

# FIITJEE ADMISSION TEST

UDAYA Plus – Two Year Integrated School Program

UDAYA – Two Year Classroom Program

IQ, SCIENCE & MATHS

Time: 3 Hours

Maximum Marks: 270

**Instructions:**

1. **Caution: Question Paper CODE as given above MUST be correctly marked in the answer OMR sheet before attempting the paper. Wrong CODE or no CODE will give wrong results.**
2. The questions paper consists of 3 Sections:  
**Section – I** ..... IQ (30 questions)  
**Section – II** ..... Science (30 questions)  
**Section – III** ..... Mathematics (30 questions)
3. All the questions are multiple choice questions having only **one correct answer**. Each question carries **+3 marks** for correct answer and **-1 mark** for wrong answer.
4. **You are advised to devote around 1 Hour on each Section as there will be minimum cutoff marks in each Section for qualifying.**
5. Answers have to be marked on the OMR sheet.
6. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
7. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
8. Write your **Name, Registration Number and Test Centre** in the space provided below.

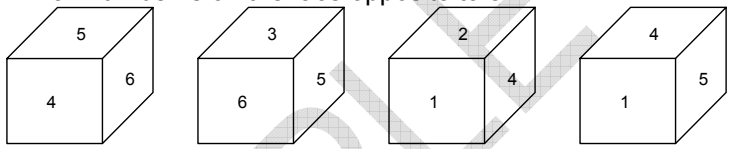
Registration Number :

Name of the Candidate : \_\_\_\_\_

Test Centre : \_\_\_\_\_

***IQ*****SECTION – I****Straight Objective Type**

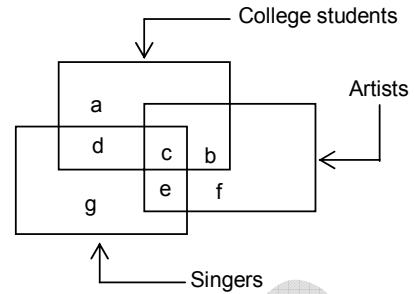
*This Section contains 30 multiple choice questions numbered 1 to 30. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

- What is the sequence if the following are arranged in a Dictionary ?  
 (1) Telegraph (2) Telephone (3) Teleprinter (4) Telemetry (5) Telepathy  
 (A) 14532 (B) 14253  
 (C) 14523 (D) 14325
- Look at the following words. No word should have more than 3 vowels. Which word does not confirm to this rule ?  
 (A) SCARCITY (B) PROGNOSIS  
 (C) COMPLEXITY (D) CONVULSION
- If in the English alphabet, every alternate letter from B onwards is written in small letters while others are written in capitals, then how will the 3<sup>rd</sup> day from Monday be coded ?  
 (A) WeDNesdaY (B) WEdnEsday  
 (C) THURsday (D) None of these
- CLOCK is 42145, LEAN is 2068, CARE is 4690, then NECKLACE is :  
 (A) 80546240 (B) 6054842  
 (C) 80452640 (D) 50842604
- Which number is on the face opposite to 3 ?  
  
 (A) 4 (B) 2  
 (C) 1 (D) 5

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**Space For Rough Work**

**Directions (6 – 10) :** Given questions are based on the following diagram in which three rectangles are interlocked. Each rectangle represents a certain section of population. Different regions of the diagram are marked a to g.



6. College students who are artists but not singers is represented by  
 (A) a (B) b  
 (C) f (D) d
7. Artists who are neither college students nor singers are represented by  
 (A) b (B) d  
 (C) f (D) g
8. College students who are singers but not artists are represented by  
 (A) a (B) b  
 (C) d (D) g
9. College students who are artists as well as singers are represented by  
 (A) c (B) f  
 (C) g (D) b
10. Singers who are artists as well but not studying in college are represented by  
 (A) e (B) c  
 (C) d (D) b
11. Which one does not belong to the group?  
 (A) Tomato (B) Orange  
 (C) Sweet lemon (D) Pineapple
12. Fish : Water :: \_\_\_\_\_ : \_\_\_\_\_  
 (A) Aero plane: Airport (B) Train: Platform  
 (C) Parasite: Organism (D) Tiger: Deer
13. Snake : Reptile :: \_\_\_\_\_ : \_\_\_\_\_  
 (A) Bat : Mammal (B) Cow : Calf  
 (C) Fish : Pond (D) Soldier : Regiment

**Space For Rough Work**

14. Optimistic : Pessimistic :: \_\_\_\_\_ : \_\_\_\_\_  
(A) Difficult : Impossible (B) Birds : Flight  
(C) Tolerating : Disgusting (D) Export : Import
15. Some boys are standing in a queue. If the 10<sup>th</sup> boy from behind is 5 positions behind the 12<sup>th</sup> boy from the front, how many boys are there in the queue?  
(A) 27 (B) 17  
(C) 26 (D) 20
16. A cricket ball is lighter than a hockey ball. A volley ball is lighter than a football. A hockey ball is lighter than a football. Which among these four is the heaviest?  
(A) cricket ball (B) hockey ball  
(C) football (D) volley ball
17. Which of the following does not belong to the group?  
(A) x (B) c  
(C) v (D) Q

**Directions (18–22):** There are six persons A, B, C, D, E and F. C is the sister of F. B is the brother of E's husband. D is the father of A and grandfather of F. There are two fathers, three brothers and a mother in the group.

18. Who is the mother?  
(A) A (B) B  
(C) D (D) E
19. Who is E's husband?  
(A) B (B) C  
(C) A (D) F
20. How many male numbers are there in the group?  
(A) 1 (B) 2  
(C) 3 (D) 4
21. How is F related to E?  
(A) uncle (B) husband  
(C) son (D) daughter
22. Which of the following is a group of brothers?  
(A) ABF (B) ABD  
(C) BFC (D) BDF

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**Space For Rough Work**

**For question (23):** Which one of the letter/s replaces the question mark (?)

23. A C F J ? U  
 (A) L (B) M  
 (C) N (D) O

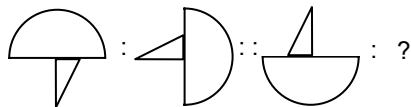
24. Find the missing number

3	6	8
4	5	5
10	3	?
120	90	240

- (A) 4 (B) 6  
 (C) 8 (D) 10
25. Consider the following set of digits : 7 8 9 7 6 5 3 4 2 8 9 7 2 4 5 9 2 9 7 6 4 7  
 How many 7's are preceded by 9 and followed by 6?  
 (A) 3 (B) 1  
 (C) 2 (D) 4

26. TALE : LATE :: ? : CAFÉ

- (A) FACE (B) CAEF  
 (C) CEFA (D) FEAC

27. 

- (A)  (B)   
 (C)  (D) 

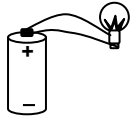
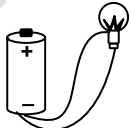
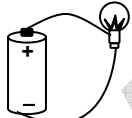
**Directions (28 –30):** Find the odd man out :-

28. (A) hockey (B) football  
 (C) tennis (D) chess
29. (A) cabbage (B) brinje  
 (C) lady finger (D) peaches
30. (A) peddler (B) hawker  
 (C) vendor (D) buyer

**Space For Rough Work**

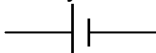


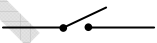
**Science****SECTION – II****Straight Objective Type**

This Section contains 30 multiple choice questions numbered 31 to 60. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

31. Tick the odd one out.  
 (A) Motion of blades of a fan.  
 (B) motion of pedals of bicycle.  
 (C) motion of the pendulum of a pendulum clock.  
 (D) motion of stone tied by a turned and whirling around.
32. SI unit of length is  
 (A) kilometer  
 (B) metre  
 (C) centimeter  
 (D) millimeter
33. An electric switch is used for  
 (A) making or breaking an electric circuit.  
 (B) helping current to pass through wires.  
 (C) providing voltage to the electric circuit.  
 (D) None of these
34. A mirror is  
 (A) a transparent object  
 (B) a translucent object  
 (C) an opaque object  
 (D) a luminous object
35. In which of the following arrangements of circuit, the bulb will glow?  
 (A)  (B) 
- (C)  (D) All of these

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**Space for Rough Work**

36. A student standing in sunlight in an open ground analyses the length of his shadow at various times. At what time of the day will he find the length of his shadow to be the smallest?  
 (A) Early morning (B) Afternoon  
 (C) Evening (D) length of shadow will be the same at all times.
37. A speed of 50 m/s is equivalent to  
 (A) 150 kmph (B) 175 kmph  
 (C) 180 kmph (D) 200 kmph
38. A car is said to be moving in a uniform motion, when the car is travelling  
 (A) in a straight line with constant speed (B) in a straight line with increasing speed  
 (C) in a straight line with decreasing speed (D) in a straight line with zero speed.
39. Which of the following instruments is used to measure the distance moved by a vehicle?  
 (A) Odometer (B) Barometer  
 (C) Ammeter (D) Thermometer
40. A simple pendulum takes 32 seconds to complete 20 oscillations. What is the time period of the pendulum?  
 (A) 1.6 s (B) 0.8 s  
 (C) 3.2 s (D) 640 s
41. Standard symbol of an electric cell is  
 (A)  (B)   
 (C)  (D) 
42. The use of a FUSE in an electrical circuit is to  
 (A) avoid the passage of excess large current in the circuit  
 (B) allow larger current in the circuit.  
 (C) allow larger voltages in the circuit  
 (D) none of the above.
43. Which gas is released in respiration?  
 (A) NO<sub>2</sub> (B) CO<sub>2</sub>  
 (C) CO (D) O<sub>2</sub>
44. Matter occupy space and has  
 (A) colour (B) smell  
 (C) mass (D) none of these

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**Space for Rough Work**

45. Amount of water on earth is  
(A) increasing (B) decreasing  
(C) constant (D) uncertain
46. A change during which heat is given out is called  
(A) exothermic change (B) endothermic change  
(C) can not say (D) none of these
47. Which of the following does not help in preventing soil erosion?  
(A) Plastic cover on the soil (B) Afforestation  
(C) Covering soil by grass and climbers (D) Step farming
48. Which of the following is not a matter?  
(A) Glass (B) Air  
(C) Water (D) Light
49. Which of the following is synthetic fiber?  
(A) Nylon (B) Polyester  
(C) Terylene (D) All of these
50. Air is  
(A) homogeneous mixture (B) heterogeneous mixture  
(C) a gaseous mixture (D) (A) and (C)
51. Which of the following method is used to separate sand from water?  
(A) Sedimentation (B) Crystallization  
(C) Distillation (D) Seiving
52. In which of the following change, new substances are formed?  
(A) Melting (B) Sublimation  
(C) Dissolving (D) Burning
53. Pressure has least effect on  
(A) solids (B) liquids  
(C) gases (D) same in all
54. Brass is  
(A) homogeneous mixture (B) heterogeneous mixture  
(C) alloy (D) (A) and (C) both

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**Space for Rough Work**



55. The indigestible material in food is known as  
(A) Proteins (B) Roughage  
(C) Vitamins (D) Fats
56. Animals which eat other animals are called  
(A) Herbivores (B) Carnivores  
(C) Omnivores (D) Autotrophs
57. Carbohydrates are  
(A) Body-building food (B) Protective food  
(C) Energy-providing food (D) Roughage
58. Small and non-woody plants are called  
(A) Tress (B) Herbs  
(C) Shrubs (D) None of these
59. The ability of living organism to respond to stimuli is called  
(A) Reactivity (B) Sensitivity  
(C) Stimuli (D) None of these
60. Which one of the following is not an organ?  
(A) Hand (B) Foot  
(C) Hairs (D) Stomach

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*Space for Rough Work*

**Mathematics****SECTION - III****Straight Objective Type**

This Section contains 30 multiple choice questions numbered 61 to 90. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

61. Which of the following is not a whole number?  
(A)  $5 - 4$  (B)  $(10 \div 4) + (3 \div 2)$   
(C) 0 (D)  $17 + 18 - 36$
62. Which one is identity element for multiplication?  
(A) 0 (B)  $-1$   
(C) 1 (D) none of these
63. How many prime factors are there in 24?  
(A) 3 (B) 2  
(C) 4 (D) 7
64.  $2 \times (x + y) = 2 \times x + 2 \times y$ , where  $x$  and  $y$  are whole numbers. Which law has been applied in above relation?  
(A) associativity (B) commutative law  
(C) distributivity of multiplication over addition (D) none of these
65. How many lines can you draw in a blackboard?  
(A) one (B) two  
(C) ten (D) none of these
66. The HCF of two consecutive natural numbers  
(A) even number (B) prime number  
(C) odd number (D) none of these
67. The length of a largest chord of a circle whose radius is 5 cm is  
(A) 5 cm (B)  $5\sqrt{2}$  cm  
(C) 10 cm (D) none of these

**Space for Rough Work**

68. Fill in the blanks with proper relation  $\frac{2009}{2008} \dots 1$   
 (A) = (B) >  
 (C) < (D) none of these
69. The value of the expression  $30 + (-30) - (-49) + (-49)$  is  
 (A) 60 (B) -98  
 (C) 0 (D) -60
70. In a class A of 50 students, 45 passed in 1<sup>st</sup> class, in another class B of 40 students, 35 passed in 1<sup>st</sup> class. In which class was a greater fraction of students getting 1<sup>st</sup> class?  
 (A) class A (B) class B  
 (C) same fraction (D) none of these
71. If  $a > 2$ , (a is natural number), then fill in the blank with proper relation,  $1/a \dots 1/2$   
 (A) > (B) <  
 (C) = (D) none of these
72. The length of a rectangular park is twice of its breadth. Then the ratio of its perimeter and its breadth is  
 (A) 1 : 2 (B) 2 : 1  
 (C) 1 : 6 (D) 6 : 1
73. The value of the expression  $\left(\frac{2}{0.5}\right) \times 5 - (20 \div 2) + \left(\frac{42}{0.5}\right)$  is equal to  
 (A) 0 (B) 1  
 (C) 94 (D) 10
74. If  $x \odot p = x$ , (x and p are whole numbers), then we call p is the identity element. Symbol " $\odot$ " stands for usual addition. Then the value of p is  
 (A) 1 (B) x  
 (C) p (D) 0
75. The least number which when divided by 12, 74, 148 and 222 leaves a remainder 6 in each case is  
 (A) 444 (B) 438  
 (C) 450 (D) none of these
76.  $\frac{1180}{190}$  is equal to  
 (A) 5.98 (B) 5.99  
 (C) 6.7 (D) none of these

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**Space for Rough Work**

77. The perimeter of a regular octagon in which each side measuring 10 cm, is  
 (A) 10 cm (B) 80 cm  
 (C) 80 m (D) 10 m
78. If  $(1.5)x - 2.5 - 0.5x = -3$ , then the value of x is  
 (A) 0 (B) 1  
 (C) 0.5 (D) -0.5
79. Which one is false?  
 (A)  $-2009 > -2008$  (B)  $-2008 > -2009$   
 (C)  $-2003 > -2004$  (D)  $-2004 > -2005$
80. Area of a square field is  $16 \text{ m}^2$ . Then the ratio of the one side of square to the area of square field is  
 (A) 4 : 1 (B) 1 : 4  
 (C) 16 : 1 (D) 1 : 16
81. 20, 30, p and 3 are in proportion. Then the value of p is  
 (A) 20 (B) 1  
 (C) 2 (D) 30
82. Rajib is 6 years old and he was born on 1<sup>st</sup> January, 2002. So his age in hours is  
 (A) 52660 hrs (B) 21960 hrs  
 (C) 18760 hrs (D) 52584 hrs
83. The ratio of age of father and his son is 3 : 1. Given the sum of the age of them is 60 years. Then the age of son is  
 (A) 15 years (B) 45 years  
 (C) 20 years (D) none of these
84. If  $x + \frac{x}{10} + \frac{x}{100} + \frac{x}{1000} + \frac{x}{10000} + \frac{x}{100000} = 0$ . Then the value of x is  
 (A) 10 (B) 1000  
 (C) 10000 (D) 0
85. Let  $x \otimes p = 3$ , where  $\otimes$  stands for "+" and p is the identity element. Then the value of x is  
 (A) 0 (B) 1  
 (C) 2 (D) 3

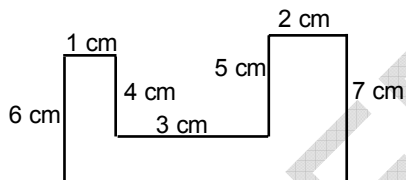
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**Space for Rough Work**

86. A floor is 10 m long and 6 m wide. A square carpet of side 5 m is laid on the floor. What is the area of the floor that is not carpeted?  
 (A) 35 sq. m (B) 10 sq. m  
 (C) 60 sq. m (D) 30 sq. m

87. If  $10y + 80 = 2y$ , then the value of  $y$  is  
 (A) 10 (B) - 10  
 (C) 8 (D) 12

88. Perimeter of the adjacent figure is  
 (A) 30 cm  
 (B) 32 cm  
 (C) 34 cm  
 (D) none of these



89. Animesh wants to cover the floor of a room 4 m wide and 5 m long by squared tiles. If each square tile is of side 0.5 m, then what is the number of tiles required to cover the floor of the room  
 (A) 80 tiles (B) 20 tiles  
 (C) 40 tiles (D) none of these

90. Let  $x = 20$ . then the value of the expression  $\frac{\frac{x}{10} + 9x}{5 + 2x}$  is  
 (A) 3.5 (B) 3.37  
 (C) 3.9 (D) none of these

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**Space for Rough Work**

# FIITJEE ADMISSION TEST

*for students presently in*

**Class-VI**

**IQ, SCIENCE & MATHS**

**ANSWERS**

**SECTION – I (IQ)**

1. C	2. D	3. D	4. C
5. A	6. B	7. C	8. C
9. A	10. A	11. A	12. C
13. A	14. D	15. C	16. C
17. D	18. D	19. C	20. D
21. C	22. A	23. D	24. B
25. C	26. A	27. A	28. D
29. D	30. D		

**SECTION – II (Science)**

31. C	32. B	33. A	34. C
35. C	36. B	37. C	38. A
39. A	40. A	41. A	42. A
43. B	44. C	45. C	46. A
47. A	48. D	49. D	50. D
51. A	52. D	53. A	54. D
55. B	56. B	57. C	58. B
59. B	60. C		

**SECTION – III (Mathematics)**

61. D	62. C	63. B	64. C
65. D	66. C	67. C	68. B
69. C	70. A	71. B	72. D
73. C	74. D	75. C	76. D
77. B	78. D	79. A	80. B
81. C	82. D	83. A	84. D
85. D	86. A	87. B	88. C
89. A	90. D		