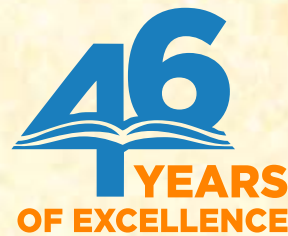




NARAYANA
IIT-JEE/NEET/FOUNDATION

JAIPUR
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N-ASAT

NARAYANA ADMISSION & SCHOLARSHIP APTITUDE TEST

SAMPLE TEST PAPER

CLASS 8 (MOVING TO 9)

Your Gateway to Desired Success in
JEE (Main+Adv) / NEET

GENERAL INSTRUCTIONS:

This test paper contains **75 Multiple choice questions**. Each questions have four choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct. For every correct answer **4 marks** are awarded and for wrong answer there is a negative marking of **1 mark**. No marks awarded for unattempted questions.

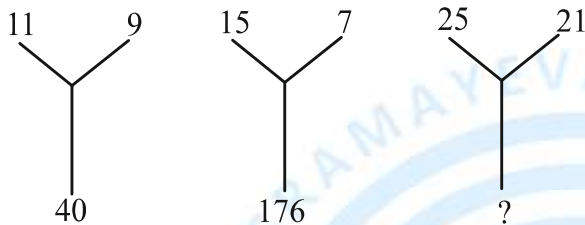
REASONING ABILITY

1. Identify the missing number in the following sequence:

2, 17, 52 _____, 206

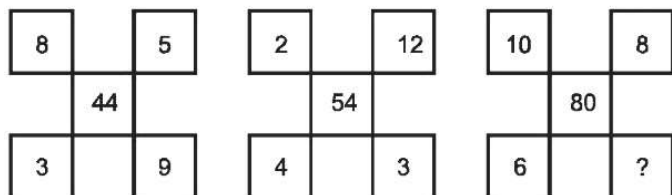
- (A) 73 (B) 85
(C) 113 (D) 184

2. Select the missing number:



- (A) 184 (B) 210
(C) 241 (D) 425

3. Find the missing number:



- (A) 13 (B) 14
(C) 12 (D) 18

4. Which of the given alternative is the mirror image of REASON, if the mirror is placed below the word?

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

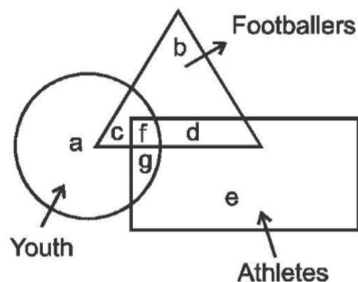
5. If ' Σ ' means 'x', ' δ ' means ' \div ', ' σ ' means '+' and ' ∞ ' means '-' then evaluate the following expression using standard operator precedence. $56 \delta (6 \sigma 8) \Sigma 4 \infty 1$

- (A) 52 (B) 24
(C) 15 (D) 43

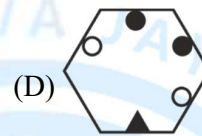
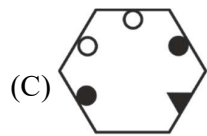
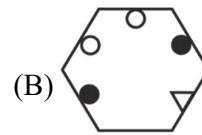
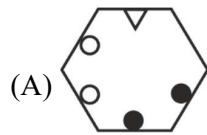
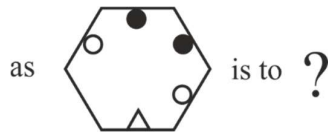
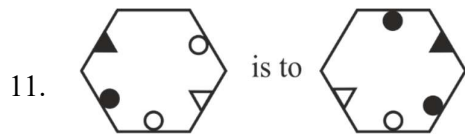
6. Find the alphabet that will replace '?'

I	2	2	3	1	5
II	3	4	2	4	2
III	H	P	I	?	Y

- (A) A (B) D
(C) O (D) N
7. If A means ' \div ' B means ' $-$ ', C means ' \times ' then find the value of following equation $46A2B3C4 = ?$
(A) 34 (B) 23
(C) 17 (D) 11
8. Facing towards south, Ashok started walking and turned left after walking 30 m, he walked 25 m and turned left and walked 30 m. How far is he from his starting position and in which direction:
(A) At the starting point (B) 25 m west
(C) 25 m east (D) 30 m east
9. In the following letter sequence, some of the letters are missing. These are given in order as one of the alternatives below. Choose the correct alternative.
 $\alpha\beta_ \alpha\alpha_ \beta\beta\beta_ \alpha\alpha\alpha\alpha_ \beta\beta\beta\ldots$
(A) $\alpha\beta\beta\alpha$ (B) $\beta\alpha\beta\alpha$
(C) $\alpha\alpha\alpha\beta$ (D) $\alpha\beta\alpha\beta$
10. In the figure, the circle represents youth, the triangle represents footballers and the rectangle represents athletes. Which letter(s) represent(s) athletes among youths who are not footballers?



- (A) g (B) g and c
(C) f (D) f and d



12. How many 7's are there in following number sequence each of which is immediately preceded by 8 and not immediately followed by 2?

5 8 7 1 2 8 1 8 2 2 7 8 2 8 7 8 5 7 8 7 2 1 3

- (A) One (B) Two (C) Six (D) Four
13. Sarita Introduced a boy as the son of the daughter of the father of her uncle. The boy is sarita's ____.
- (A) Brother (B) Son (C) Uncle (D) Son-in-law

Direction for (Question 14 - 16)

Seven Villages A, B, C, D, E, F and G are situated as following

E is 2km to the West of B

F is 2km to the North of A

C is 1km to the West of A

D is 2km to the South of G

G is 2km to the East of C

D is exactly in the middle of B and E

14. Which two villages are farther from one another?

- (A) F – E (B) G – E
(C) D – C (D) F – B

15. How far E and F?

- (A) 5km (B) $\sqrt{26km}$ (C) 4 km (D) $\sqrt{20km}$

16. A is in the middle of which two villages

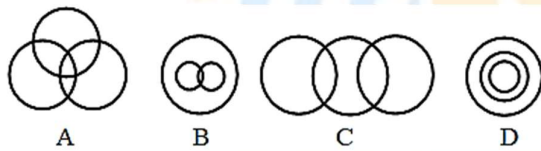
- (A) E – G (B) E – C
(C) G – C (D) F – G

17. A, B, C, D and E are sitting on a bench. A is sitting next to B, C is sitting next to D, D is not sitting next to E, who is sitting on the left end of the bench. C is on the second position from the right. A is to the right of B and E. Counting from the left in which position is A sitting?

- (A) 2
(B) 3
(C) 5
(D) Cannot be determined from the given conditions

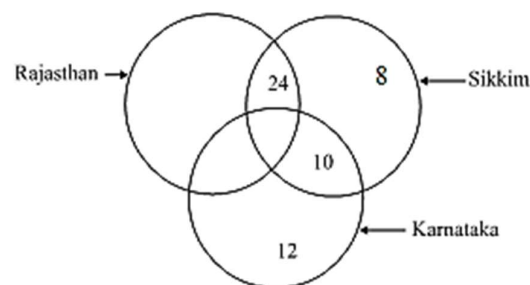
18. Four diagrams marked A, B, C and D are given below. The one that best illustrates the relationship among three given classes:

Women, Teachers, Doctors



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

Direction (Question 19 - 20) – There are three circles in the following diagram. A total number of 100 persons were surveyed and the number in the diagram indicates the number of tourists who visited different states. 46 tourists visited Sikkim and 42 tourists visited Karnataka.



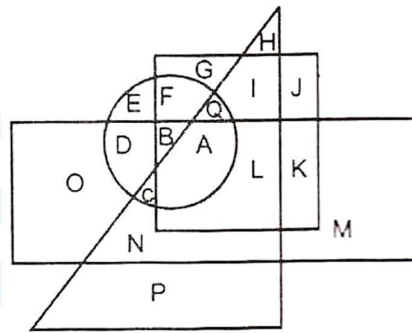
19. How many tourists have visited at least two states?

- (A) 46 (B) 50
(C) 54 (D) 58

20. How many tourists have visited only two states?
 (A) 46 (B) 50 (C) 54 (D) 96
21. If BREAKTHROUGH is coded as EAOUHRBRGHKT, DISTRIBUTION will be coded:
 (A) STTIBUDIONRI (B) TISTBUONDIRI
 (C) STTIBUONRID I (D) RISTTIBUDION

22. In the following diagram, there are four inter locked figures of a circle, a square, a triangle and a rectangle representing number of students passing in English, Maths, Science and Hindi, respectively. Different regions of the diagrams are also lettered from A to Q.

Now consider the following statements:



Statements:

- I. There is no letter that represents a student who passed in all the four subjects.
 II. There are only two letters that represent a student who passes on three subject only.
 Which of the above statements is/are correct?
 (A) I only (B) II only
 (C) Both I and II (D) Neither I and II
23. If $P \$ Q$ means P is the brother of Q; $P \# Q$ means P is the mother of Q; $P * Q$ means P is the daughter of Q in $A \# B \$ C * D$; who is the father?
 (A) D (B) B (C) C (D) Data is inadequate

24. How many points will be on the face opposite to the face which contains 2 points?



- (A) 1 (C) 4 (B) 5 (D) 6
25. Pointing to a photograph of a boy Mahesh said, "He is the son of the only son of my mother." How is Mahesh related to that boy?
 (A) Brother (B) Uncle
 (C) Cousin (D) Father

PHYSICS

26. Which of the following is a non – contact force?
(A) Friction (B) Muscular force
(C) Magnetic force (D) Normal force
27. The Frictional force:
(A) Opposes the relative motion of a body
(B) May cause the sliding of a body
(C) Is a non – contact force
(D) Acts perpendicular to the direction of motion of the body
28. The relation between frequency (f), wave velocity (v) and wavelength λ is:
(A) $V = f \lambda$ (B) $V = \frac{f}{\lambda}$
(C) $\lambda = \frac{f}{V}$ (D) $f = V \lambda$
29. The relation between the S.I. unit of force and the weight of 1 kg mass is:
(A) 1 kg f = 1 N (B) 1 kg f = 0.98 N
(C) 1 kg f = 9.8 N (D) 1 N = 9.8 kg f
30. The pitch of sound depends on
(A) Frequency (B) Amplitude
(C) Intensity (D) Loudness
31. Arrange the following types of friction forces in decreasing order: -
(A) Rolling, Static, Sliding (B) Rolling, Sliding, Limiting
(C) Limiting, Sliding, Rolling (D) Sliding, Static, Rolling
32. The specially designed shape of the objects like aeroplane, boats are made to:
(A) Increase the friction (B) Reduce the friction
(C) Increase the speed (D) Decrease the speed
33. The hearing range of human ear is:
(A) 20 Hz to 20,000 Hz (B) Less than 20 Hz
(C) More than 20,000 Hz (D) 20 Hz to 20,000 KHz

34. The pressure at any point in a liquid at rest depends only on the _____ of the liquid.
(A) Colour (B) Mass
(C) Shape of container (D) Depth
35. A block of mass 5kg placed on rough horizontal surface is acted by a 15 N force, find Frictional force acting on block is:
($\mu_k = 0.4, \mu_s = 0.5$)
(A) 13 N (B) 24.5 N
(C) 15 N (D) Zero

CHEMISTRY

36. What is the primary source of minerals in the soil?
(A) Plants (B) Animals
(C) Parent rock (D) Plants and rock
37. Which of the following is not a vital constituent of petroleum?
(A) Butane (B) Liquified petroleum gas
(C) Jet fuel (D) Coal
38. Which of the following is not an inflammable substance?
(A) Alcohol (B) Wood
(C) Ethanol (D) Liquified Petroleum Gas
39. Which of the following is not an ideal fuel characteristic?
(A) Readily available (B) Easy to transport
(C) High calorific value (D) Costly
40. What is the source of coal formation?
(A) Plants (B) Marine Life
(C) Both plants and marine life (D) Rock
41. Which of the following gas is produced during combustion of hydrocarbon when there is insufficient supply of oxygen
(A) CO (B) CO₂
(C) Both CO and N₂ (D) N₂

42. Which of the following is used as an industrial fuel?
(A) Coal tar (B) Nitrogen gas
(C) Carbon dioxide gas (D) Hydrogen gas
43. The substances which have very low ignition temperature will
(A) Catch fire easily (B) Will not catch fire
(C) Catch fire after some time (D) Catch fire after long time
44. What is the primary constituent of liquefied petroleum gas and compressed natural gas respectively?
(A) Butane and hexane (B) Methane and hexane
(C) Methane and butane (D) Butane and methane
45. Purest form of carbons is :
(A) Coal (B) Charcoal (C) Coke (D) Coal - tar

BIOLOGY

46. First step in agricultural practices is:
(A) Sowing seeds (B) Irrigation (C) Ploughing (D) Weeding
47. 'Droplet infection' is not found in which of the following disease -
(A) Influenza (B) Diphtheria (C) Common cold (D) Tetanus
48. Hot spots are those area where –
(A) Endemic Species is found
(B) Minimum biological diversity is observed
(C) Climatic temperature is high
(D) Maximum biological diversity is found
49. Sheela observed that the Mango pickle her grand-mother makes does not get spoiled for a long time. What do you think prevents them from being spoiled?
Mark the correct alternatives.
a) Pickle is preserved through pasteurization
b) Salt or acid preservatives are added to pickles.
c) Use of oil & vinegar prevents spoilage.
d) Mangoes are boiled before making pickles.
(A) Only a, & b (B) Only c & d (C) All a, b, c & d (D) Only b & c

50. Endangered plant species are conserved through:
- (A) Herbarium (B) Gene library
(C) Gene Bank (D) Reducing pollution
51. What is false for weeds
- (A) Weedicides are used to control weeds
(B) Some weeds may be poisonous for animals & human beings
(C) Weeds should be removed after they produce flower & seeds
(D) Weeds compete with crop plants for nutrition
52. Match the following:
- | A | B |
|--|----------------|
| I. Providing water to the crops | (a) Winnowing |
| II. A rabi crop that is also one of the pulses | (b) Paddy |
| III. A kharif crop which is first grown in a nursery | (c) Gram |
| IV. A process of separating the grain from chaff | (d) Irrigation |
- (A) I – d, II – c, III – b, IV – a
(B) I – b, II – a, III – c, IV – d
(C) I – a, II – b, III – c, IV – d
(D) I – a, II – c, III – b, IV – d
53. What is most effective way to conserve plant and animal diversity of an area?
- (A) Tissue culture (B) Zoological garden
(C) Biosphere reserves (D) Seed banks
54. Bark of which plant yields famous drug of malaria:
- (A) *Cinchona* (B) *Quercus*
(C) *Betula* (D) *Eucalyptus*
55. BCG vaccine is for–
- (A) Emphysema (B) Pneumonia
(C) Polio (D) Tuberculosis

MATHEMATICS

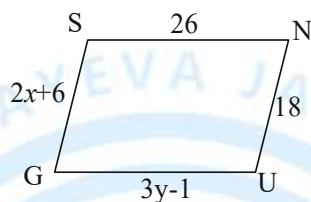
56. By what number should $\left(\frac{-3}{5}\right)^5$ be divided to get $\left(\frac{-3}{5}\right)^{-2}$?

- (A) $\left(\frac{-3}{5}\right)^7$ (B) $\left(\frac{-3}{5}\right)^{-7}$ (C) $\left(\frac{-2}{6}\right)^6$ (D) $\left(\frac{-3}{5}\right)^{-8}$

57. If $2a - 3 = 5$, $3b + 1 = 2$ then $3b - 2a$.

- (A) -3 (B) -7 (C) 7 (D) -9

58. The following figure GUNS is a parallelogram find x and y.



- (A) $x = 9, y = 6$ (B) $x = 6, y = 9$
 (C) $x = 6, y = 6$ (D) $x = 9, y = -6$

59. The mean of 6, 7, 13, 26, 24, 8 and 7 is

- (A) 10 (B) 11 (C) 13 (D) 15

60. If $3(x - 2)^2 = 507$ then $x = ?$

- (A) 13 (B) 12 (C) 15 (D) 14

61. What is the value of $\sqrt[3]{3.375}$?

- (A) 1.5 (B) 2 (C) 2.5 (D) 3

62. "12 less than 10 times x" is written as

- (A) $12 - 10x$ (B) $10x - 12$ (C) $12 < 10x$ (D) $10x + 12$

63. The value of multiplicative inverse of $\left(\frac{5}{7} \times \frac{8}{3}\right)$ is

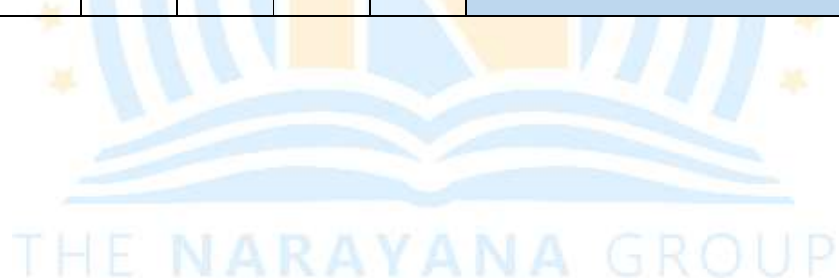
- (A) $\frac{5}{7}$ (B) $\frac{15}{56}$ (C) $\frac{21}{40}$ (D) $\frac{40}{21}$

64. The average of two numbers is P. If one number is Q. Then other number is

- (A) $2Q$ (B) $2P$ (C) $P - Q$ (D) $2P - Q$

65. The angles of a quadrilateral are in the ratio 2 : 3 : 5 : 8. The smallest angle is
(A) 60° (B) 40° (C) 20° (D) 50°
66. Data represented using circles is known as:
(A) Bar graph (B) Histogram (C) Pictograph (D) Pie chart
67. $\sqrt{196} + \sqrt{484} - \sqrt{841} = ?$
(A) 5 (B) 6 (C) 7 (D) 8
68. If the volume of a cube is 1728 cm^3 then the side of the cube (in cm) is
(A) 12 (B) 13 (C) 14 (D) 15
69. If $x = 3$ find the value of $2x^2 - 4x + 5$
(A) 10 (B) 11 (C) 12 (D) 20
70. Rational numbers are commutative with respect to:
(A) Addition (B) Subtraction
(C) Division (D) All basic mathematical operation.
71. If $\frac{7}{x} + 35 = \frac{1}{10}$, then $x =$
(A) $\frac{-23}{349}$ (B) $\frac{23}{349}$ (C) $\frac{-70}{349}$ (D) $\frac{70}{349}$
72. In a square ABCD, $AC = (7x - 2) \text{ cm}$ and $BD = (11x - 10) \text{ cm}$ then AC is:
(A) 11 cm (B) 9 cm (C) 12 cm (D) 8 cm
73. Monthly salary of a person is ₹ 15000. The angle representing his expenses on food and house Rent on a pie chart is 60° . The amount he spend on food and house rent is:
(A) ₹ 5000 (B) ₹ 2500 (C) ₹ 6000 (D) ₹ 9000
74. Which of the following is not a Pythagorean Triplet?
(A) 3, 4, 5 (B) 5, 12, 13 (C) 1, 2, 3 (D) 6, 8, 10
75. If a number is doubled, then its cube increased to:
(A) 2 times (B) 4 times (C) 8 times (D) 9 times

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

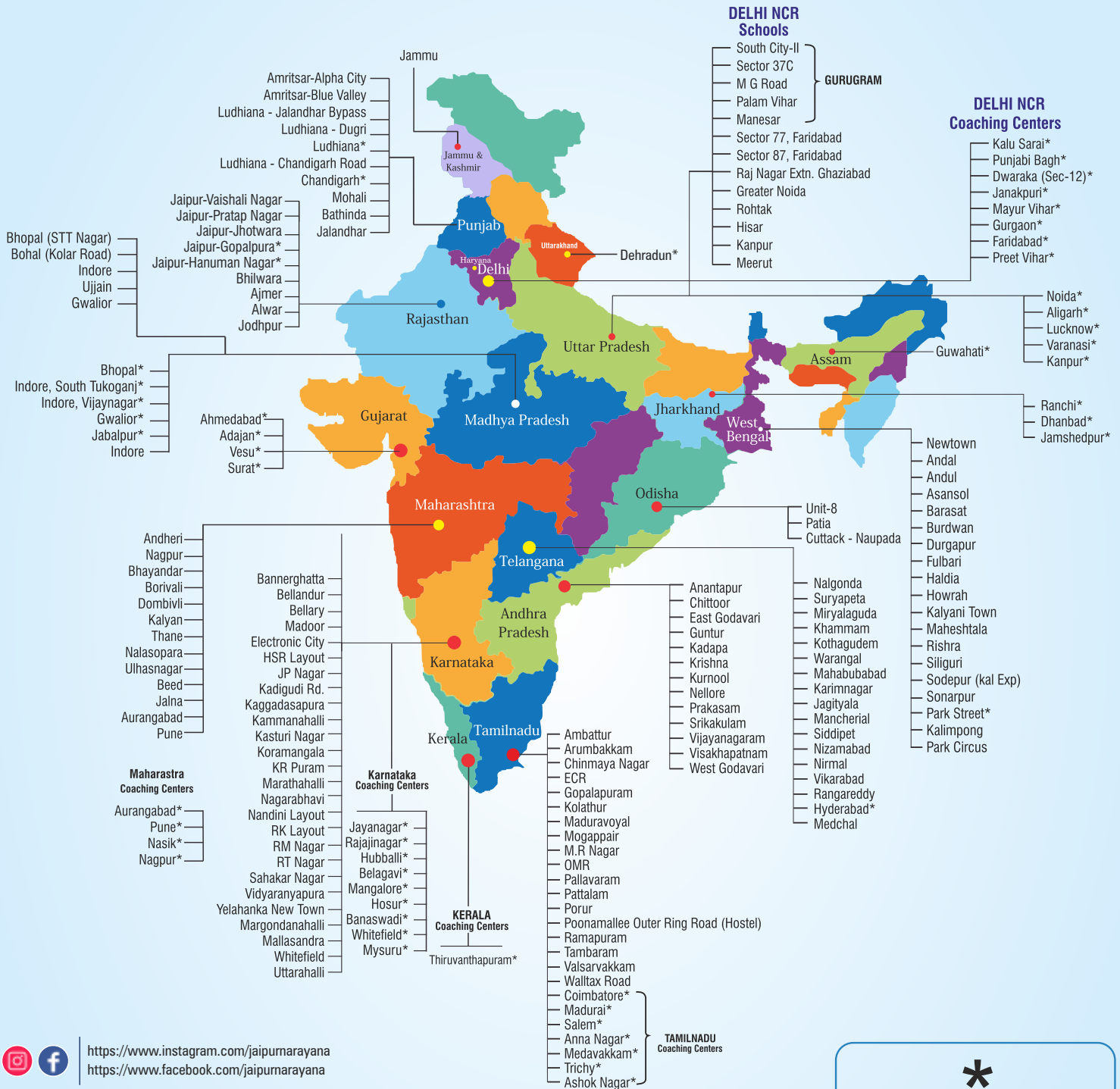


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www.narayanajaipur.com



jaipur@narayanagroup.com



0141-4848000

Corporate Office : 10th Floor, Melange Towers Sy No.80 to 84, Patrika Nagar, Madhapur, Hyderabad, Telangana 500081