



NSAT-2025

CLASS – VIII (Mental Ability, Mathematics, Physics, Chemistry & Biology)
(Class VIII Moving to IX)

NARAYANA SCHOLASTIC APTITUDE TEST (NSAT)

SAMPLE PAPER

Time: 2:00 Hr.

Maximum marks: 300

IMPORTANT INSTRUCTIONS:

1. The test Booklet consists of 75 questions. The maximum marks are 300.
2. There are five parts in the question paper of MAT (Q. No. 1 to 15) Mathematics (Q. No. 16 to 30), Physics (Q. No. 31 to 45), Chemistry (Q. No. 46 to 60) & Biology (Q. No. 61 to 75) having 75 questions. Each question is allotted +4 (four) marks for each correct response & –1 for each incorrect answer
3. Mark only one correct answer out of four alternatives.
4. Use Blue/Black Ball Point Pen only for writing particulars/markings.
5. Use of Calculator is not allowed.
6. Dark the circle in the space provided only.
7. Use of white fluid or any other material which damage the answer sheet, is not permissible on the Answer Sheet.

TO BE FILLED IN CAPITAL LETTERS

NAME OF THE STUDENT: _____

FATHER'S NAME: _____

CONTACT NUMBERS: _____ SCHOOL NAME : _____

ROLL NO.: _____ TEST CENTRE : _____

have read all the instructions and shall abide by them

.....

Signature of the Candidate

I have verified all the information filled in by the Candidate

.....

Signature of the Invigilator



EDUCATION IS INTEGRAL FOR GROWTH AND DEVELOPMENT

Education is integral for the growth and development of an individual. The expectation from an educational institute is always about making the society better for all and to bring out one's true Potential in the service of mankind.

At Narayana, we believe that a student's education is complete only when we are able to contribute towards his/her overall development besides imparting knowledge based and career oriented training.

With an aim to provide top of the league training to students to excel in every sphere of their lives, Narayana Group has been focusing on result oriented inputs.

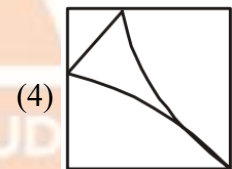
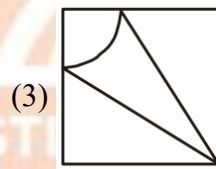
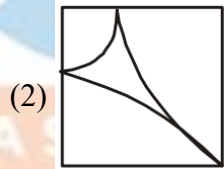
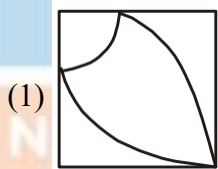
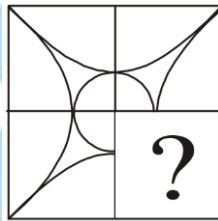
Narayana's courses have been designed to cater to all the needs of the aspirants to help them excel in various competitive as well as Board examinations. Innovative strategies and techniques adopted in our centres keep our students abreast of the ever-changing pattern of top level Engineering/Medical Entrance Exams. As a result, Narayana's time-tested learning formulae are percolating to far-flung corners of India to benefit students from all backgrounds.

"Footprints on the sands of time are not made by sitting down". Today we rededicate the last 4 decades of our success to your dreams. I wish all our students a very successful academic year ahead.

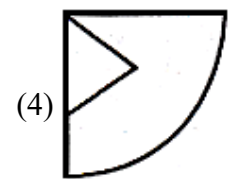
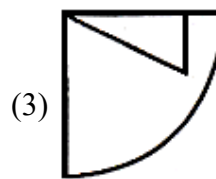
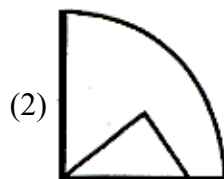
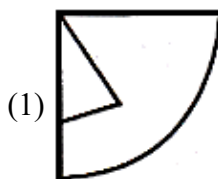
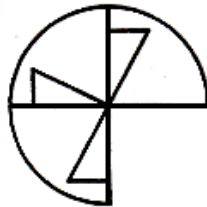
Dr. P. NARAYANA
Founder, Narayana Group

MENTAL ABILITY

1. 3, 12, 27, 48, 75, 108, (?)
 (1) 147 (2) 162 (3) 183 (4) 192
2. BEH, KNQ, TWZ?
 (1) IJL (2) CFI (3) BDF (4) ADG
3. In a certain code ABHIJIT is written as CEJLLLV. How will BROTHER be written in the same code?
 (1) ETRVKGU (2) DUQWJHT (3) DURWJIT (4) EUQWKHT
4. In the following question, a portion from , the problem figure is missing. Complete that missing portion by selecting from the given answer figures (1), (2), (3) and (4).

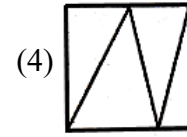
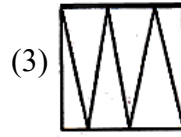
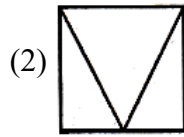
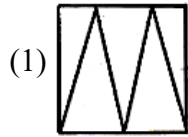
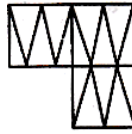


5. In the following question, a portion from , the problem figure is missing. Complete that missing portion by selecting from the given answer figures (1), (2), (3) and (4).



Space for rough work

6. In the following question, a portion from, the problem figure is missing. Complete that missing portion by selecting from the given answer figures (1), (2), (3) and (4).



7. 2, 8, 18, 32, 50, ?

(1) 70

(2) 72

(3) 74

(4) 76

8. In the following question one term is missing as shown by ?, find the missing term :

AZ, GT, MN, ? YB

(1) KF

(2) RX

(3) SH

(4) TS

9. One person A is going toward north-east after walking 120m he takes 200 times left turns and each time he walks 40m, after it he takes 225 times right turns and each time he walks 40m. Now in which direction is he moving?

(1) South-East

(2) South-West

(3) North-East

(4) North-West

10. In a certain code GAMES is written as JXPBV. How will NORTH be written in the same code?

(1) QPLVU

(2) QLPLB

(3) QLVKA

(4) QLUQK

11. $\frac{2}{\sqrt{5}}, \frac{3}{5}, \frac{4}{5\sqrt{5}}, \frac{5}{25}, (?)$

(1) $\frac{6}{25\sqrt{5}}$

(2) $\frac{7}{25}$

(3) $\frac{6}{125}$

(4) $\frac{6}{5\sqrt{5}}$

12. In the following question one term is missing as shown by ?, find the missing term :

B, C, E, H, ?

(1) H

(2) L

(3) K

(4) J

13. In a row there are total 40 persons. If Ram is 18th from right end then what is his rank from left end?

(1) 21st

(2) 22nd

(3) 23rd

(4) 24th

Space for rough work

14. If the code of MUMBAI is NWPFFO, then what is the code of ONGALE?
(1) PPJEQL (2) PPJFQK (3) PPJEPK (4) PPJEQK
15. Which one set is “Similar to ” the given set : (2, 4, 8)
(1) (3, 9, 27) (2) (4, 64, 96) (3) (1, 2, 3) (4) None of these

MATHEMATICS

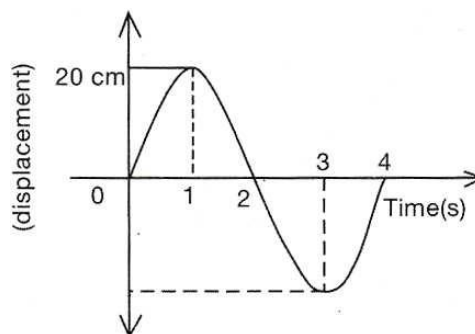
16. The number which is subtracted from $\frac{27}{13}$ to get $-\frac{3}{7}$ is
(1) $\frac{228}{91}$ (2) $\frac{1}{91}$ (3) $\frac{200}{91}$ (4) $\frac{198}{91}$
17. When a certain number m is divided by 5 and added to 8, the result is equal to $3m$ subtracted from 4. The value of m is
(1) 2 (2) $\frac{4}{3}$ (3) $-\frac{1}{3}$ (4) $-\frac{5}{4}$
18. There were only two candidates in an election. One got 62% votes and was elected by a margin of 144 votes. The total number of votes were
(1) 500 (2) 600 (3) 700 (4) 800
19. A quadrilateral with all sides angles and diagonals equal is a
(1) square (2) rectangle (3) rhombus (4) trapezium
20. By what least number should 9720 be multiplied to get a perfect cube.
(1) 15 (2) 25 (3) 5 (4) 75
21. If $\sqrt[3]{x-12} = 19$, then the value of x is
(1) 6871 (2) 6072 (3) 6889 (4) 5080
22. If A's salary is 30% more than B's, then how much percent is B's salary less than A's ?
(1) 30% (2) 25% (3) $23\frac{1}{13}\%$ (4) $33\frac{1}{3}\%$
23. If $\sqrt{1+\frac{x}{289}} = 1\frac{1}{17}$, then x is equal to
(1) 1 (2) 13 (3) 35 (4) 15

Space for rough work

24. The square root of 1584.04 is
 (1) 39.8 (2) 41.8 (3) 43.8 (4) 45.8
25. If $\frac{k}{3} - 4 = 8 - k$, then $k =$ ____
 (1) 2 (2) 4 (3) 6 (4) 9
26. A person says, "Twelve years hence my age will be 3 times my age 12 years ago". Find the present age.
 (1) 32 years (2) 20 years (3) 24 years (4) 15 years
27. The value of $(5^{30} \times 5^{20}) \div (5^5)^9$ in the exponential form is
 (1) 5^{-5} (2) 5^5 (3) 5^{50} (4) 5^{95}
28. The product of the ten fractions $\frac{0}{1} \times \frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \frac{6}{7} \times \frac{7}{8} \times \frac{8}{9} \times \frac{9}{10}$ is
 (1) $\frac{1}{10}$ (2) $\frac{362880}{3628800}$ (3) 0 (4) $\frac{9}{10}$
29. $1.564 - 0.500 + 3.001 - 2.500$ equals
 (1) 3.500 (2) 1.565 (3) 2.575 (4) 3.000
30. The number of faces of a triangular prism is ____
 (1) 5 (2) 6 (3) 4 (4) None of these

PHYSICS

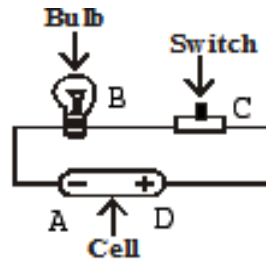
31. From the graph shown below, determine the amplitude of oscillation.



- (1) 80 cm (2) 40 cm (3) 20 cm (4) 10 cm

Space for rough work

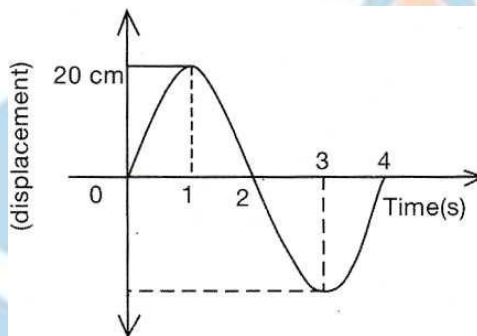
32. Trace the correct path of electron in the given circuit.



- (1) DCBA (2) ABCD (3) CBAD (4) ADCB
33. Find the value of x in the given figure so that the forces on the box are balanced
-
- (1) 0 (2) 10 (3) 20 (4) 30
34. If the velocity of sound wave 330 ms^{-1} and the frequency of oscillations is 10 Hz, then the distance between an adjacent compression and rarefaction is _____ m.
- (1) 33 (2) 16.5 (3) 66 (4) 44
35. What causes an electric current to flow in a circuit?
- (1) Protons (2) Neutron (3) Electrons (4) Both protons and electrons
36. What is U-tube manometer used for?
- (1) To measure force applied by liquids direction
 (2) To measure density of liquids
 (3) To measure liquid pressure
 (4) To measure liquid volume
37. Change in temperature of body is 20°C , then change in temperature on kelvin scale is __
- (1) 20K (2) 40 K (3) 30K (4) 180K
38. The path length travelled by a body in a given time interval is ____
- (1) Distance (2) displacement (3) Speed (4) Velocity

Space for rough work

39. Velocity define as _____ per time.
(1) Distance (2) displacement (3) Speed (4) none of these
40. What happens to the speed of a moving car when force is applied in the opposite
(1) It increases (2) It decreases
(3) It remains as it is (4) It increases first and then decreases
41. The bouncing back of light after hitting a polished surface is called
(1) Reflection (2) Refraction (3) Absorption (4) dissipation
42. From the graph shown below, determine the frequency of oscillation.



- (1) 0.5 Hz (2) 0.25 Hz (3) 0.75 Hz (4) 0.30 Hz
43. An object is vibrating at 50 hertz. What is its time period ?
(1) 0.02 s (2) 2 s (3) 0.2 s (4) 20.0 s
44. Pitch of a sound is determined by
(1) Frequency (2) Amplitude (3) Speed (4) Loudness
45. Which of the following metals is used in electroplating to make objects appear shining ?
(1) Iron (2) Copper (3) Chromium (4) Aluminum

CHEMISTRY

46. Which of the following is not a petroleum product?
(1) Kerosene (2) Beeswax (3) Pitch black (4) None of the above
47. Which of the following is the purest form of carbon?
(1) Coal gas (2) Coal tar (3) Coke (4) None of the above

Space for rough work

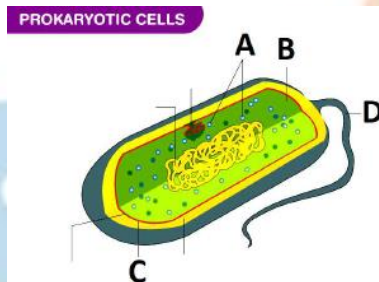
48. Combustion of a substance releases heat and ____ .
(1) oxygen (2) wood (3) light (4) water
49. Which organism converts human excreta into vermi-cakes in vermi processing toilets ?
(1) Bacteria (2) Earthworms (3) Micro organism (4) None of the above
50. Petroleum is also known as _____.
(1) Black gold (2) Golden diamond (3) Black diamond (4) None of these
51. What kind of change is the explosion of fireworks?
(1) Physical change (2) Chemical change (3) Not a change (4) Rearise change
52. Which of the following is a physical change?
(1) Cutting a long of wood into pieces (2) Ripening of a fruit
(3) Formation of manure from leaves. (4) Formation of salt from acid and base.
53. Which of the following is not used as fuel?
(1) Hydrogen (2) Methane (3) Carbon dioxide gas (4) All of the above
54. What kind of change occurs when the tip of the blade is placed on a gas a stove?
(1) Chemical change (2) Physical change (3) No change (4) Irreversible change
55. The combustion reaction which occurs on its own, without any external supply of heat is called as
(1) Explosion (2) Spontaneous combustion
(3) Fire (4) Rapid combustion
56. Which of the following cannot be used to extinguish the fire caused by electricity?
(1) Carbon dioxide (2) Blanket (3) Sand (4) Water
57. Which of the following settle as solid in the bottom during waste- water treatment?
(1) Sewage (2) Sludge (3) Litter (4) All of the above
58. It is dangerous to burn wood in a room. The gas X produced can be fatal to the person sleeping in the room. Identify the gas X.
(1) CO₂ (2) SO₂ (3) CO (4) N₂
59. Which of the following is not a free state of carbon?
(1) Petrol (2) Coke (3) Diamond (4) All of the above

Space for rough work

60. Which of the following equipment is used to remove floatable particles from wastewater?
- (1) Bar screen (2) Sedimentation tank
(3) Both (1) and (2) (4) None of the above

BIOLOGY

61. Which of the following is true regarding cross pollination?
- (1) It leads to variations (2) Occurs within same plants
(3) No variations occur (4) Occurs between same species
62. Which of the following help in locomotion



- (1) A = Flagella (2) D-Flagella (3) B-Flagella (4) C - Flagella
63. Typhoid is a _____ disease and caused by _____.
- (1) Bacterial, *Streptococcus typhi* (2) Viral, *Salmonella typhi*
(3) Bacterial, *Salmonella typhi* (4) Viral, *Mycobacterium sp.*
64. The term used for the process of separation of grains from chaff is
- (1) sieving (2) winnowing (3) threshing (4) hand picking
65. Transplantation is not done for the cultivation of
- (1) Potatoes (2) Rice (3) Tomatoes (4) Chilies
66. Who discovered penicillin?
- (1) Rudolf Virchow (2) Louis Pasteur
(3) Alexander Fleming (4) Edward Jenner
67. The species which are at the verge of the extinction
- (1) Endemic (2) Extinct (3) Endangered (4) None of these
68. Propagation of ginger is generally done using
- (1) seed (2) stem (rhizome) (3) root (4) leaf

Space for rough work

69. Style belongs to
(1) Pistil (2) Stamen (3) Anther (4) Sepals
70. Roof of the forest made by branches of the tall trees is called
(1) Canopy (2) Crown (3) Understory's (4) None of these
71. Formation of clot when bleeding is stopped from a wound in Human body is due to
(1) RBC (2) WBC (3) Iron (4) Platelets
72. Project Tiger was launched on
(1) 1 April 1973 (2) 23 May 1973
(3) 21 September 1973 (4) 25 September 1975
73. Weeds can be removed by
(1) Sickle (2) Plough (3) Harvester (4) None of these
74. Which is the thickest chamber of heart ?
(1) Right ventricle (2) Left ventricle (3) Right auricle (4) Left aunicle
75. Xylem transports _____ and _____ in _____ direction.
(1) food, minerals, upward (2) water, minerals, downward
(3) food, water, downward (4) food, water, downward

NARAYANA SCHOLASTIC APTITUDE TEST

ASPIRE • ASSESS • ACHIEVE

Space for rough work