

# FIITJEE Admission Test

for students presently in **Class 5 (Paper 1)**

Time: 3 Hours (9:00 am – 12:00 pm)

**CODE: 56-1**

Maximum Marks: 240

## Instructions:

Caution: Class, Paper, Code as given above MUST be correctly marked on the answer OMR sheet before attempting the paper. Wrong Class, Paper or Code will give wrong results.

1. You are advised to devote 35 Minutes on Section-I, 35 Minutes on Section-II, 50 Minutes on Section-III, 30 Minutes on Section-IV and 30 Minutes on Section-V.
2. This Question paper consists of 5 sections. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I	APTITUDE TEST	1 to 12	+3	0
		13 to 18	+4	0
SECTION – II	PHYSICS (PART-A)	19 to 22	+2	0
	CHEMISTRY (PART-B)	23 to 26	+2	0
	MATHEMATICS (PART-C)	27 to 31	+2	0
	BIOLOGY (PART-D)	32 to 36	+2	0
SECTION – III	PHYSICS (PART-A)	37 to 48	+1.5	0
	CHEMISTRY (PART-B)	49 to 60	+1.5	0
	MATHEMATICS (PART-C)	61 to 72	+1.5	0
	BIOLOGY (PART-D)	73 to 84	+1.5	0
SECTION – IV	PHYSICS (PART-A)	85 to 88	+3	0
	CHEMISTRY (PART-B)	89 to 92	+3	0
	BIOLOGY (PART-C)	93 to 96	+3	0
SECTION – V	MATHEMATICS (PART-A)	97 to 102	+3	0
	MATHEMATICS (PART-B)	103 to 108	+3	0

3. Answers have to be marked on the OMR sheet. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
4. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
5. **Before attempting paper write your OMR Answer Sheet No., Registration Number, Name and Test Centre** in the space provided below.
6. **See method of marking of bubbles at the back of cover page for question no. 103 to 108.**

**Note:** Please check this Question Paper contains all **108** questions in serial order. If not so, exchange for the correct Question Paper.

**OMR Answer Sheet No. :** \_\_\_\_\_  
**Registration Number :** \_\_\_\_\_  
**Name of the Candidate :** \_\_\_\_\_  
**Test Centre :** \_\_\_\_\_

For questions **103 to 108**

Numerical based questions single digit answer 0 to 9

**Example 1:**

If answer is 6.

Correct method:

① ② ③ ④ ⑤ ● ⑦ ⑧ ⑨

**Example 2:**

If answer is 2.

Correct method:

① ● ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

SAMPLE PAPER

# Recommended Time: 35 Minutes for Section – I

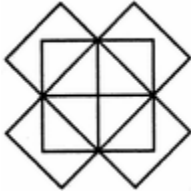
## Section – I

### APTITUDE TEST

This section contains **18 Multiple Choice Questions** number **1 to 18**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

1. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?  
 (A) Friday (B) Sunday  
 (C) Wednesday (D) Saturday

2. Count the number of rectangles in the given figure.



- (A) 20 (B) 18 (C) 16 (D) 15
3. Choose the alternative which is closely resembles the water-image of the given combination.

U4P15B7

- (1) 7B15P4U (2) 7B1P4U  
 (3) 7B1P4U (4) 7B1P4U

- (A) 1 (B) 2 (C) 3 (D) 4
4. Choose the alternative which is closely resembles the mirror image of the given combination.

247596

- (1) 695742 (2) 247596  
 (3) 247596 (4) 695742

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

Space for Rough Work

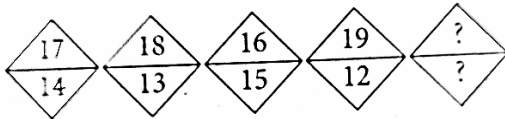
5. Find the next term in the series.  
16, 17, 21, 30, 46, 71, ?  
(A) 99 (B) 107 (C) 112 (D) 126
6. Find the next term in the series.  
4, 23, 122, 621, ?  
(A) 960 (B) 1728 (C) 3120 (D) 2870
7. In a certain code, the word SYSTEM is coded as ZEXXHO then how do we code the word FLOWER?  
(A) MRTAHT (B) LQSAGR (C) OQTZHS (D) LQSZHT
8. A man starts walking from a point and walks 12 kms towards North. He, turns  $90^\circ$  left and walks a distance and stopped. If the distance between initial point and final positions is 13 kms, how much distance he travelled after turning from the North?  
(A) 1 km (B) 5 km (C) 7 km (D) 2 km
9. In a certain code language, the word **AMASSED** is written as **JUHYXIG**. How will the word **KNOBBLY** be written in that language ?  
(A) TVVHGPP (B) SUTGFOA (C) TTUVPQC (D) TVUHHOB
10. In a certain code language **IMPLICIT** is written as **LRWUTPXK**. How will the word **NEWSCAST** be written in that language ?  
(A) LSAZAITMI (B) LSAAZITIM (C) LSASIZTIM (D) None of these
11. Figures given in question follows a set pattern. Determine the pattern and find the correct answer:  
5, 14, 43, 128, ?  
(A) 382 (B) 384 (C) 385 (D) 386
12. In a certain code GARNISH is written as RAGHSIN. How will GENIOUS be written in that code?  
(A) ENGOIUS (B) NEGIOUS (C) NGEOISU (D) GENOISU
13. If H = 8 and HAT = 29, then how BOX = ?  
(A) 46 (B) 43 (C) 42 (D) 41
14. Rana left home and walked 5 km southwards, turned right, then walked 2 km and turned right, then walked 5 km, again turned left, then walked 5 km. How many kilometres will she have to walk to reach her home straight?  
(A) 5 (B) 7 (C) 17 (D) 15

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*Space for Rough Work*

**Directions(Q 15 to Q17):** Amit is son of Rahul. Sarika, Rahul's sister has a son Sonu and a daughter Rita. Raja is the maternal uncle of sonu.

15. How is Raja related to Amit?  
 (A) Nephew (B) Uncle (C) Cousin (brother) (D) None of these
16. How is Rita related to Raja?  
 (A) Sister (B) Daughter (C) Niece (D) None of these
17. How many nephew does Raja have?  
 (A) 1 (B) 2 (C) 3 (D) 0
18. Select from the answer choices given against each question an appropriate number to replace the question mark.



(A)  $\frac{20}{13}$

(B)  $\frac{21}{25}$

(C)  $\frac{15}{16}$

(D)  $\frac{17}{18}$

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*Space for Rough Work*

**Recommended Time: 35 Minutes for Section – II**

**Section – II**

**PHYSICS – (PART – A)**

*This part contains 4 Multiple Choice Questions number 19 to 22. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

19. The time required by moonlight to reach the earth is \_\_\_\_\_  
(A) 1 sec (B) 1.3 sec  
(C) 2 sec (D) 2.3 sec
20. In order of their distances from the Sun, which of the following planets lie between Mars and Uranus?  
(A) Earth and Jupiter (B) Jupiter and Saturn  
(C) Saturn and Earth (D) Saturn and Neptune
21. Which of the following is not a function of a machine?  
(A) To make our work convenient  
(B) To enable us lift more load with less force  
(C) To enable us make the measurement correctly  
(D) To make our work faster
22.  $1A^0$  is equal to  
(A)  $10^{-10}$  m (B)  $10^{-9}$  m  
(C)  $10^{-3}$  m (D)  $10^{-2}$  m

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**Space for Rough Work**

## CHEMISTRY – (PART – B)

*This part contains 4 Multiple Choice Questions number 23 to 26. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

23. Which of the following substance is able to sublime?  
(A) Carbon dioxide (B) Salt  
(C) Water (D) Air
24. Which of the following is NOT a metamorphic rock?  
(A) Marble (B) Sandstone  
(C) Quartzite (D) Slate
25. The full form of LPG is:  
(A) Low quality paraffin gas (B) Liquefied petroleum gas  
(C) Low quality petroleum gas (D) Liquefied paraffin gas
26. Which one of the following statements is correct about wind?  
(A) Wind is produced due to uneven heating on the earth by the sun  
(B) Wind is produced due to even heating on the earth by the sun  
(C) Sun does not effect wind on earth  
(D) Both (A) and (B)

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*Space for Rough Work*

## MATHEMATICS – (PART – C)

This part contains 5 Multiple Choice Questions number 27 to 31. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

27. If Ramya types 180 words in 4 minutes, how many words will she type in 9 minutes?  
(A) 405 (B) 450 (C) 80 (D) 360
28. Two equal sides of a triangle are each 8 m less than twice the third side. If perimeter of triangle is 59 m. Find third side.  
(A) 22 m (B) 15 m (C) 30 m (D) 8 m
29. The value of  $-84 \times 13 + 365$  is equal to  
(A) 627 (B) -727 (C) -627 (D) 727
30. If  $\frac{2}{5}$  of 50% of x is 10, then find x.  
(A) 100 (B) 50 (C) 25 (D) 80
31. The average of the sum of the squares of the first five natural number is  
(A) 10 (B) 11 (C) 12 (D) 9

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Space for Rough Work



## BIOLOGY – (PART – D)

*This part contains 5 Multiple Choice Questions number 32 to 36. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

32. When you see your grandparents are not able to walk properly due to weak bones, what would you suggest them to include in their diet?  
(A) Minerals (B) Proteins  
(C) Carbohydrates (D) Lipids
33. Aerial animals are animals which spend most of their time  
(A) in water (B) in air  
(C) on land (D) underground
34. The feet of frogs and ducks are webbed. This adaptation helps them in  
(A) holding branches tightly (B) swimming in water  
(C) flying in the air (D) grabbing and eating insets
35. Identify the name of an insectivorous plant.  
(A) Zenia (B) Cactus  
(C) Money plant (D) Pitcher plant
36. Deficiency of which of the following causes anemia?  
(A) Iron (B) Calcium  
(C) Iodine (D) Sodium

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*Space for Rough Work*

## Recommended Time: 50 Minutes for Section – III

### Section – III

### PHYSICS – (PART – A)

This part contains **12 Multiple Choice Questions** number **37 to 48**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

37. Which of the following celestial bodies bear, 'The Sea of Tranquility' and 'The Ocean of Storms' ?  
(A) Mars (B) Venus  
(C) Moon (D) Sun
38. Comets moves around the  
(A) Earth (B) Venus  
(C) Sun (D) Jupiter
39. Work done:  
(A) is always positive (B) is always negative  
(C) can be positive, negative or zero (D) none of these
40. Hand span is the distance between the tip of the ..... and the ..... of a fully stretched hand  
(A) first finger, little finger (B) thumb, middle finger  
(C) thumb, little finger (D) middle finger, little finger
41. 1mm is equal to  
(A) 1/10 m (B) 1/100 m  
(C) 1/1000 m (D) 1/10000 m
42. A group of stars that form a beautiful pattern is known as.....  
(A) Constellation (B) asteroids  
(C) meteors (D) comets
43. Out of following which one is Jovian planet?  
(A) Mercury (B) Jupiter  
(C) Earth (D) Venus

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*Space for Rough Work*

44. Which of the following is an example of a wedge?  
(A) Knife (B) screw  
(C) stapler (D) nutcracker
45. To measure the mass of a pack of gum, which one is the most reasonable unit  
(A) milligram (B) gram  
(C) kilogram (D) all are correct
46. Nuclear energy is generated because of  
(A) Joining of nuclei (B) Breaking of nuclei  
(C) Both joining and breaking of nuclei (D) None of the above
47. When the car is moving we can say it possess  
(A) Potential energy (B) Heat energy  
(C) Kinetic energy (D) Electrical energy
48. A particle is projected vertically upward with kinetic energy 150 J, its potential energy at highest point will be, ignoring air resistance  
(A) less than 150 J (B) greater than 150 J  
(C) equal to 150 J (D) none of these

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*Space for Rough Work*

## CHEMISTRY – (PART – B)

This part contains 12 Multiple Choice Questions number 49 to 60. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

49. Earthquakes are measured on  
(A) Ruler (B) Barometer  
(C) Richter scale (D) All of these
50. Sandstone is an example of  
(A) Non-foliated rock (B) Sedimentary rock  
(C) Igneous rock (D) Metamorphic rock
51. For electrical equipment, which is the natural resource?  
(A) Copper (B) Gold  
(C) Bauxite ore (D) None of these
52. Solid → Liquid: Melting:: .....:Freezing  
(A) Gas → Liquid (B) Liquid → Gas  
(C) Solid → Gas (D) Liquid → Solid
53. Rocks that contain fossils are called  
(A) metamorphic rocks (B) igneous rocks  
(C) core (D) sedimentary rocks
54. The Gondwana rock system is famous for which mineral?  
(A) Coal (B) Limestone  
(C) Copper (D) Diamond

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*Space for Rough Work*

55. For jewellery, which is the natural resource?  
(A) Copper (B) Gold  
(C) Bauxite ore (D) None of these
56. Which one of the following are causes of drought?  
(A) Less rainfall (B) High temperature  
(C) Dry winds (D) All of these
57. Which source of energy can be replenished quickly?  
(A) Renewable (B) Non-renewable  
(C) none of these (D) can't say
58. \_\_\_\_\_ is water in its gaseous form.  
(A) Evaporation (B) Water vapour  
(C) Atom (D) Condensation
59. 0 degree Celsius : Freezing point of water:: \_\_\_\_\_ : Boiling  
(A) 110 degree Celsius (B) 100 degree Celsius  
(C) 120 degree Celsius (D) 98 degree Celsius
60. For the Aluminium products, the natural resource is:  
(A) Tree (B) Coal  
(C) Bauxite ore (D) None of these

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*Space for Rough Work*

## MATHEMATICS – (PART – C)

This part contains 12 Multiple Choice Questions number 61 to 72. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

61. How many lines can pass through any three collinear points?  
(A) 0 (B) 1  
(C) 2 (D) infinite
62. Which of the following numbers is divisible by 8?  
(A) 87653234 (B) 78956042  
(C) 64298602 (D) 98741032
63. Which statement is false?  
(A)  $4.69 > 4.6$  (B)  $1061 > 10.601$   
(C)  $1.09 < 1.089$  (D)  $921.6 > 92.1601$
64. A tetrahedron is a pyramid whose base is a  
(A) triangle (B) square  
(C) rectangle (D) quadrilateral
65. If two lines do not meet or intersect they are said to be \_\_\_\_\_.  
(A) parallel (B) perpendicular  
(C) intersecting (D) None of these
66. Distance all round a shape is called  
(A) Area (B) Perimeter  
(C) Volume (D) None of these

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*Space for Rough Work*

67. If  $121 \times 169 = 143 \times x$  then x is  
(A) 143 (B) 121 (C) 13 (D) 11
68. Rs 2000 is lent out at 2% per annum for 10 years under simple interest. Calculate the amount (in Rs).  
(A) 1400 (B) 2400 (C) 200 (D) 1500
69. If the cost price of an article is Rs.12 and the selling price of the article is Rs 15. Find the profit percentage.  
(A) 25% (B) 50% (C) 75% (D) 10%
70. Amit scored 50, 60, 45, 80 and 75 marks in five different subject. The maximum marks in each subject is 100. Find his average percentage of marks.  
(A) 60% (B) 63% (C) 62% (D) 65%
71.  $\frac{12}{13} \div 0 = ?$   
(A)  $\frac{12}{13}$  (B) 0 (C) Does not exist (D) None of these
72. What do you call the triangle whose two of its angles are  $40^\circ$  and  $70^\circ$  ?  
(A) Scalene (B) Obtuse (C) Isosceles (D) Equilateral

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*Space for Rough Work*

## BIOLOGY – (PART – D)

This part contains 12 Multiple Choice Questions number 73 to 84. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

73. The hard-protective covering of brain is called  
(A) Sternum (B) Cranium  
(C) Ribs (D) Vertebral column
74. The main unit of Nervous system is  
(A) Neurons (B) Bones  
(C) Cartilage (D) Platelets
75. A boy wants to build his muscles to look fit and smart. His diet should be rich in which of the following nutrients?  
(A) Proteins (B) Vitamins  
(C) Carbohydrates (D) Fats
76. Match Column I with Column II
- | Column I                                   | Column II                                  |
|--|--|
| P. Bulb                                    | (i) Potato                                 |
| Q. Tuber                                   | (ii) Sweet Potato                          |
| R. Leaf                                    | (iii) Bryophyllum                          |
| S. Root                                    | (iv) Onion                                 |
| (A) P – (iv); Q – (i); R – (iii); S – (ii) | (B) P – (iii); Q – (ii); R – (iv); S – (i) |
| (C) P – (ii); Q – (iii); R – (i); S – (iv) | (D) P – (i); Q – (iii); R – (iv); S – (ii) |
77. Potato and ginger are underground  
(A) root (B) leaf  
(C) stem (D) none of these
78. Which joint allows movement in several directions?  
(A) ball and socket (B) Hinge  
(C) pivot (D) sliding

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*Space for Rough Work*



79. Deer eats only plant products and so is called  
(A) Herbivore (B) Omnivore  
(C) Carnivore (D) Decomposer
80. Which of the following animals has its body covered by a hard shell?  
(A) Snake (B) Earthworm  
(C) Fish (D) Snail
81. The nature of digestive juice in the stomach is  
(A) Acidic (B) Basic  
(C) Neutral (D) All
82. Nonessential parts of flowers are:  
(A) Sepals and petals (B) Sepals and carpels  
(C) Sepals and gynoecium (D) Androecium and gynoecium
83. The process by which seed grows into a new plant is called:  
(A) germination (B) photosynthesis  
(C) respiration (D) circulation
84. What is the name of the substance that gives skin and hair its pigment?  
(A) Cerebrum (B) Iris  
(C) Melanin (D) Quadriceps

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*Space for Rough Work*

**Recommended Time: 30 Minutes for Section – IV**

**Section – IV**

**PHYSICS – (PART – A)**

*This part contains 4 Multiple Choice Questions number 85 to 88. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

85. Asteroids have their orbits between the planets  
(A) Mercury and Venus (B) Earth and Mars  
(C) Mars and Jupiter (D) Jupiter and Saturn
86. The light coming from stars gives the idea of their  
(A) Size (B) Rotational speed  
(C) Mass (D) Temperature
87. The forces generated by a machine are  
(A) magnetic force (B) mechanical force  
(C) gravitational force (D) electrostatic force
88. The door knob of the house is an example of:  
(A) lever (B) inclined plane  
(C) wedge (D) wheel and axle arrangement

*Space for Rough Work*

## CHEMISTRY – (PART – B)

This part contains 4 Multiple Choice Questions number 89 to 92. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

89. The central highlands of the Indian peninsula are composed of \_\_\_\_\_  
(A) from sedimentary and metamorphic rocks  
(B) Igneous and sedimentary rocks  
(C) from igneous and metamorphic rocks  
(D) from sedimentary rocks
90. Pick the odd one out.  
(A) Love  
(B) Smell  
(C) Almonds  
(D) Thoughts
91. The upper layer of the earth is made of  
(A) Core  
(B) Tectonic plates  
(C) Magma  
(D) Fire
92. People studying earthquakes are called:  
(A) Seismologists  
(B) Doctors  
(C) Astrologers  
(D) All of these

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*Space for Rough Work*

## BIOLOGY – (PART – C)

*This part contains 4 Multiple Choice Questions number 93 to 96. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

93. Beri beri is caused due to the deficiency of  
(A) Vitamin A (B) Vitamin B  
(C) Vitamin C (D) Vitamin D
94. The bird which has eyes in the front of its head is  
(A) Owl (B) Sparrow  
(C) Eagle (D) Hen
95. Which of the following is a part of the human ribcage?  
(A) humerus (B) sternum  
(C) femur (D) thigh bone
96. Which of the following parts appears first in a plant?  
(A) root (B) leaves  
(C) shoot (D) all of these

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*Space for Rough Work*

**Recommended Time: 30 Minutes for Section – V****Section – V****MATHEMATICS – (PART – A)**

*This part contains 6 Multiple Choice Questions number 97 to 102. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

97. The least number divisible by each of the number 15, 20, 24, 32 and 36 is  
(A) 1460 (B) 1440 (C) 1480 (D) 1420
98. A machine prints 1500 news papers in 45 min. How many papers will be printed in 2 hrs?  
(A) 3000 (B) 4000  
(C) 2000 (D) 1000
99. If  $\angle A$  of a  $\triangle ABC$  measure  $56^\circ$ ,  $\angle C = 3\angle B$ , find the measure of  $\angle B$ .  
(A)  $62^\circ$  (B)  $31^\circ$  (C)  $93^\circ$  (D)  $56^\circ$
100. The product of three numbers is 29500, if two of the three numbers are 25 and 59 then the third number is  
(A) 15 (B) 18 (C) 22 (D) 20
101. The L.C.M. of 12, 24 and 36 is  
(A) 24 (B) 36 (C) 108 (D) 72
102. Anand saves 55% of his income. If his income is Rs. 11000, then find his expenditure (in Rs).  
(A) 6050 (B) 7450 (C) 4950 (D) 3350

*Space for Rough Work*

**MATHEMATICS – (PART – B)**

**This part contains 6 Numerical Based Questions number 103 to 108. Each question has Single Digit Answer 0 to 9.**

103. A trader has a stock of  $4\frac{3}{4}$  tonne wheat. If he would like to fill it in bags such that each bag contains 50 kg, if number of bags is k then  $\frac{k}{19}$  is
104. Two supplementary angles differ by  $44^\circ$ , if the greater angle is  $x^\circ$  then  $\frac{x}{16}$  is
105. A person crosses a 1200 m long street in 10 minutes if speed is k(km/hr) then  $\frac{k}{1.2} = ?$
106.  $2\frac{1}{3} + 3\frac{1}{2} + 2\frac{1}{6} = ?$
107. If  $\frac{4}{5}$  of a number exceeds its  $\frac{2}{3}$  by 8, If the number is n then  $\frac{n}{12}$  is
108.  $\frac{0.1 \times 0.2 \times 0.3}{0.0015} = ?$

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**Space for Rough Work**

# FIITJEE Admission Test

for students presently in **Class 5 (Paper 1)**

## SAMPLE PAPER ANSWER KEY

1.	A	2.	A	3.	C	4.	D
5.	B	6.	C	7.	A	8.	B
9.	A	10.	D	11.	C	12.	C
13.	D	14.	B	15.	B	16.	C
17.	B	18.	C	19.	B	20.	B
21.	C	22.	A	23.	A	24.	B
25.	B	26.	A	27.	A	28.	B
29.	B	30.	B	31.	B	32.	A
33.	B	34.	B	35.	D	36.	A
37.	C	38.	C	39.	C	40.	C
41.	C	42.	A	43.	B	44.	A
45.	B	46.	C	47.	C	48.	C
49.	C	50.	B	51.	A	52.	D
53.	D	54.	A	55.	B	56.	D
57.	A	58.	B	59.	B	60.	C
61.	B	62.	D	63.	C	64.	A
65.	A	66.	B	67.	A	68.	B
69.	A	70.	C	71.	C	72.	C
73.	B	74.	A	75.	A	76.	A
77.	C	78.	A	79.	A	80.	D
81.	A	82.	A	83.	A	84.	C
85.	C	86.	D	87.	B	88.	A
89.	C	90.	C	91.	B	92.	A
93.	B	94.	A	95.	B	96.	A
97.	B	98.	B	99.	B	100.	D
101.	D	102.	C	103.	5	104.	7
105.	6	106.	8	107.	5	108.	4