

# Sample Questions

for

# ASAT

(ALLEN Scholarship Cum Admission Test)

## CLASSROOM CONTACT PROGRAMME

**PRE-NURTURE & CAREER FOUNDATION : CLASS-VI**  
**(FOR V to VI MOVING STUDENTS)**



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## INSTRUCTIONS

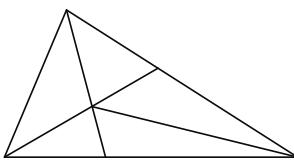
Things NOT ALLOWED in EXAM HALL : Blank Paper, clipboard, log table, slide rule, calculator, camera, mobile and any electronic or electrical gadget. If you are carrying any of these then keep them at a place specified by invigilator at your own risk

1. This booklet is your Question Paper. **DO NOT** break seal of Booklet until the invigilator instructs to do so.
2. Fill your Form No. in the space provided on the top of this page.
3. The Answer Sheet is provided to you separately which is a machine readable Optical Response Sheet (ORS). You have to mark your answers in the ORS by darkening bubble, as per your answer choice, by using black & blue ball point pen.
4. Total Questions to be Attempted 80. Part-I : 20 Questions & Part-II : 60 Questions.
5. After breaking the Question Paper seal, check the following:
  - a. There are **13 pages** in the booklet containing question no. 1 to 80 under 2 Parts i.e. Part-I & Part-II.
  - b. Part-I contains total 20 questions of IQ (Mental Ability).
  - c. Part-II contains total 60 questions under 4 sections which are - Section (A) : Physics, Section (B) : Chemistry, Section(C) : Biology & Section (D): Mathematics.
6. Marking Scheme:
  - a. If darkened bubble is **RIGHT answer** : **4 Marks**.
  - b. If no bubble is darkened in any question: **No Mark**.
  - c. **Only for part - II** : If darkened bubble is **WRONG answer**: **-1 Mark (Minus One Mark)**.
7. Think wisely before darkening bubble as there is negative marking for wrong answer.
8. If you are found involved in cheating or disturbing others then your ORS will be cancelled.
9. Do not put any stain on ORS and hand it over back properly to the invigilator.

PART-I

## **IQ (MENTAL ABILITY)**

This section contains **20 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.



10. A plane flying in North-West direction turns clockwise by an angle of  $45^\circ$ . In which direction is it flying now?  
(1) North                   (2) South                   (3) West                   (4) South-west

11. X is brother of Y. B is brother of A. A is mother of X. What is B of Y ?  
(1) Aunt                   (2) Niece                   (3) Nephew                   (4) Uncle

12. Find the missing character from amongst the given alternatives.






**Direction :** (Q.13 & Q.14) : P, Q, R, S, T, U, V and W are sitting round the circle and facing the centre  
P is second to the right of T who is the neighbour of R and V.

S is not the neighbour of U.

V is the neighbour of U.

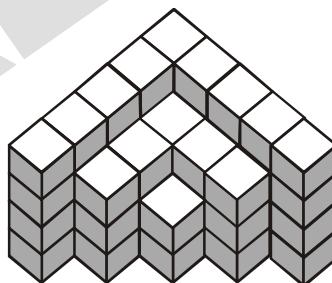
Q is not between S and W. W is between Q and S.



- 15.** Find the value of  $\star + \star + \square$ . If  $\square + \square + \square + \square + \square = 175$  and  $\square \div \star = 5$

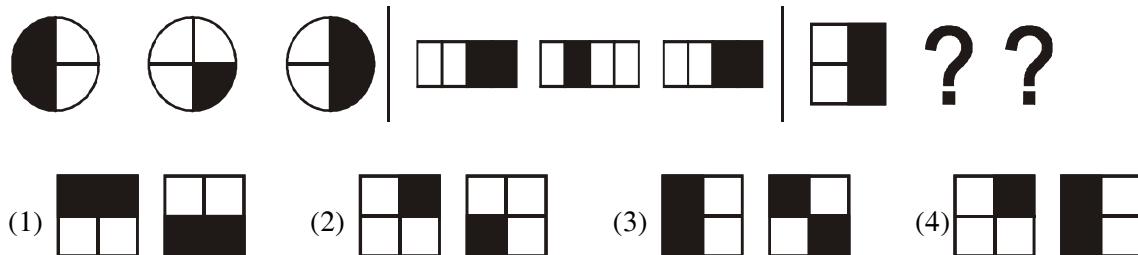
(1) 7      (2) 14      (3) 35      (4) 49

- 16.** How many unit cubes are there in the figure?

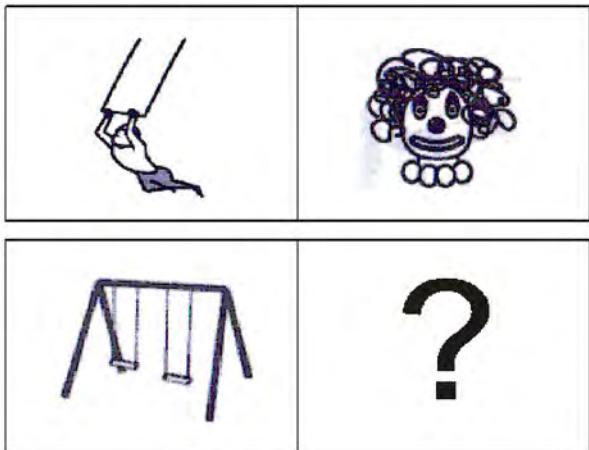




- ### **17. What should come next?**



18. Which figure completes the second pair in the same way as the first pair.

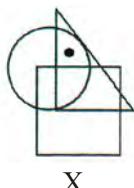


19. Group the following figures into three classes regarding common properties amongst them.


- (1) 4, 7, 9; 2, 5, 8; 1, 3, 6  
(3) 1, 2, 3; 4, 5, 6; 7, 8, 9

- (2) 4, 7, 9; 2, 5, 6; 1, 3, 8  
(4) 1, 2, 3; 4, 7, 9; 5, 6, 8

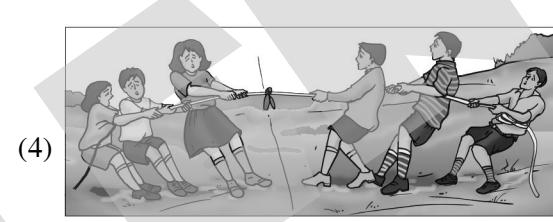
20. In the following question, from amongst the figures marked (1), (2), (3) and (4), select the one which satisfies the same condition of placement of the dot as in the given figure (X)



**PART-II****SECTION-A : PHYSICS**

This section contains **12 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

- 21.** In which of the following figures only pushing force is applied?



- 22.** Work is always done when

- (1) an object moves.
- (2) a force moves an object.
- (3) a force is exerted on an object.
- (4) an object has mass.

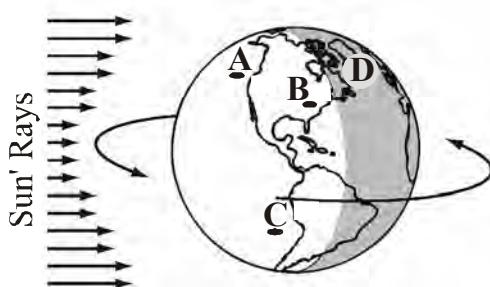
- 23.** An axe is an example of which type of simple machine?

- (1) Screw
- (2) Inclined plane
- (3) Wedge
- (4) Lever

- 24.** A standard bottle opener is an example of which type of lever?

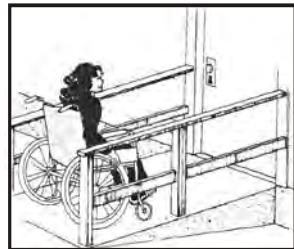
- (1) Lever of the first order
- (2) Lever of the second order
- (3) Lever of the third order
- (4) Lever of the fourth order

- 25.** In the diagram below, which of these locations would enter the night-time side of Earth next?



- (1) A
- (2) B
- (3) C
- (4) D

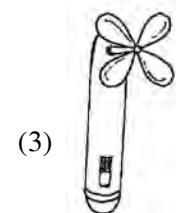
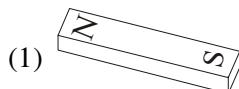
26. The Great Red Spot is a planetary feature that has been observed for hundreds of years. On which planet is the Great Red Spot?  
(1) Venus                    (2) Mars                    (3) Neptune                    (4) Jupiter
27. The illustration below shows a student approaching the door to a building.



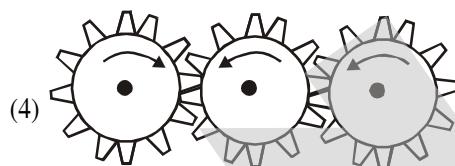
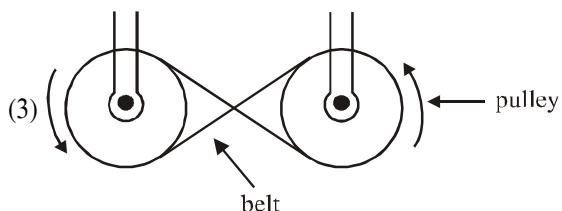
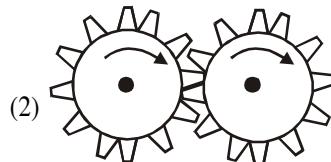
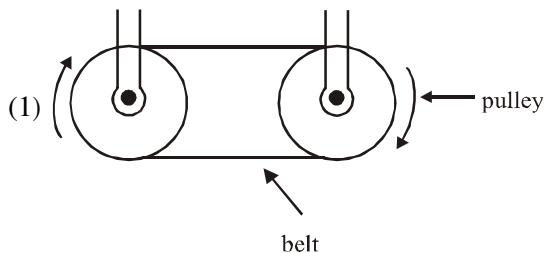
- Which two simple machines are being used to enable the student to reach the door?  
(1) Inclined plane and pulley                    (2) Lever and wheel-and-axle  
(3) Pulley and lever                                (4) Wheel-and-axle and inclined plane
28. Which among the following is the unit of force?  
(1) Newton    (2) Dyne  
(3)  $kg \frac{m}{s^2}$     (4) All are units of force
29. The picture shows Raj pulling the car made of iron with a wand.



Which of these is probably inside the wand?



- 30.** Alisha wants to build a machine for her technology class. To think of ideas, she drew four sketches of moving parts for her machine. Which design will work?



- 31.** All stars appear to move from

  - (1) East to West
  - (2) West to East
  - (3) North to South
  - (4) South to North

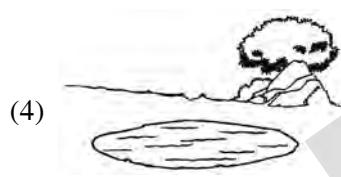
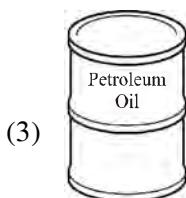
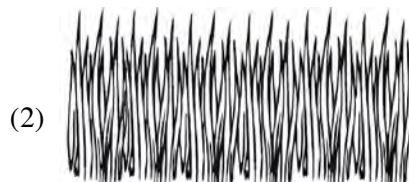
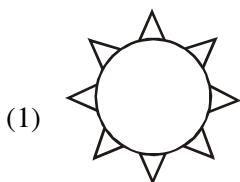
**32.** Which among the following planets has no rings around it?

  - (1) Jupiter
  - (2) Saturn
  - (3) Uranus
  - (4) Mars

## **SECTION-B : CHEMISTRY**

This section contains **11 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

37. Nonrenewable resources are natural resources that cannot be replaced quickly by nature when they get used up. According to this definition, which of these is a nonrenewable resource?



38. Diamond is formed at.....

- (1) high temperature and high pressure
- (2) high temperature and low pressure
- (3) low temperature and high pressure
- (4) low temperature and low pressure

39. The diagram below shows the effect of a river on an area over many years.

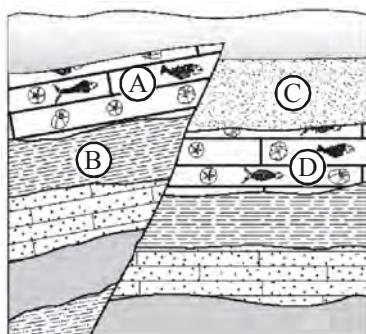


Which process caused the valley to form?

- (1) condensation
  - (2) deposition
  - (3) erosion
  - (4) evaporation
40. The size of crystals in igneous rock can be determined by how fast the magma cools and solidifies. The faster the magma cools, the smaller the crystals. Which sample of granite is formed from magma that is cooled and solidified at the slowest rate?



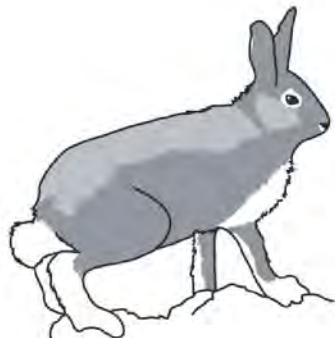
41. The layers of this area do not line up. Which of the following could have caused this?



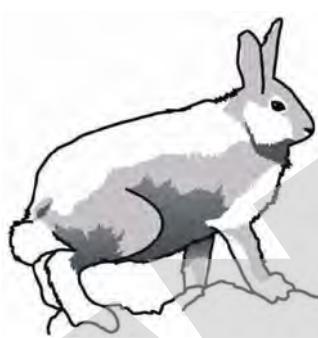



## **SECTION-C : BIOLOGY**

This section contains **12 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.



## Fur in summer



## Fur in winter

Which of the following statements best describes how this change helps arctic hares?

- (1) It lowers their body temperature.      (2) It protects their eyes from sunlight.  
(3) It helps them to move on slippery ice.      (4) It makes them less visible to predators.

- 52.** John has diabetes.

Which of the following should he be careful about eating or drinking?

- (1) Beef                          (2) Eggs                          (3) Milk                          (4) Fruit juice



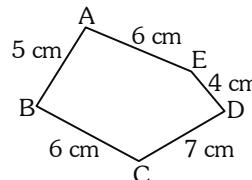
- |                       |                                  |
|-----------------------|----------------------------------|
| (1) Cut plant tissues | (2) Siphon nectar                |
| (3) Sponge up food    | (4) Pierce skin and suck liquids |

## SECTION-D : MATHEMATICS

This section contains **25 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

- 56.** Find the perimeter of the following figure.

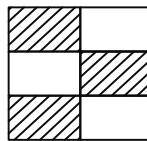
- (1) 23 cm      (2) 25 cm  
 (3) 28 cm      (4) None of these



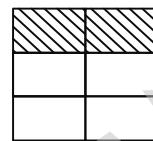
- 57.** Which figure can be made using 3 matchsticks (without breaking the sticks) ?

- (1) Square      (2) Rectangle      (3) Triangle      (4) Circle

- 58.** Which figure represents greater fraction by shaded part ?



(i)

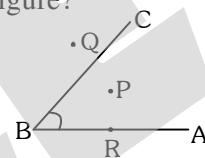


(ii)

- (1) (i)      (2) (ii)      (3) both are equal      (4) None of these

- 59.** Which point is interior to the angle in the following figure?

- (1) P      (2) Q  
 (3) R      (4) Both P & Q



- 60.** A pipe leaks 3.5 gallons of water each hour.

Which table represents the total amount of water leaked at the end of each hour?

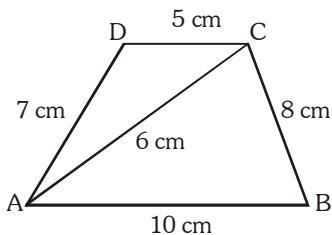
Time(Hours)	Water Wasted (gallons)
1	3.5
2	3.5
3	3.5
4	3.5
5	3.5

Time(Hours)	Water Wasted (gallons)
1	3.5
2	7
3	10.5
4	14
5	17.5

Time(Hours)	Water Wasted (gallons)
1	3.5
2	7
3	21
4	84
5	420

Time(Hours)	Water Wasted (gallons)
1	3.5
2	12.25
3	42.88
4	150.06
5	525.22

61. Find the perimeter of the following figure ABCD.



- (1) 30 cm      (2) 36 cm      (3) 42 cm      (4) 24 cm

62. If two angles of a triangle are equal and third is unequal, then the triangle is

- (1) Isosceles triangle    (2) Equilateral triangle    (3) Scalene triangle    (4) None of these

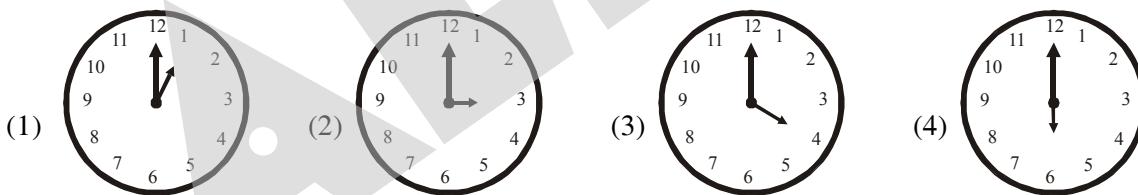
63. Mrs. Joshi will put a fence around her rectangular garden.

- The length of the garden is  $9\frac{5}{6}$  yards.
- The width of the garden is  $5\frac{1}{4}$  yards.

How many yards of fencing does Mrs. Joshi need?

- (1)  $14\frac{6}{10}$       (2)  $29\frac{1}{12}$   
(3)  $29\frac{1}{5}$       (4)  $30\frac{1}{6}$

64. In which clock is the angle between the hour hand and the minute hand less than  $90^\circ$ ?

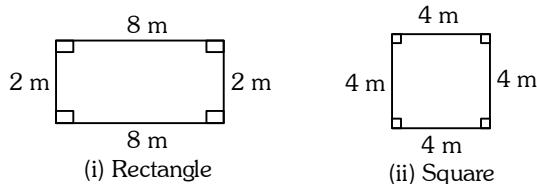


65. Solve

$$92\frac{7}{8} - 49.326 = ?$$

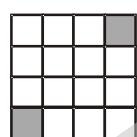
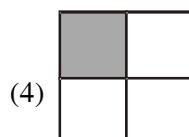
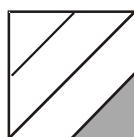
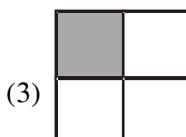
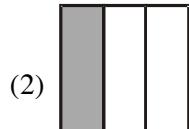
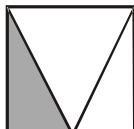
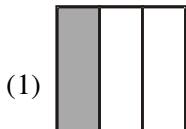
- (1) 40.152      (2) 43.454      (3) 43.549      (4) 57.551

66. Which has greater area ?



- (1) (i)      (2) (ii)      (3) Both are equal      (4) None of these

67. In a right angled triangle, one angle is  $48^\circ$ . Then find the remaining angle.
- 45°
  - 42°
  - 90°
  - Can't be determined
68. Which pair of figures has the same fractional area shaded gray?



69. When an arm of an angle is extended then the measure of angle
- Doubles
  - Triples
  - Remains the same
  - None of these

70.  $2 + \frac{9}{10} + \frac{9}{100} + \frac{9}{1000} + \frac{1}{1000} =$

(1) 3

(2) 2

(3) 2.999

(4) 2.991

71. If 5  can hold 25 litres of water, then 2 such  can hold \_\_\_\_\_ litres of water.
- 5 L
  - 10 L
  - 15 L
  - 20 L
72. Mona spent Rs. 40 and had Rs. 10 left. What fraction of her money had she spent ?

(1)  $\frac{14}{5}$

(2)  $\frac{40}{5}$

(3)  $\frac{4}{5}$

(4)  $\frac{1}{5}$

73. Bob covered a floor with carpet.

Which unit of measure describes how much carpet he used ?

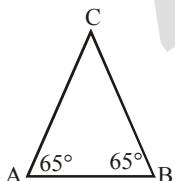
(1) inches

(2) feet

(3) square feet

(4) cubic inches

74. Triangle ABC is shown.



What is the measure of angle C ?

(1) 50°

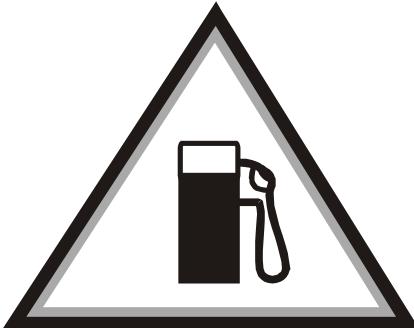
(2) 65°

(3) 90°

(4) 180°

75. Russell bought  $2\frac{1}{8}$  pounds of turkey and  $3\frac{3}{4}$  pounds of roast beef to make sandwiches. Which estimate is reasonable for the amount of meat he bought ?
- 4 pounds
  - 5 pounds
  - 6 pounds
  - 7 pounds

76. Heavy rains caused the water level of a lake to rise eight hundred sixty-four thousandths of a meter. Which number is equivalent to eight hundred sixty-four thousandths?
- (1) 0.0864      (2) 0.864      (3) 86,400      (4) 864,000
77. Bettina has a book with 364 pages. There are 14 chapters in her book. Each chapter has the same number of pages. How many pages are in each chapter of Bettina's book ?
- (1) 25      (2) 26      (3) 27      (4) 28
78. The triangular sign shown below has a height of 14 inches and a base length of 18 inches.



What is the area of this sign ?

- (1) 126 square inches      (2) 252 square inches  
(3) 504 square inches      (4) 756 square inches
79. Which two numbers have an difference of  $2 / 5$  ?
- (1)  $18\frac{2}{3}$  and  $15\frac{1}{10}$       (2)  $18\frac{5}{10}$  and  $18\frac{1}{10}$       (3)  $18\frac{1}{4}$  and  $18\frac{1}{8}$       (4)  $18\frac{5}{4}$  and  $15\frac{1}{2}$
80. Roberto began his homework at 4:25 p.m. He finished it one and a half hours later. At what time did Roberto finish his homework ?
- (1) 5:05 p.m.      (2) 5:55 p.m.      (3) 6:05 p.m.      (4) 6:15 p.m.

**ANSWER KEY**

<b>Que.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>Ans.</b>	2	2	2	2	3	2	4	2	3	1	4	2	3	1	4	2	4	3	2	2
<b>Que.</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>Ans.</b>	3	2	3	2	2	4	4	4	1	1	1	4	2	4	3	1	3	1	3	4
<b>Que.</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>Ans.</b>	2	3	1	3	1	4	2	2	4	3	4	4	3	2	1	3	3	1	1	2
<b>Que.</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>77</b>	<b>78</b>	<b>79</b>	<b>80</b>
<b>Ans.</b>	1	1	4	1	3	3	2	2	3	1	2	3	3	1	3	2	2	1	2	2

## ALLEN RESULT : JEE (MAIN) 2019\*

**5**

Classroom Students Scored **100 PERCENTILE**  
in JEE Main 2019\* and made it to All India Top 15

Highest among all Institutes of India



\*January Attempt

**SAMBIT BEHERA**

Rajasthan State Topper

**JAYESH SINGLA**

Punjab State Topper

**KEVIN MARTIN**

Karnataka State Topper

**ANKIT K. MISRA**

Maharashtra State Topper

**KARTIKEY GUPTA**

Maharashtra State Topper

✓ 37 Classroom Students Score **100** Percentile in Maths

✓ 1650+ Students Score **99** Percentile & Above

✓ 13 Classroom Students Score **100** Percentile in Physics

✓ 239 Students Score **99.9** Percentile & Above

✓ 3 Classroom Students Score **100** Percentile in Chemistry

7 Times All India Rank-1 In Last 9 Years From ALLEN Classroom

AIR 1



Nishita Purohit  
AIIMS 2017

AIR 1



Aman Bansal  
IIT-JEE 2016

AIR 1



Het Sanjay Shah  
NEET 2016

AIR 1



Chitraang Murdia  
IIT-JEE 2014

AIR 1



Tejaswin Jha  
AIPMT 2014

AIR 1



Ayush Goel  
NEET 2013

AIR 1



Lokesh Agarwal  
AIPMT 2010

### Admission Announcement KOTA CENTER (Session 2019-20)

Stream	Course Name (Eligibility)	Batches Start Date	Stream	Course Name (Eligibility)	Batches Start Date
JEE (Advanced)	Nurture (X to XI Moving)	3 April, 15 April	<b>PRE-MEDICAL (NEET-UG, AIIMS)</b>	Nurture (X to XI Moving)	7 April, 21 April
	Enthusiast (XI to XII Moving)	1 April, 8 May		Enthusiast (XI to XII Moving)	1 April, 15 May
	Leader (XII Pass/Appeared)	24 April, 08 May		Leader (XII Pass/Appeared)	8 April, 29 April
JEE (Main)	Nurture (X to XI Moving)	1 April, 15 April	<b>Pre-Nurture &amp; Career Foundation</b>	Achiever (XII Pass/Repeaters)	15 May
	Enthusiast (XI to XII Moving)	1 April, 6 May		For Class VI to X	7 April, 13 May
	Leader (XII Pass/Appeared)	24 April, 6 May		NTSE & Olympiads	

For Further Batch Starting Dates & Registration, Log on to [www.allen.ac.in](http://www.allen.ac.in) or walk-in to ALLEN Center for Application Form



# REGISTER KIYA KYA?

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for Application Form



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SUNDAY  
OPEN

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