



# SCIENCE APTITUDE TEST

## CLASS - 5

## SOLUTIONS

TEST CODE - 28S

WhatsApp Channel



**Result will be Declared on 14th Oct. 2025**

Video Solutions will be available on

[www.khoj.iitashram.com](http://www.khoj.iitashram.com)

They will also be available on the **IIT ASHRAM WhatsApp Channel**.

Just scan the QR codes below & never miss an update!

**IIT Ashram**  
JEE MAIN | JEE ADVANCED | GUJCET | FOUNDATION



**Drs' Ashram**  
NEET | GUJCET | FOUNDATION

**ALKAPURI (H.O.) :** UG – 1 to 2, Concorde Complex, Above PNB, R.C. Dutt Rd., Alkapuri, Vadodara.

**M : 9081062221, 9033063029.**

**MANJALPUR - IIT ASHRAM :** SF-1 TO 12, Kabir Plaza, Beside Kabir Complex, Above IDBI Bank, Infront of Army Camp Manjalpur, Nr. Gupta Hospital, Bhavan's Makarpura Road, Manjalpur . **M : 9033063027 / 9033063028**

**ANAND - IIT ASHRAM :** 2nd Floor, HR Stone Building, Beside Croma Showroom, A.V. Road, Nr. Town Hall, Anand. **M: 9227777098, 8460009041.**

**Bhayli - IIT ASHRAM :** Akshar Pavilion, 3rd floor, Tower A, Nilamber Circle, Main rd, Bhayli, Vadodara, Gujarat 391410. **M : 6358891896, 9081062221**

OUR PRIDE, OUR ACHIEVERS.



# IIT Ashram

IIT JEE | NEET | GUJCET | FOUNDATION (6 to 10)

## 10<sup>th</sup> CBSE Board Results 2025

SCI -100 | SS -100



99.00%

Kushagrah



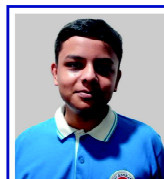
98.80%

Devansh



98.50%

Harshil



98.40%

Jay D.



98.66%

Rudra

MATH -100



97.60%

Aryan



97.60%

Khwahish



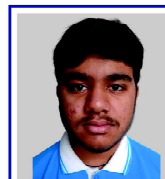
97.40%

Naman



97.40%

Rusha



97.40%

Siddhant

MATH -100



96.60%

Diza



96.50%

Kaushar



96.00%

Harleen



96.00%

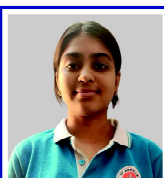
Rakti



95.75%

Swara

ENG -100



95.60%

Jayani



95.60%

Parita



95.50%

Shaurya



95.20%

Krishiv



95.05%

Shruja

And Many More....



# IIT Ashram

IIT JEE | NEET | GUJCET | FOUNDATION (6 to 10)



## 10<sup>th</sup> GSEB Board Result 2025



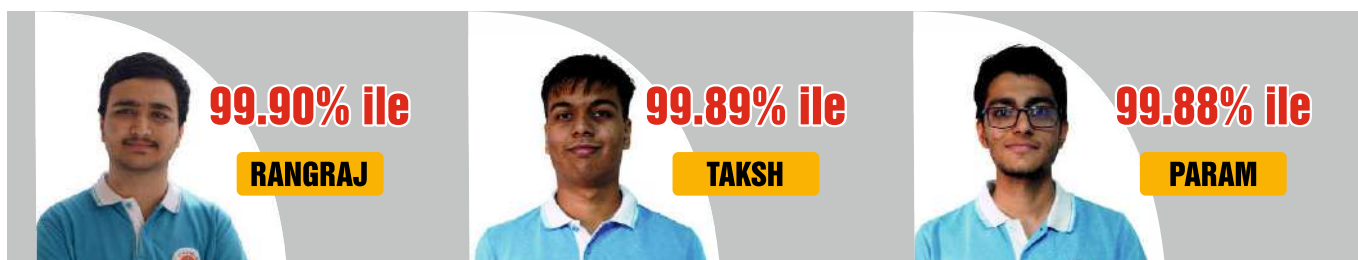
 SCI 100 SS 100 99.81% ile Naysa P.	 MATH 100 SCI 100 99.60% ile Pahal B.	 SS 100 99.35% ile Khushi P.	 SCI 100 99.22% ile Chirag R.	 99.14% ile Rutvi S.	 MATH 100 99.00% ile Darsh G.
 98.62% ile Dhanesh B.	 MATH 100 98.31% ile Darshil P.	 98.20% ile Vihaan T.	 98.20% ile Drashti S.	 98.20% ile Aanya K.	 98.20% ile Kshitij N.
 97.99% ile Varada M.	 97.88% ile Saksham U.	 MATH 100 SCI 100 97.76% ile Nivedya J.	 97.64% ile Dhyey P.	 97.50% ile Maharsh B.	 MATH 100 97.40% ile Shubh P.
 97.27% ile Pankti P.	 97.14% ile Devansh A.	 SCI 100 97.02% ile Vihaan P.	 96.76% ile Kathit S.	 96.68% ile Nisarg S.	 96.63% ile Dhwani P.
 96.50% ile Evan C.	 96.36% ile Disha S.	 MATH 100 96.36% ile Samarth T.	 96.22% ile Devanshi P.	 95.93% ile Mahaveer V.	 95.93% ile Abhinav P.

And Many More....

**PART - I : MENTAL ABILITY**

1.  
**Sol. (b)** 5 m - After East and West movements cancel out, the bird is 5 meters South from the start.
2.  
**Sol. (d)** 30 sec  
Speed =  $100\text{m}/10\text{s} = 10\text{ m/s}$ .  $\rightarrow$  To cross 200m bridge  $\rightarrow$  distance =  $100 + 200 = 300\text{m}$   
 $\rightarrow$  time =  $300/10 = 30\text{ sec}$ .
3.  
**Sol. (b)** 10- The numbers are increasing by 2 each time.
4.  
**Sol. (d)** 80 - Each number is multiplied by 2.
5.  
**Sol. (b)** I - The letters are skipping one alphabet in between: A, C, E, G, I.
6.  
**Sol. (d)** 14 - All other numbers are prime numbers, but 14 is not.
7.  
**Sol. (d)**
8.  
**Sol. (b)** West - Rohan is facing west after completing the movements
9.  
**Sol. (d)**
10.  
**Sol. (a)** W - The letters are skipping two alphabets in between K, N, Q, T, W.
11.  
**Sol. (a)** Seed, Tree, Branch, Leaf, Fruit - The logical order of growth and development of a plant.

**27** Students secured above **99% ile** in **JEE Main 2025**



and many more....



12.

**Sol. (c)** circle

All others are polygons, but a circle is not.

13.

**Sol. (a)** The animals are listed in increasing size: cat → dog → lion → elephant → blue whale.

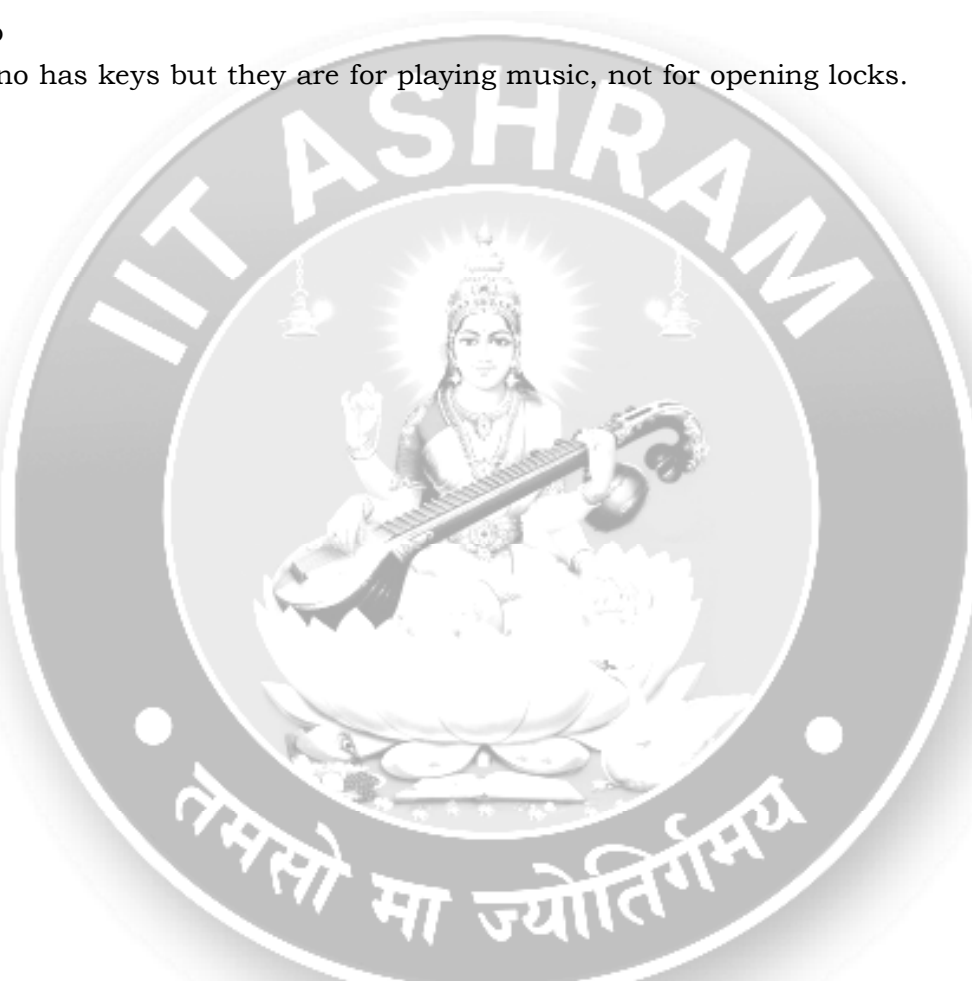
14.

**Sol. (b)** 36The series is the squares of consecutive natural numbers ( $1^2, 2^2, 3^2, 4^2, 5^2, \dots$ ).

15.

**Sol. (c)** Piano

A piano has keys but they are for playing music, not for opening locks.



# IIT Ashram

www.iitashram.com

JEE MAIN &amp; ADVANCED | NEET | PRE-FOUNDATION &amp; FOUNDATION

## COURSES OFFERED

# ADMISSION OPEN

**IIT - JEE/NEET**  
CLASS - XI & XII

**FOUNDATION**  
CLASS - VI TO X

**ADMISSION-CUM SCHOLARSHIP  
TEST ON EVERY SUNDAY**
**PRE-FOUNDATION**  
CLASSROOM PROGRAM  
CLASSES : VI, VII, VIII

**JEE MAIN/ADVANCED**  
(PCM)  
CLASSROOM PROGRAM  
CLASSES : XI & XII

**FOUNDATION**  
CLASSROOM PROGRAM  
CLASSES : IX & X

**NEET (PCB)**  
CLASSROOM PROGRAM  
CLASSES : XI & XII

 UG-1&2 Concorde Complex, Above OBC Bank, R.C. Dutt Road,  
Alkapuri, Vadodara - 390007. (Guj.) India.

**9081062221**

 iitashram.2011@gmail.com  
www.iitashram.com

## PART - II : MATHEMATICS

1.

**Sol. (c)** Number of jugs = Total capacity  $\div$  Capacity of one jug      Calculation: Number of jugs =  $10 \div 2 = 5$

2.

**Sol. (c)** Formula: Product = Multiplicand  $\times$  Multiplier

Calculation:  $127 \times 4 = (100 \times 4) + (20 \times 4) + (7 \times 4) = 400 + 80 + 28 = 508$

3.

**Sol. (b)** Definition: A polygon is a simple closed curve composed of line segments.

Since it is closed and made of only line segments  $\Rightarrow$  Polygon.

4.

**Sol. (b)**  $(-3) + 5 = +(5-3) = +2 = 2$

5.

**Sol. (c)**  $\frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$

6.

**Sol. (b)** Formula: Add decimals by aligning place values, Calculation:  $2.50 + 3.75 = 6.25$

7.

**Sol. (b)** Formula: Area of square:  $A = s^2$ ,  $A = 5^2 = 25 \text{ cm}^2$

8.

**Sol. (c)** Formula:  $1 \text{ km} = 1000 \text{ m}$ ,  $3 \text{ km} = 3 \times 1000 = 3000 \text{ m}$

9.

**Sol. (a)** Formula:  $x = \text{Dividend} \div \text{Divisor}$

Calculation:  $x = 336 \div 6 = 56$

10.

**Sol. (b)** Definition: A vertex is a corner where two sides meet.

In polygons, sides meet at vertices.

**35** Students secured admissions in different fields of **Biology** in 2024.



and many more....

11.

**Sol. (c)** Numbers increase to the right on a number line.  
 $0 > -1$ , so 0 is to the right of -1.

12.

**Sol. (b)**  $\frac{5}{7} - \frac{2}{7} = \frac{5-2}{7} = \frac{3}{7}$

13.

**Sol. (a)**  $\frac{7}{10} = 0.7$

14.

**Sol. (b)** Formula:

$$\text{Breadth} = \frac{\text{Perimeter}}{2} - \text{length} = \frac{28}{2} - 8 \Rightarrow 14 - 8 = 6 \text{ cm}$$

15.

**Sol. (b)** Formula: 1 hour = 60 minutes  
 2 hours =  $2 \times 60 = 120$  minutes;  
 $120 + 15 = 135$  minutes

16.

**Sol. (c)** Number of bags = Total oranges  $\div$  Oranges per bag =  $144 \div 12 = 12$

17.

**Sol. (c)** Definition: Diameter is a chord through the center.  
 Chord through centre  $\Rightarrow$  Diameter.

18.

**Sol. (c)**

New temperature  $T = \text{Initial} + \text{Change}$   
 $T = 5 + (-7) = -2^\circ\text{C}$

19.

**Sol. (d)** Formula: Compare using common denominator or decimals.  
 $3/4 = 0.75$ ,  $2/3 \approx 0.666\dots$ ,  $5/6 \approx 0.833\dots$ ,  $1/2 = 0.5$   
 $\Rightarrow$  smallest is 0.5

20.

**Sol. (a)** Formula: Subtract decimals by aligning place values =  $5.63 - 2.40 = 3.23$

21.

**Sol. (a)** Formula: Perimeter of rectangle:  $P = 2(l + w)$ 

Calculation:  $P = 2(15 + 10) = 2 \times 25 = 50 \text{ m}$

22.

**Sol. (d)** Formula: Area of rectangle:  $A = l \times w$ 

Calculation:  $A = 5 \times 10 = 50 \text{ m}^2$

23.

**Sol. (b)** Definition: Triangle has three sides and three vertices.

24.

**Sol. (c)** Formula: Negative integers are less than zero. $-23 < 0$  and is an integer  $\Rightarrow$  negative integer.

25.

**Sol. (a)**  $\frac{1}{4}$  of 20 =  $\frac{1}{4} \times 20 = 20 \div 4 = 5$

26.

**Sol. (b)** Eight-hundredths = 0.08  $\Rightarrow 7 + 0.08 = 7.08$

27.

**Sol. (b)** Formula: Perimeter of square:  $P = 4s$ 

$\Rightarrow s = P/4 \quad \Rightarrow s = 36 \div 4 = 9 \text{ cm}$

28.

**Sol. (b)** Divisibility: sum of digits of a multiple of 9 is a multiple of 9.

$\Rightarrow$  Calculation:  $4+5 = 9 \Rightarrow 45$  is divisible by 9

29.

**Sol. (c)**  $22/4 = 11/2 \Rightarrow$  So  $11/2 + 11/2 = 22/2 = 11$ .

$\Rightarrow$  Among options,  $33/3 = 11$ .

30.

**Sol. (c)** Formula: Add decimals aligning place values

$\Rightarrow 2.005 + 3.962 = 5.967$

**65** Students secured admissions to **IITs** in 2024.

and many more....



## PART - III : PHYSICS &amp; CHEMISTRY

1.

**Sol. (a)** The pole star lies on the axis of rotation of earth and in the sky, it is located in the northern side with respect to earth. Therefore, if viewed from north pole of earth, it can be seen to lying directly overhead.

2.

**Sol. (c)** The image formed by a plane mirror is upright, the same size as the object, and is as far behind the mirror as the object is in front of it. However, it is not a real image; it is virtual.  
Real Image: Can be projected onto a screen, formed by converging light rays.  
Virtual Image: Cannot be projected onto a screen. Its is formed by diverging light rays that appear to originate from a point.

3.

**Sol. (a)** The time taken to travel from P to Q will be more than from R to S because distance between P and Q is greater and speed is the same.  $\text{Time} = \text{Distance} / \text{Speed}$ , so more distance means more time. The best answer is (A).

4.

**Sol. (b)** This is because 1 meter = 100 centimeters and 1 centimeter = 10 millimeters, so 1 meter =  $100 \times 10 = 1000$  millimeters.

5.

**Sol. (d)** Guitar strings produce sound due to vibrations, which is related to mechanical or elastic force, not electric force.

6.

**Sol. (b)** A pulley changes the direction of a force, making it easier to lift or move objects by pulling in a different direction.

7.

**Sol. (b)** According to the definition of work in physics, work is done when a force is applied to an object and the object moves in the direction of the force. Since the wall doesn't move, no work is done, even if you're applying a lot of force.

8.

**Sol. (b)** According to the figure, the length of the given object is  $5 - 1.8 = 3.2$  units.

9.

**Sol. (b)** Newton  
This SI unit is given a special name: Newton (N).

10.

**Sol. (a)** Mechanical energy is the sum of kinetic energy (energy due to motion) and potential energy (energy due to position). It encompasses the total energy an object possesses because of its motion or its position.

11.  
**Sol. (a)** Solid  
Particles are tightly packed; strongest intermolecular forces.
12.  
**Sol. (c)** Evaporation  
Liquid absorbs latent heat from surroundings to change to vapour, cooling the surface.
13.  
**Sol. (d)** Filtration  
A strainer filters out tea leaves from liquid tea.
14.  
**Sol. (c)** Lemon juice  
The acid curdles milk proteins to form paneer.
15.  
**Sol. (d)** Iron nail  
Iron is attracted by a magnet; others aren't.
16.  
**Sol. (b)** Surface water  
Rainwater that flows over land without seeping is surface runoff (surface water).
17.  
**Sol. (a)** Hydrogen  
A gas: no fixed shape and no fixed volume.
18.  
**Sol. (d)** Condensation  
Water vapour cools to liquid droplets (dew) on cold grass.
19.  
**Sol. (b)** Metal  
Strong, non-corrosive; suitable for spectacle rims (glass is brittle; wood is heavy; cotton is a fibre).
20.  
**Sol. (b)** Compressed  
Tyres are inflated with compressed air.

**Total Selections In IIT ASHRAM Till Date**

**1103**  
in JEE Advanced

**5386**  
in JEE Main

**557**  
in NEET

**PART - IV : BIOLOGY**

1.

**Sol. (c)** By covering water containers

Covering the water containers mosquitoes can be prevented for egg laying because they breed in stagnant water.

2.

**Sol. (b)** Less crop price

When farmers sell crops at low prices, they may not recover their investment, leading to debt.

3.

**Sol. (c)** Adivasis

The Indigenous tribal communities residing in or near forest areas are known as Adivasis.

4.

**Sol. (c)** Hive

A group of honeybees lives in a structure called a hive.

5.

**Sol. (b)** Plough and bullocks

Wooden or iron ploughs are pulled by bullocks use to plough the field it is a traditional implement.

6.

**Sol. (b)** Smell

Though the tongue detects taste with the help of taste buds present on tongue but smell of food helps to enhance the perception of flavours.

7.

**Sol. (b)** Eagle

They have exceptional eyesight, allowing them to spot prey from great distances.

8.

**Sol. (c)** A is true, but R is false.

Seeds need water to sprout, not to become dry. The reason is incorrect.

9.

**Sol. (d)** All

All three statements are scientifically accurate.

10.

**Sol. (a)**  $1 \rightarrow b, 2 \rightarrow c, 3 \rightarrow a, 4 \rightarrow d$