is the branch of medicine that study about muscles.

3. Circulatory System

The heart and blood vessels constitute the circulatory system. The circulatory system is a network of arteries, capillaries, and veins all connected by the heart to supply oxygen and nutrients to different parts of the body. Another function of this system is to carry away waste products.

Human Heart: The heart is a muscular organ that is situated in the front of the chest. It pumps blood all through the body in a process called circulation. The human heart is divided into four chambers: two ventricles and two atria. The atria are the receiving chambers of the heart, accepting blood from the body (right atrium) and from the lungs (left atrium). The ventricles are the pumping chambers, moving blood to the lungs (right ventricle) and into the body (left ventricle). Valves control the movement of blood into the heart.

Largest Artery -Aorta, largest vein-Vena cava.

Cardiology is the study and treatment of disorders of heart and blood vessels.

4. Digestive system

The digestive system of the human body is the sum of alimentary canal and accessory organs (tongue, liver, pancreas, etc.).

An alimentary canal consists of mouth, food pipe, stomach, intestine, rectum and anus. The glands associated are salivary glands, liver, gall bladder and pancreas.

Gastroenterology is the branch of medicine focused on this system.

5. Respiratory system

The human respiratory system consists of a pair of nostrils, nasal cavity, pharynx, larynx, trachea, bronchi and lungs. In humans, exchange of gases occurs in the alveoli that are surrounded by capillaries. The opening of larynx is guarded by a leaf like structure called epiglottis.

Inhalation and exhalation are the two processes involved in breathing.

Study of respiratory system is **Pulmonology**.

6. Nervous system

The nervous system includes the brain, spinal cord and nerves which is responsible for the control and coordination of the body. The nervous system has 2 major parts. The central system is made up of the brain and spinal cord. The peripheral nervous system is made up of nerves that carry messages to and from the central nervous system, Human brain consists of 3 main parts cerebrum, cerebellum and medulla oblongata (Brain stem)

Study of nervous system is **Neurology**.

7. Excretory system

The human excretory system consists of two kidneys, two ureters, a urinary bladder and urethra. The functional units of kidneys are called Nephrons. Urine and sweat are the two excretory products in humans. Skin is the largest organ in the human body. The study of kidney function is called **Nephrology**.

Plant Physiology

Plant physiology is a branch of study in Botany dealing with the physiological processes or functions of plants. **Father of plant physiology - Stephen Hales.**

Transportation of water and minerals in plants

Plants have pipe-like vessels to transport water and nutrients from the soil. The vessels are made of special cells, forming vascular tissue.

The vascular tissue for transport of water and nutrients in the plant is called **Xylem** and the vascular tissue that transport food to all parts of the plant is **Phloem**.

TALENT SEARCH STUDY MATERIAL –CLASS VI

Facts about Human Body

1. Largest bone -Femur (in thigh)
2. Smallest bone-Stirrup (in the middle ear)
3. Largest muscle in the body is Gluteus Maximus in Buttocks
4. Smallest muscle is Stapedius (in the middle ear)
5. Longest cell -Nerve cell
6. Smallest cell-Sperm cell
7. Largest cell-Ovum
8. Largest endocrine gland-Thyroid gland
9. Pulse rate -72-80 beats /minute
10. Breathing rate – 15-18 times/minute

Cellular Organization

All organisms are made up of the basic building units called cells. **Cells were first observed in cork by Robert Hooke in 1665.** The cell has 3 main parts: the cell membrane, cytoplasm which contains smaller components called organelles and the nucleus.

Cell biology is the study of cell structure and function.

Tissues are groups of cells that have a similar structure and act together to perform a specific function. Organs are created by combining the functional groups of tissues.

Unicellular Organisms: Organisms which are made up of a single cell and perform all the metabolic functions. Example: Amoeba, Paramecium.

Multicellular Organisms – Organisms which are made of many cells and different cells perform different functions. Example: Humans, cows, trees etc.

Matter Around Us

Everything in this universe is made up of material which scientists have named ‘matter.’ Matter on earth is in the form of solid, liquid and gas and are made of tiny particles called atoms and molecules.

Types of matter: Pure substances and mixtures

Pure Substance: Elements and compounds are the two types of pure substances. A Pure substance is made up of one type of atom or molecule.

Example: water (H₂O molecule), Oxygen (O₂ molecule), Iron, Silver etc.

Elements: If a pure substance cannot be broken into simpler substances by any means, it is called an element.

Eg. Oxygen, Nitrogen, Sodium, Potassium etc.

Compounds: A pure substance composed of two or more elements, chemically combined in a different proportion.

Eg, Sodium Chloride, Water, Calcium Hydroxide etc.

Mixtures: A mixture is a physical combination of two or more substances that are not chemically joined.

Eg. Water and salt are separate substances that once mixed, create a mixture.

Mixtures can be either homogeneous or heterogeneous. A mixture in which constituents are distributed uniformly is called a homogeneous mixture, such as salt in water. A mixture in which constituents are not distributed uniformly is called a heterogeneous mixture, such as sand in water.

TALENT SEARCH STUDY MATERIAL –CLASS VI

EFFECTS OF POLLUTION

Global warming is the phenomenon of gradual increase in the average temperature of earth. It is caused by the release of greenhouse gases like Carbon dioxide, methane, CFCs (Chlorofluorocarbon's) etc. into the atmosphere.

Ozone depletion: It is the gradual thinning of earth's ozone layer in the Stratosphere caused by the release of chemical pollutants. This results in the reaching of the **UV** radiation to the earth's surface. This radiation is known to cause skin cancer, damage to the eye and immune system, sunburn etc. Depletion of ozone layer is caused by CFCs which are used in refrigerators, fire extinguishers, aerosol sprayers.

Acid rain: The rain becomes acidic because of Carbon dioxide, Sulphur dioxide and Nitrogen dioxide which are released into air as pollutants dissolve in rain drops to form Carbonic acid, Sulphuric acid and Nitric acid respectively. Acid rain can cause damage to buildings, historical monuments (marble cancer-yellowing of Taj Mahal), plants and animals.

ISRO (Indian Space Research Organization)

ISRO is the national space agency of India. The present chairman of ISRO is **Somanath S. Vikram Sarabhai** was the founder of ISRO.

VSSC (Vikram Sarabhai Space Centre) Thiruvananthapuram, is lead centre of ISRO responsible for the design and development of launch vehicle technology.

URSC (U R Rao Satellite Centre, Bangalore) is responsible for design, development, and assembly of satellite missions.

Integration and launching of satellites and launch vehicles are carried out from **SDSC (Satish Dawan Space Centre) Srihari Kota.**

Sensors for communication and remote sensing satellites and application aspects of space technology are taken up at **Space Application Centre (SAC), Ahmedabad.**

Remote sensing satellite data reception processing and dissemination is entrusted to **National Remote Sensing Centre (NRSC) Hyderabad.**

Geostationary Satellites are used for communication purposes that include television, radio, satellite phones. GSAT-7A satellite is used by the Indian Military as a communication satellite.

APPLE is the first Indian communication satellite.

Chandrayaan – 1, India 's first mission to moon, was launched successfully on OCTOBER 22, 2008 from SDSC, Srihari Kota. Chandrayan-1 was open for 312 days.

Chandrayaan -2, is the second lunar exploration mission which had failed in the lunar phase when its lander 'Vikram' crashed into the surface of the moon while attempting a safe landing.

Chandrayan -3, is the third exploration mission by ISRO on July 14th 2023. With Chandrayan -3 success, India became the first country to land on the south pole of the moon.

NOBEL PRIZES -2023

PHYSICS

The Nobel Prize in Physics 2023 was awarded to Pierre Agostini, Ferenc Krausz and Anne L'Huillier for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter.

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CHEMISTRY

Moungi G. Bawendi, Louis E. Brus and Aleksey Yekimov are awarded the Nobel Prize in Chemistry 2023 for the discovery and development of quantum dots. These tiny particles have unique properties and now spread their light from television screens and LED lamps.

PHYSIOLOGY OR MEDICINE

2023 Nobel Prize in Physiology or Medicine was awarded to [Katalin Karikó](#) and [Drew Weissman](#) (born for their discoveries concerning nucleoside base modifications that enabled the development of effective [mRNA vaccines](#) against [COVID-19](#)).

INVENTIONS & DISCOVERIES

S.NO	INVENTION / DISCOVERY	SCIENTIST NAME
1	Electric Lamp	Thomas Alva Edison
2	Blood groups	Landsteiner
3	Oxygen	Antoine Laurent Lavoisier
4	Proton, Nuclear model of atom	Ernest Rutherford
5	Mercury thermometer	Daniel Gabriel
6	Electrons	J. J. Thomson
7	Neutrons	James Chadwick
8	Penicillin	Alexander Fleming
9	Smallpox Vaccine	Edward Jenner
10	Anthrax Vaccine	Louis Pasteur
11	X ray	Wilhem Rontgen
12	Rocket Engine	Robert H. Goddard
13	Raman Effect	Sir C. V. Raman
14	Stethoscope	Rene Laennec
15	Radio	G. Marconi
16	Hydrogen	Henry Cavendish
17	DNA	Johann Friedrich Miescher
18	Atomic Bomb	Robert Oppenheimer
19	Theory of Evolution	Charles Darwin
20	Seismograph	John Milne
21	Helicopter	Paul Cornu
22	Insulin	F. Banting
23	Antibiotic	Alexander Fleming
24	Radioactive Element- Radium	Marie curie
25	Hovercraft	C. Cockerell
26	Airplane	Wright Brothers
27	Gramophone	Thomas Alva Edison
28	Telephone	Alexander Graham Bell
29	Thermometer	Galileo
30	Air Conditioner	Willis Carrier

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Deficiency Diseases

S. No.	Vitamins	Deficiency Diseases
1)	Thiamine (B1)	Beriberi, Extreme weakness
2)	Riboflavin(B2)	Glossitis (inflammation of the tongue)
3)	Niacin(B3)	Pellagra
4)	Pyridoxine(B6)	Seizures
5)	Cyanocobalamine(B12)	Pernicious Anaemia
6)	Folic acid (B9)	Megaloblastic Anaemia
7)	Pantothenic acid	Parasthesia(multiple sclerosis that affect brain)
8)	Biotin	Derrmatitis
9)	Ascorbic acid (Vitamin C)	Scurvy
10)	Retinol (Vit. A)	Poor vision,Night blindness
11)	Calciferol (Vit. D)	Rickets, fragile bones
12)	Phylloquinone (Vit.K)	Excessive bleeding due to injury

TECHNOLOGY -ELECTRONIC GADGETS

List of electronic devices used in daily life,

- 1.Mobile Phone
- 2.Computer/Laptop
- 3.Tablets/iPads
- 4.Electronic Watch
- 5.Bluetooth Speaker
- 6.Digital Camera
- 7.Television
- 8.Music Player
- 9.Game Console
- 10.Electronic Toys
- 11.Electronic Bell
- 12.usb Lights
- 13.Amplifier

Electronic devices are those which perform some valuable work with the help of electrical energy. The main difference between electrical devices and electronic devices is that, electronic devices are smaller and more compact in size than electrical devices and they work with very low voltage and low current.

Martin Cooper, a Motorola researcher and executive, made the first mobile.

TECHNOLOGY TERMS

Android (Operating system)

- A mobile operating system developed by Google.

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- Based on a modified version of the Linux kernel and other open sources software.
- Designed primarily for touchscreen mobile devices such as smartphones and tablets.

Bios (Basic Input / Output system)

- Perform hardware initialization during the booting process

HTTP cookie

- A small piece of data sent from a website and stored on the user's computer by the user's web browser while the user is browsing
- Remember stateful information.
- To record the user's browsing activity

Device driver

- Computer program that operates or controls a particular type of device that is attached to a computer.

Ethernet

- A family of computer networking technologies

Firewall

- The network security system that monitors and controls the incoming and outgoing network traffic based on the predetermined security rules.

Global Positioning System (GPS)

- A satellite-based Radio navigation system.
- It operates independently of any telephonic or internet reception

Hypertext Transfer Protocol Secure (HTTPS)

- An extension of the HypertextTransfer Protocol (HTTP) for secure communication over a computer network.

International Mobile Equipment Identity or IMEI

- A number, usually unique to identify mobile phones.
- Usually found printed inside the battery compartment of the phones

Phishing

- The fraudulent attempt to obtain sensitive information such as usernames, passwords, and credit card details by disguising as a trustworthy entity in an electronic communication.

Spam

- The use of messaging systems to send an unsolicited message.

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TALENT SEARCH STUDY MATERIAL –CLASS VI

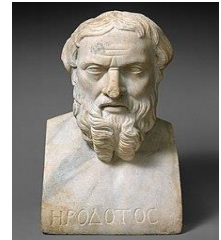
SUBJECT : SOCIAL SCIENCE

GENERAL TOPICS

WHAT IS HISTORY?

History is derived from Ancient Greek (*historía*) 'inquiry; knowledge acquired by investigation is the systematic study and documentation of the human past.

Sources of history have been divided broadly into two parts - Literary and archaeological. Archaeological sources consist of inscription, coins, monuments, remains of cities, pottery, ornaments, etc. The famous Greek historian, **Herodotus** is recognized as the 'Father of history'.



IMPORTANT HISTORICAL TERMS:

KEY TERM	DEFINITION
Chronological order	Listing events in the order that they happened.
Era/period	A period of time that is joined by cultural/historical factors. An example of an era is the Industrial era.
Decade	A unit of time that is equal to ten years
Century	A unit of time that is equal one hundred years / one of the hundred-year periods into which human history is divided.
Millennium	A unit of time that is equal to one thousand years.
B.C.E (Before the Common Era)/B.C (Before Christ)	Used to show that a year or century comes before the year 1 of the calendar used in much of the world, esp. in Europe and North and South America.
C.E (The Common Era)	Used when referring to a year after the birth of Jesus Christ when the Christian calendar starts counting years.
A.D (Anno Domini)	Used when referring to a year after Jesus Christ was born
Carbon Dating	Refers to the chemical analysis used to estimate the age of organic articles.
Inscriptions	The writings engraved on solid objects such as metals, rocks, pillars and walls of caves.
Edicts	The official order or royal command issued by rulers in ancient times.
Artifacts	The articles of archaeological value.
Epigraphy	The study of old inscriptions or epigraphs.
Numismatics	The study of coins.

IMPORTANT GEOGRAPHICAL TERMS:

- Geography - The study of the earth's surface.
- Geology - The study of earth's history, structure and make up.
- Palaeontology - The study of fossils.
- Meteorology - The scientific study of the atmosphere that focuses on weather processes and weather forecasting.
- Ecology - The study of how organisms interact with one another and with their physical environment.
- Anthropology - The scientific study of humans, human behavior and societies in the past and present.

DID YOU KNOW?

- Greenland is the largest Island.
- Sahara, the World's largest desert, covers about 9 million square kilometers.
- Nile is the longest river in the world. Two major tributaries of Nile – White Nile and Blue Nile.
- Amazon is the world's largest river. It is also known as 'The River Sea'.
- The dead sea is currently 429 Meters below the sea level and is sinking about 1 meter every year. The salinity of Dead Sea is 342 parts per thousand.
- Vatican City is the smallest country in the world.
- Canada has more than half of all the natural lakes in the world.
- Though Mount Everest is the highest peak, Mount Chimborazo in Ecuador is closer to the moon.
- Nauru, an island country located in the Pacific Ocean has no official capital.
- The Sargasso Sea is the only sea with no coast.
- Istanbul is the only city located over 2 continents (Asia & Europe)
- Lake Superior is the largest freshwater lake in the world by surface area.
- The smallest island with a county status is Pitcairn.

CIVICS

The constitution of India

- The **Constitution of India** is the supreme law of **India**.
- The Indian constitution is the lengthiest constitution in the world.

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- Every year on November 26, India commemorates Constitution Day, a day dedicated to recognizing the adoption of the Indian Constitution in 1949.
- The Constituent Assembly met for the first time on December 5, 1946.
- The preamble of our constitution states that India a sovereign, socialist, secular, and democratic republic, assures its citizens justice, equality, and liberty, and endeavors to promote fraternity.
- The constitution of India has created a secular state. It means the state gives equal protection to all religions.
- Fundamental rights and duties are an important part of the Indian constitution.
- 6 Fundamental Rights in Indian Constitution are as- Right to equality, Right to freedom, Right against exploitation, Right to freedom of religion, Cultural and educational rights, Right to constitutional remedies.
- Directive Principles are classified under the following categories: Economic and Socialistic, Political and Administrative, Justice and Legal, Environmental, Protection of Monuments, Peace and Security.
- The Constitution provides for a Parliamentary form of government which is federal in structure with certain unitary features.
- Separation of Powers- Between Legislature, Executive, and Judiciary.
- There are 448 articles in the Indian Constitution (originally 395 articles were there).
- The Father of our Constitution is B.R. Ambedkar.
- Article 17 of Fundamental Rights abolishes untouchability
- Article 14, 15 and 16 establish principles of equality and social Justice.
- Article 14 proclaims equality before law and equal protection of law for all.
- Article 15(1) prohibits discrimination on grounds of race, caste, sex, religion or place of birth.

Important abbreviations

- **ASEAN:** Association of South-East Asian Nations
- **PSC :** Public Service Commission.
- **IAS :** Indian Administrative Services
- **UPSC:** Union Public Service Commission.
- **UNICEF:** United Nations Children's Fund
- **UNESCO:** United Nations Educational, Scientific and Cultural Organization

HISTORY

MAJOR CIVILIZATIONS OF THE WORLD

Indus Valley Civilization:

John Marshall was the first researcher to use the term, 'Indus Valley Civilization'. Indus Valley Civilization spread from the year 2500 – 1750 BC according to radio-carbon dating. The most distinctive feature of the Harappan Civilisation was its urbanisation. The capital cities are

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Mohenjodaro and Harappa. The port cities are Sutkagendor, Balakot, Lothal, Allahdino, and Kuntasi. The Indus valley people were well-acquainted with the use of both cotton and wool. Indus Valley Civilization was the largest among the four civilizations of the world.

Egyptian Civilization:

The Egyptian civilization developed around 3150 BC on the banks of the Nile. The Egyptians invented the Solar calendar with 365 days. The Egyptians were also famous for their art and architecture. The best examples are the Pyramids of Giza and The Sphinx. The Egyptian **Hieroglyphics** is a form of writing that used images to express and meanings.

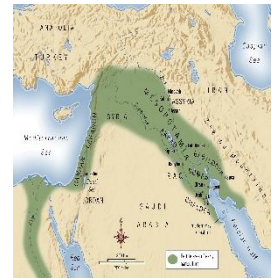


River

sounds

Mesopotamian Civilization:

Mesopotamian Civilizations were structured on the banks of two popular rivers of that era namely, The Tigris and Euphrates rivers, these rivers are now known as Iraq and Kuwait. The early Mesopotamian Civilizations started to form during the time of the Neolithic revolution which happened 1200 BC. Mesopotamia is sometimes called “**Jazira**” or “**Al-Jazira**”. It was later referred to as ‘The Fertile Crescent’ by Egyptologist J.H.Breasted. The earliest potter’s wheel was invented in Mesopotamia.



in

Chinese Civilization:

The Chinese civilization is one of the world's ancient calcinations, aged almost 5,000 years. Its first written records date back to IV millennia BC. The Chinese civilization originated in Hwang Ho and Yangtze River basins. The Chinese first used tea leaves for making **Medicines**. The Chinese made beautiful vessels of **Porcelain**. The stupa-style temple of the Chinese was known as **Pagoda**. The Great Wall of China was built by **Shi-Hwang-Ti**. The first known Chinese dynasty is the **Shang**. Paper making, printing, gun powder and the compass are the four major inventions of ancient China to the world.



The Mauryan Empire:

Mauryan Empire was established in 322 BC by Chandragupta Maurya.

The capital of Mauryans were **Pataliputra**.

The Indika and Arthashastra are the two main source of information about Mauryans.

Indika was written by Megasthenes and **Arthashastra** by Kautilya.

Ashoka fought Kalinga war in 261 BC.



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Gupta Empire:

Samudragupta was the greatest Gupta ruler. He is often called the Napoleon of India. **Kalidasa** a great Sanskrit writer and poet, who wrote the Ramayana, Mahabharatha, Abhijana Shakuntalam etc. lived in the court of Chandragupta II.

Two great physicians of this period were Sashruta and Acharya Charak. **Acharya Charak** is known as the father of Indian medicine.

GEOGRAPHY

- Cartography refers to the study of maps and mapmaking, whereas the person who makes maps is known as a cartographer.
- In 1798, James Rennell drew the first map of Africa. Rennell has been called the Father of Oceanography. Captain James Rennell designed the first map of India in 1783.
- Map projections involve the transference of data from a three dimensional model of the earth, a globe, to a two-dimensional surface, a piece of paper.
- The three common map projections are Conic, Cylindrical and Planar.
- The Earth initially had only one large landmass called Pangaea.
- There are more than 2300 languages in Asia.
- Africa is the only continent that covers 4 hemispheres.
- There are 54 countries in Africa.
- The Pacific Ocean was named by Ferdinand Magellan - first European to sail through the dangerous straits to South America in the 16th century.
- The first European to discover the Pacific Ocean was Vasco Nunez de Balboa.
- The Pacific Ocean Basin contains 75% of the world's volcanoes.
- The Atlantic Ocean is connected to all the other oceans. The Atlantic connected the Arctic Ocean to the north. It borders the Antarctic Ocean to the south. It is also connected to the Indian Ocean from the southeast. It is connected to the Pacific Ocean on the southwest side.
- Arctic is the smallest and shallowest of the world's oceans.

CIVICS

- India is the birthplace of four of the world's major religions, i.e., Hinduism, Buddhism, Jainism, and Sikhism.
- Article 29 of the constitution mandates the state to protect the distinguished culture and traditions of various ethnic groups.
- The municipal corporation officers are called Mayors.
- Central Government has special power in administering the Union Territories in India.
- The number of official Languages in India is 22.
- Equality and liberty are the basic principles of democracy.
- Municipal Corporation is the largest and topmost local body in urban administration.
- The first known democracy in the world was in Athens.
- Balwant Rai Mehta is known as the father of Panchayati Raj Institutions.
- Lord Rippon is popularly known as the father of local self-government in India.

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SUBJECT: GENERAL KNOWLEDGE AND CURRENT AFFAIRS

NOBEL PRIZES 2023

The Nobel Prize is considered the most prestigious prize in the world. This prize is given in 6 fields' i.e, Physics, Chemistry, Medicine, Literature, Economics, and Peace Prize.

Alfred Nobel (1833-1896) was **born in Stockholm, Sweden, on October 21, 1833**. He is known for inventing dynamite.. Agency responsible for selection is specifically designated by Alfred Nobel .

§ The Royal Swedish Academy of Sciences selects the Nobel Laureate in Physics and Chemistry,

§ Karolinska Institute selects Nobel Laureate in the field of Physiology or Medicine,

§ the Swedish Academy for the Nobel Prize selects Nobel Laureate in Literature,

§ a Committee of five persons elected by the Norwegian Parliament selects for the Nobel Peace Prize.

§ Marie Curie is the only one woman who has been honoured twice, with the 1903 Nobel Prize in Physics and the 1911 Nobel Prize in Chemistry.

§ John Bardeen is the only Nobel Laureate who has been awarded the Nobel Prize in Physics twice, in 1956 and 1972.

§ Despite being nominated five times, Mohandas Karamchand Gandhi(Mahatma Gandhi) never won the Nobel Prize

§ **John B. Goodenough is the oldest recipient of this prize in Chemistry 2019 at the age of 97yrs.**

§ **The first Indian to receive the Nobel Prize was Rabindra Nath Tagore.**

§ Malala Yousafzai is the youngest Nobel Laureate to get the Peace Prize in 2014 at the age of 17 yrs.

- **Nobel Prize in Physics 2023-**Pierre Agostini ,Ferenc Krausz ,Anne L’Huillier“for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter”
- **Nobel Prize in Chemistry 2023-** Mounji G. Bawendi, Louis E. Brus ,Aleksey Yekimov“for the discovery and synthesis of quantum dots” that added colour to nanotechnology-
- **Nobel Prize in Physiology or Medicine 2023-**Katalin Karikó,Drew Weissman “for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19”,contributed to an unprecedented rate of vaccine development
- **Nobel Prize in Literature** -Jon Fosse “for his innovative plays and prose which give voice to the unsayable” His immense oeuvre written in Norwegian Nynorsk and spanning a variety of genres consists of a wealth of plays, novels, poetry collections, essays, children’s books and translations. While he is today one of the most widely performed playwrights in the world, he has also become increasingly recognised for his prose.
- **The Nobel Peace Prize -Narges Mohammadi** “for her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all”

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- **Nobel Prize / The Sveriges Riksbank Prize in Economic Sciences** in Memory of Alfred Nobel 2023-Claudia Goldin “for having advanced our understanding of women’s labour market outcomes”
- **Miss Universe 2023** Sheynnis Palacios from Nicaragua won the 2023 title at the international competition's 72nd final in San Salvador.
- **Shital Mahajan:** First Woman to Skydive from 21,500 ft Near Mt Everest November 15, 2023. Mahajan is a well-known Indian skydiver who holds several skydiving records and is the **recipient of the fourth highest civilian award, the Padma Shri in 2001.**
- **Savitri Jindal-** India's richest woman Savitri Jindal now 7th wealthiest Indian
- **Katrina Kaif** has become the brand ambassador for clothing brand Uniqlo
- **Sultan AlNeyadi** became the first Arab astronaut to complete a spacewalk mission outside the ISS, as part of the 69th mission last April, which lasted about 7 hours.This historic achievement is also added to the record of the Arab world’s contributions to outer space exploration.He conducted pioneering scientific experiments that contribute to serving humanity and the scientific community.
- The **2023 G20 New Delhi summit** was the eighteenth meeting of G20 (Group of Twenty). It was held in Bharat Mandapam International Exhibition-Convention Centre, Pragati Maidan, New Delhi on 9–10 September 2023. It was the first G20 summit held in India.
- In September 2023, at the 18th G20 Summit, Indian PM Narendra Modi announced that **the African Union has been included as a member of the G20, making it the 21st member.**
- **The Ramon Magsaysay Award** (Filipino: Gawad Ramon Magsaysay) is an annual award established to perpetuate former Philippine President Ramon Magsaysay’s example of integrity in governance, courageous service to the people, and pragmatic idealism within a democratic society. Magsaysay Award is often called the Nobel Prize of Asia
- **Magsaysay Award 2023** -Dr. Ravi Kannan R. of IndiaImmense commitment to medicine emphasizing holistic care and patient-first treatment.

SPACE MISSION

- Chandrayaan-3 is the third mission in the Chandrayaan programme , a series of lunar-exploration missions developed by the Indian Space Research Organisation (ISRO).The mission consists of a lunar lander named Vikram and a lunar rover named Pragyan , similar to those launched aboard Chandrayaan-2 in 2019.
- Chandrayaan-3is now happily sleeping on the Moon, it was unlikely to revive.
- Indian Space Research Organisation Chief S Somanath
- The Indian Space Research Organisation (ISRO) has been honored with the distinguished Leif Erikson Lunar Prize for its pioneering Chandrayaan-3 mission, a significant milestone in lunar exploration.

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BOOKS AND AUTHORS

- Booker Prize (2023) was won by Irish author Paul Lynch for Prophet Song, a dystopian vision of Ireland in the grips of totalitarianism.
 - Pulitzer Prize 2023 -Barbara Kingsolver won the 2023 Pulitzer Prize for Fiction for 'Demon Copperhead', which is a moder retelling of Charles Dickens' classic 'David Copperfield'.
 - Most read book in 2023 is the novel “Happy Place “by Emily Henry
- Greatest Book Ever Written
- Anna Karenina -Leo Tolstoy,
 - To Kill a Mockingbird-Harper Lee,
 - The Great Gatsby -F. Scott Fitzgerald
 - One Hundred Years of Solitude-Gabriel García Márquez
 - A Passage to India -E.M. Forster
 - Invisible man- H G Wells
 - Don Quixote-Miguel de Cervantes
 - Beloved -Toni Morrison
 - Mrs. Dalloway-Virginia Woolf
 - Things Fall Apart-Chinua Achebe
 - Jane Eyre-Charlotte Brontë
 - The Color Purple-Alice walker
- Most popular reads of 2023
- Happy place-Emily Henry
 - Forth wing-Rebecca Yarros
 - Yellow face-R. F. Kuang
 - Spare- Prince Harry
 - The Midnight Library-Matt Haig
 - Age of Vice-Deepti Kapoor
 - Hello Beautiful-Ann Napolitano
 - The wager- David Grann
 - Birnam wood -Eleanor Catton

THE 54TH INTERNATIONAL FILM FESTIVAL OF INDIA (IFFI) 2023

- Best Film: Endless Borders
- Best Actor-Male: Pouria Rahimi Sam for Endless Borders
- Best Actor (Female): Melanie Thierry for Party of Fools
- Best Director: Stephan Komandarev for Blaga’s Lessons
- Special Jury Award: Rishab Shetty For Kantara
- Best Debutant Director: Reger Azad Kaya for his Syrian-Arab Republic film When the Seedlings Grow
- Best Web Series: Panchayat Season 2
- Satyajit Ray Lifetime Achievement Award: Michael Douglas.

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69TH NATIONAL FILM AWARDS (2023) FILM AWARDS

- 69th National Film Awards 2023: President Droupadi Murmu conferred the 69th National Film Awards 2023 in New Delhi
- Dadasaheb Phalke Award- Waheeda Rehman
- Best Feature Film - Rocketry
- Best Director - Nikhil Mahajan for Godavari
- Nargis Dutt Award for Best Feature Film on National Integration - The Kashmir Files
- Best Actor - Allu Arjun for Pushpa
- Best Popular Film Providing Wholesome Entertainment - RRR
- Best Actress - Alia Bhatt for Gangubai Kathiawadi, and Kriti Sanon for Mimi
- Best Film on Environment Conservation/Preservation: Aavasavyuham (Malayalam)
- Best Film on Social Issues: Anunaad - The Resonance (Assamese)

SPORTS

CRICKET

- National Sports day is observed on 29th August every year.
- **ICC ODI Player Of the Year 2023**: Pakistan Skipper Babar Azam
- BCCI President – Roger Binny
- **Team India men's captain** - Rohit Sharma
- **Team India women's captain** - **Harmanpreet Kaur**
- Team India Head Coach – Rahul Dravid

FOOTBALL

- **FIFA**- The Federation International de Football Association
- **FIFA President** – Giovanni Vincenzo Infantino
- **FIFA Player of the Year 2022** - Lionel Messi
- Lionel Messi clinched his eighth **Ballon d'Or award** for Argentine.
- **COPA America 2022** winners – Argentina won their first title in 28 years by defeating Brazil in the final.
- **Premier League Golden Boot**- **Manchester** City star Erling Haaland won the 2022/23 Premier League Golden Boot with a new Premier League single-season record of 36 goals.

HOCKEY

- IIHF (International Ice Hockey Federation) The US women's National Team claimed gold at the 2023 IIHF Women's world Championship in Brampton, Ontario, with a win over Canada to capture USA Hockey's first medal since 2019.
- **The 2023 Men's FIH Hockey World Cup** was the 15th edition of the Men's FIH Hockey world cup, the quadrennial world championship for men's national field Hockey team organized by the International Hockey Federation. It was held at the Kalinga stadium in Bhubaneswar and at Birsa Munda International Hockey Stadium in India from 13 to 29 January 2023.
- **The 2023 Men's FIH Hockey World Cup** - Germany won against Belgium.

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BADMINTON

- **BWF World Ranking** is the official ranking of the Badminton World Federation.
- It is used to determine the qualification for the World Championships and Summer Olympic Games, BWF World Tour tournaments
- South Korean badminton stars *An Se-young and Seo Seung-jae* have been named the world's best players for the year 2023
- **BWF Korean Open 2023**- Anders Antonsen beats Loh Kean Yew in men's final, An Seyoung wins women's title at home.
- P.V.Sindhu -The first Indian to win gold in the Badminton World Championship.

KABBADI

- Asian Kabbadi championship 2023- The **Indian men's kabaddi team** beat Iran in the final to win the gold medal while the Indian women defeated Chinese Taipei to reclaim the crown.

Athletics

- World Para Athletics Championships in France. Two world records for Brazil's Rodrigues at World Para athletics Championships.

BILLIARDS

- Pankaj Advani won World Billiards Championship for record 26th time.

MOTOR RACING

- 2023 Formula One World Championship/Winner- **Max Verstappen**
- The **2023 United States Grand Prix** (officially known as the **Formula 1 Lenovo United States Grand Prix 2023**) was a Formula One motor race that took place on October 22, 2023, at the Circuit of the Americas IN Austin, Texas, United States. It was the eighteenth round of the 2023 Formula One World Championship and the fifth Grand Prix weekend of the season to utilize the sprint format. **Max Verstappen**won both races.
- Japanese Grand Prix - **Max Verstappen**
- World Constructors' Championship- Red Bull

CHESS

- The Chess World Cup 2023 Venue – Baku, Azerbaijan
- Magnus Carlsen (NOR, 2835) emerged as the Winner of the FIDE World Chess Cup.
- India's Youngest Chess Grandmaster- R Praggnanandhaa

LAWN TENNIS

- **DAVIS CUP- Italy won** the title, defeating Australia in the final.
- **AUSTRALIAN OPEN 2023- Novak Djokovic** defeated Stefanos Tsitsipas in the final.
- **FRENCH OPEN** - Novak Djokovic wins his 23rd Grand Slam title by beating Casper Ruud in the French Open final. **Novak Djokovic** makes history with his 23rd Grand Slam singles title and third at Roland-Garros - 'The pinnacle of his career'.
- **ATP - Novak Djokovic** won the ATP Finals for a record seventh time by defeating Jannik Sinner.
- **US OPEN**- Novak Djokovic defeated Daniil Medvedev in the final, to win the men's singles tennis title at the 2023 US Open. It was his fourth US Open title and record-extending 24th men's

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singles major title overall.

- Coco Gauff won the women's singles title, defeating Aryna Sabalenka.

LIST OF NATIONAL SPORTS AWARDS 2023

- **Major Dhyan Chand Khel Ratna Award 2023: Shri Rankireddy Satwik Sai Raj and Shri Chirag Chandrashekhar Shetty for Badminton**
- The award is conferred for the most outstanding performance in sports by a sportsperson over the time period of the last four years.
- **Arjuna Award:** Ms. Aditi Gopichand Swami (Archery), Shri Ojas Pravin Deotale (Archery), Ms. Parul Chaudhary (Athletics), Shri. Sreeshankar M (Athletics), Shri Mohameed Hussamuddin (Boxing), Shri Mohammed Shami (Cricket), Ms. R Vaishali (Chess), Ms Divyakriti Singh (Equestrian Dressage), Shri Anush Agarwalla (Equestrian), Ms. Diksha Dagar (Golf), Ms. Pukhrambam Sushila Chanu (Hockey), Shri Krishan Bahadur Pathak (Hockey), Ms. Ritu Negi (Kabaddi), Shri Pawan Kumar (Kabaddi), Ms. Nasreen (Kho-Kho), Ms. Pinki (Lawn Bowls), Ms. Esha Singh (Shooting), Shri. Aishwarya Pratap Singh Tomar (Shooting), Shri. Harinder Pal Singh Sandhu (Squash), Ms. Ayhika Mukherjee (Table Tennis), Ms. Antim (Wrestling), Shri. Sunil Kumar (Wrestling), Ms. Naorem Roshibina Devi (Wushu), Ms. Sheetal Devi (Para Archery), Shri Illuri Ajay Kumar Reddy (Blind Cricket) and Ms. Prachi Yadav (Para Canoeing).
- **Dronacharya Award (Regular category):** Shri Lalit Kumar (Wrestling),
- R. B. Ramesh (Chess), Shriveer Prasad Saini (Para Athletics), Shivendra Singh (Hockey) and Shri Ganesh Prabhakar Devrukhkar (Mallakhamb)
- **Dronacharya Award (Lifetime Category):** Shri. Jashkirat Singh Grewal (Golf), Shri. Bhaskaran E (Kabaddi) and Shri. Jayanta Kumar Pushilal (Table Tennis)
- **Dhyan Chand Award: (Lifetime Category):** Ms. Manjusha Kanwar (Badminton), Shri. Vineet Kumar Sharma (Hockey) and Ms. Kavitha Selvaraj (Kabaddi)



Emily Henry



Waheeda Rehman



Aditi Gopichand S.



R Praggnanandhaa



Pankaj Advani

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Satwik Sairaj Rankireddy



Chirag Shetty



Novak Djokovic



Chandrayaan -3



Max Emilian Verstappen
F1 World Champion



Lionel Messi- 2023 Ballon d'Or winner (8th Ballon d'Or)



FIFA World Cup 2023 in Qatar



Neeraj Chopra- Olympic champion and World champion in Men's javelin throw



OceanGate Titan Submersible



Russia's Luna 25

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India's new parliament building



The Nobel Peace Prize for 2023
Was awarded to Narges Mohammadi



Droupadi Murmu
President of India



Sharath Kamal receives Khel Ratna



Best Original Song Oscar Academy
Awards at the 2023 for the song "Naatu Naatu."



Open AI GPT-4 was released in
March of 2023



Brendan Fraser wins best actor in oscars 2023



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