

FIITJEE ADMISSION TEST

UDAYA – One 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 : _____

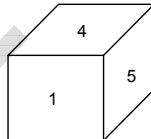
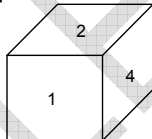
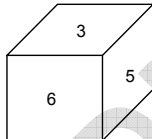
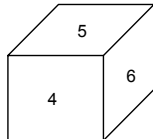
IQ**SECTION – I****Straight Objective Type**

*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 3rd 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 ?

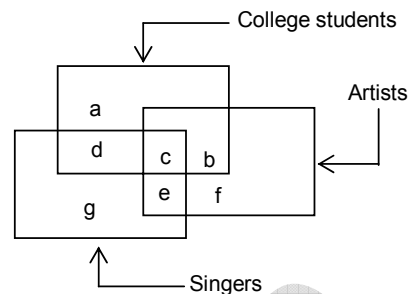


- (A) 4
(C) 1

- (B) 2
(D) 5

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 10th boy from behind is 5 positions behind the 12th 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

Space For Rough Work

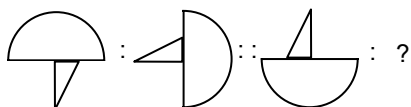
For question (23): Which one of the letter/s replaces the question mark (?)

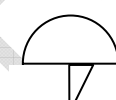
23. A C F J ? U
 (A) L (B) M
 (C) N (D) O

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 :-

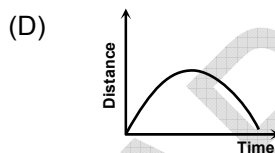
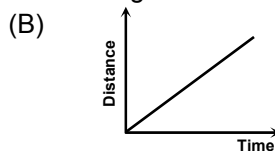
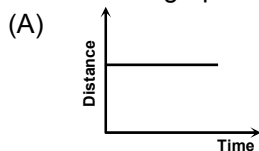
28. (A) hockey (B) football
 (C) tennis (D) chess
29. (A) cabbage (B) brinjal
 (C) lady finger (D) peaches
30. (A) peddler (B) hawker
 (C) vendor (D) buyer

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. Which of the graph represents the motion of a car moving with a constant speed?



32. The heat produced in a current carrying conductor is directly proportional to the value of its resistance. From this information, one can say that the coil of an electric heater must have
 (A) high resistance (B) low resistance
 (C) Any moderate value of resistance (D) can't say
33. Which of the following can form image of objects spread over a large area?
 (A) A concave mirror (B) A convex mirror
 (C) a concave lens (D) A plane mirror
34. White light is composed of
 (A) only white colour (B) infinitely many colours
 (C) seven colours (D) Nine colours
35. Which of these is the most preferable to be worn in summer season?
 (A) White woolen clothes (B) Black woolen clothes
 (C) White cotton clothes (D) Black cotton clothes

Space for Rough Work

36. Which of these is not a heat transfer process?
(A) convection (B) conduction
(C) radiation (D) ionization
37. A thermos flask is polished well
(A) to make it attractive (B) for shining
(C) to absorb all radiations from outside (D) to reflect all radiations from outside.
38. An iron ball at 40°C is dropped in a mug containing water at 40°C . The net heat will
(A) flow from iron ball to water.
(B) not flow from iron ball to water or from water to iron ball.
(C) flow from water to iron ball.
(D) increase the temperature of both.
39. A speed of 90 kmph is equivalent to
(A) 25 m/s (B) 20 m/s
(C) 30 m/s (D) 324 m/s
40. A body moves 4m towards east and then 3 m north. The distance covered by the body is
(A) 7 m (B) 6 m
(C) 5 m (D) 10 m
41. Ram takes 15 minutes from his house to reach his school on a bicycle. If the bicycle has a speed of 2 m/s. Calculate the distance between his house and the school.
(A) 2000 m (B) 1900 m
(C) 1800 m (D) 1700 m
42. In a standard symbol, representing a battery, the longer line represents
(A) The negative terminal (B) The positive terminal
(C) Neutral (D) None of these
43. Silk and wool are
(A) protein fibres (B) carbohydrate fibres
(C) both (A) and (B) (D) none of these

Space for Rough Work

44. Science of raising silk worms so as to obtain silk cocoons, is
(A) apiculture (B) floriculture
(C) silviculture (D) sericulture
45. The process of selecting parents for obtaining special characters is termed as
(A) selection (B) selective breeding
(C) separating (D) rearing
46. The eggs of silkworm are stored in
(A) wooden box (B) metal box
(C) strips of cloth (D) plastic box
47. The formula for potassium hydroxide is
(A) NaOH (B) KOH
(C) K_2O (D) $K(OH)_2$
48. Which of the following is used in fire extinguishers?
(A) Sodium hydroxide (B) Sodium carbonate
(C) Sodium bicarbonate (D) Sodium chloride
49. Which of the following is not an indicator?
(A) Blue litmus (B) Methyl orange
(C) Phenolphthalein (D) Sulphur
50. Calcium hydroxide is also called
(A) Quick lime (B) Marble
(C) Lime stone (D) Slaked lime
51. Which of the following is not a mixture?
(A) air (B) sea
(C) pure water (D) soil
52. In the gaseous states, particles can move:
(A) only in one direction (B) only in fixed path
(C) randomly in all directions (D) upward and downward only
53. Which of the following represents a mixture?
(A) air (B) water
(C) oxygen (D) sugar

Space for Rough Work

54. Black soil does not exhibit one of the properties
(A) porous (B) rich in iron and magnesium
(C) rich in humus (D) contains large amount of sand
55. In the process of photosynthesis food is synthesized in the form of
(A) Glucose (B) Fat
(C) Proteins (D) All of these
56. Finger like projections called villi are present in
(A) Mouth (B) Stomach
(C) Small intestine (D) Large intestine
57. A structure which guards the larynx, prevents the entry of food into the trachea, is called
(A) Bronchi (B) Pleura
(C) Epiglottis (D) Pharynx
58. Transportation of food materials in Amoeba and Paramecium occurs by
(A) Xylem (B) Diffusion
(C) Phloem (D) Roots
59. In plants, materials are transported through
(A) Xylem (B) Phloem
(C) Root hair (D) Xylem and phloem
60. In the process of sexual reproduction
(A) Only male gamete is needed
(B) Both male and female gametes are needed.
(C) Only female gamete is needed
(D) All of the above

Space for Rough Work

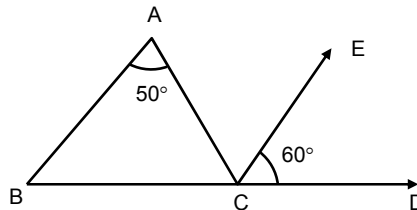
Mathematics**SECTION - III****Straight Objective Type**

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 a proper fraction?
(A) $\frac{9}{10}$ (B) $\frac{29}{10}$
(C) $\frac{23}{15}$ (D) $\frac{15}{5}$
62. Reciprocal of $2\frac{5}{6}$ is
(A) $2\frac{6}{5}$ (B) $6\frac{2}{5}$
(C) $5\frac{2}{6}$ (D) none of these
63. $\frac{1}{0.2}$ is equal to
(A) 0.05 (B) 0.5
(C) 5 (D) 50
64. $\left(-\frac{2}{3}\right)^{-3}$ is equal to
(A) $\frac{81}{8}$ (B) $-\frac{27}{8}$
(C) $\frac{8}{81}$ (D) $-\frac{8}{81}$
65. $\frac{2}{3}$ of a number is less than the original number by 11. The original number is
(A) 30 (B) 33
(C) 36 (D) 28

Space for Rough Work

66. Two complementary angles differ by 6° . The measure of the smaller angle is
 (A) 54° (B) 36°
 (C) 48° (D) 42°
67. After 8 years Raj will be 3 times as old as he was 2 years ago. His present age is
 (A) 7 yrs (B) 9 yrs
 (C) 10 yrs (D) 11 yrs
68. The ages of A and B are in the ratio 7 : 5. After ten years, the ratio of their ages will be 9 : 7. The present age of B is
 (A) 20 yrs (B) 25 yrs
 (C) 30 yrs (D) 35 yrs
69. On a map 0.8 cm represents 8 km. How much distance will be represented by 4 cm?
 (A) 24 km (B) 30 km
 (C) 40 km (D) 44 km
70. 8 men or 12 boys can do a piece of work in 25 days. In how many days can 6 men and 11 boys do it?
 (A) 9 (B) 11
 (C) 13 (D) 15
71. 70% of students in a school are boys. If the number of girls is 240, how many boys are there in the school?
 (A) 440 (B) 480
 (C) 560 (D) 580
72. A T.V. dealer marks a T.V. with a price which is 20% more than the cost price. He allows a discount of 10% on it. His gain percentage is
 (A) 8% (B) 12%
 (C) 14% (D) 15%
73. In the given figure, $\angle A = 50^\circ$, $CE \parallel BA$ and $\angle ECD = 60^\circ$. Then $\angle ACB$ is equal to
 (A) 50°
 (B) 60°
 (C) 70°
 (D) 80°



Space for Rough Work

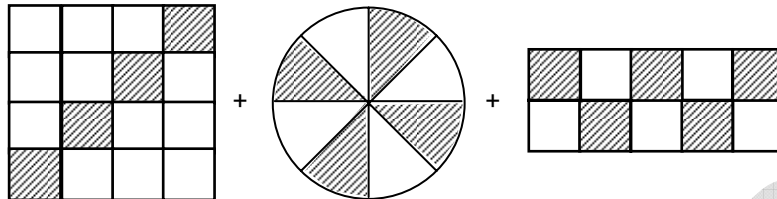
74. The length of a rectangle is 12 m and the length of its diagonals is 15 m. The area of the rectangle is
(A) 108 m^2 (B) 90 m^2
(C) 180 m^2 (D) 118 m^2
75. Each side of an equilateral triangle is $2\sqrt{3}$ cm. Its height is
(A) $\sqrt{3}$ cm (B) $2\sqrt{3}$ cm
(C) 3 cm (D) $1/2\sqrt{3}$ cm
76. The radius of a wheel is 7 cm. In covering 44 km, how many revolutions will it make?
(A) 90,000 (B) 100,000
(C) 140,000 (D) 150,000
77. A sum amounts to Rs. 3584 in 219 days at 4% per annum simple interest. The sum is
(A) 3250 (B) 3260
(C) 3500 (D) 3560
78. Rs. 640 is divided among A, B, C in the ratio 2 : 3 : 5. Then B's share is
(A) 120 (B) 320
(C) 182 (D) 192
79. In an examination it is required to get 36% to pass. A student gets 145 marks and fails by 35 marks. The maximum marks will be
(A) 400 (B) 500
(C) 600 (D) 700
80. A circle is $\frac{7}{11}$ of a square in area. If the diagonal of the square is 7.7 cm, the diameter of the circle is.
(A) 2.45 cm (B) 2.5 cm
(C) 4.9 cm (D) 4.8 cm
81. Shakthi purchased x kg apples. Then she has given $1/3^{\text{rd}}$ kg of the apples to Janani. It is seen that Shakthi had 3 kg apples in her hand, then the value of x is
(A) $4\frac{1}{2}$ (B) $\frac{9}{4}$
(C) $\frac{9}{3}$ (D) none of these

Space for Rough Work

82. Shiva made a rectangular shaped biscuit using 10 squares shaped biscuits. If the area of the rectangle is 1000 cm^2 . Then the area of each square is
 (A) 1000 (B) 100
 (C) 10 (D) none of these

83. A square is divided as 4 equal triangles (with same area). If the area of the square is 16 cm^2 , then the sum of the areas of two triangles are
 (A) 16 (B) 4
 (C) 8 (D) 2

84.



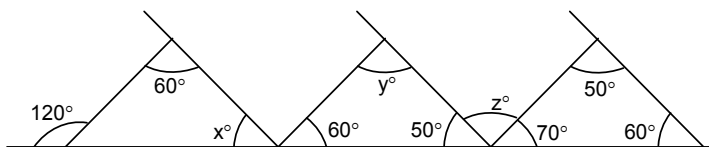
[This can be represent by $4/16$]

- (A) $\frac{1}{12}$ (B) $1\frac{1}{4}$
 (C) $\frac{5}{2}$ (D) $1\frac{5}{4}$
85. By joining two triangles, if we are able to form a rectangle and if the area of the triangles of each of then are 4 cm^2 , then the area of rectangle is
 (A) 8 (B) 4
 (C) 2 (D) 16
86. A car covers a distance of 89.1 km in 2.2 hours. Then how much distance it can cover by 10 hours
 (A) 405 km (B) 40.5 km
 (C) 4.05 km (D) 4050 km
87. If a number is multiplied by an another number, then in the result we are getting the twice the first numbers, then the second number is
 (A) 12 (B) $1/2$
 (C) 4 (D) none of these

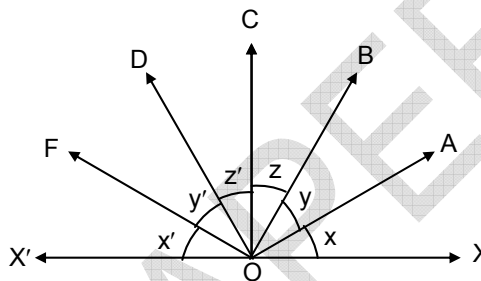
Space for Rough Work

88. In a right angled triangle, if one of the angle is 45° , then what are the other angles
 (A) $90^\circ, 45^\circ$ (B) $20^\circ, 135^\circ$
 (C) $45^\circ, 70^\circ$ (D) none of these

89. In the given figure, the sum of the angles $(x + y + z)$ is equal to
 (A) 180°
 (B) 190°
 (C) 170°
 (D) none of these



90. In the given figure, the sum of the angles $((x + y + z) + (x' + y' + z'))$ is equal to
 (A) 190°
 (B) $3x^\circ$
 (C) 180°
 (D) $3(x + y + z) - 180^\circ$



Space for Rough Work

FIITJEE ADMISSION TEST

for students presently in

Class-VII

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

SECTION – III (Mathematics)

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