NSAT-2023

CLASS – VII (Mental Ability, Mathematics & Science)
(Class VII Moving to VIII)

NARAYANA SCHOLASTIC APTITUDE TEST (NSAT)

SAMPLE PAPER

Time: 1:00 Hr.   *Maximum marks: 160*

IMPORTANT INSTRUCTIONS:

1. The test Booklet consists of 40 questions. The maximum marks are 160.
2. There are five parts in the question paper of MAT (Q. No. 1 to 8) Mathematics (Q. No. 9 to 19), Physics (Q. No. 20 to 26), Chemistry (Q. No. 27 to 33) & Biology (Q. No. 34 to 40) having 40 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/marking.
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 : _____

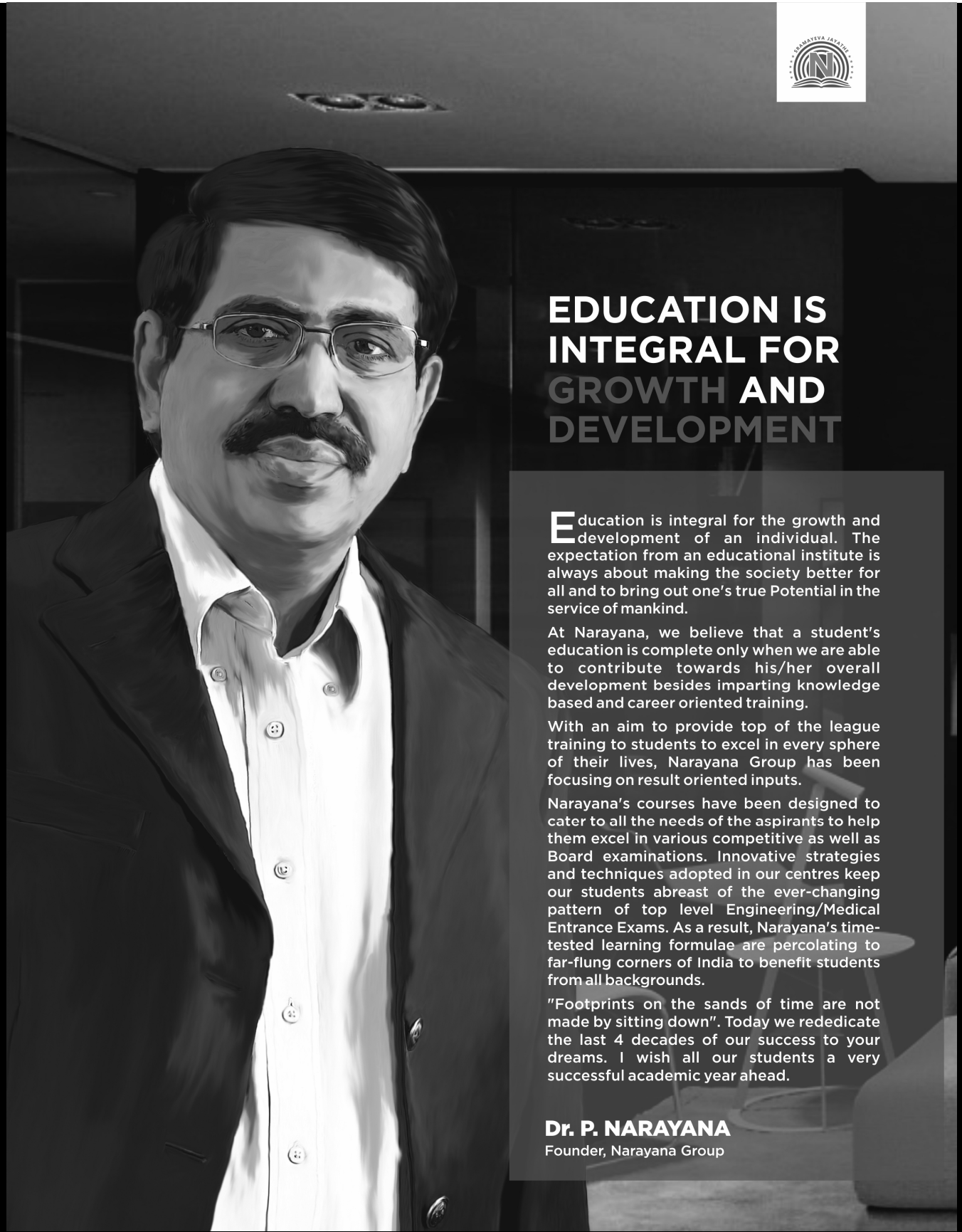
I have read all the instructions and shall abide by them	I have verified all the information filled in by the Candidate
……..……………………………… **Signature of the Candidate**	………….…………………………………… **Signature of the Invigilator**

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.
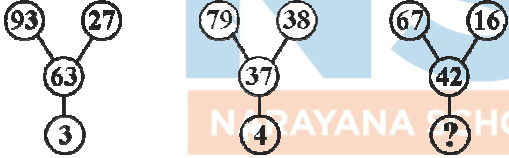
Narayana's courses have been designed to cater to all the needs of the aspirants to help them excel in various competitive as well as Board examinations. Innovative strategies and techniques adopted in our centres keep our students abreast of the ever-changing pattern of top level Engineering/Medical 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.   336, 210, 120, ?, 24, 6, 0
   (A) 40   (B) 50   (C) 60   (D) 70

2. Rakesh is standing at a point. He walks 20 m towards the East, then further 10 m towards South, then he walks 35 m towards the West and then further 5 m towards North. The he walks 15 m towards East. What is the straight distance between his starting point and the point where he reached last?
   (A) 0 m   (B) 5 m
   (C) Cannot be determined   (D) None of these

3. If L denotes ÷, M denotes ×, P denotes + and Q denotes – , then which of the following statement is true?

   (A) $32 \text{ P } 8 \text{ L } 16 \text{ Q } 4 = -\dfrac{3}{2}$ (B) $6 \text{ M } 18 \text{ Q } 26 \text{ L } 13 \text{ P } 7 = \dfrac{173}{13}$

   (C) $11 \text{ M } 34 \text{ L } 17 \text{ Q } 8 \text{ L } 3 = \dfrac{38}{3}$ (D) $9 \text{ P } 9 \text{ L } 9 \text{ Q } 9 \text{ M } 9 = -71$

4. In place of **?** Mark :

   (A) 9   (B) 6   (C) 8   (D) 5

   Which of the following is the mirror image of given is:

5. T A R A I N 1 0 1 4 A
   (A) A�4 I 0 I И I A Я A⅃   (B) A I 0 I ⅃4 N I A R A T
   (C) A I 0 I ⅃4 T A R A I N   (D) A ⅃4 I 0 I N I A Я A T

   Which of the following is the water image of given is:

6. P Q 8 A F 5 B Z 9
   (A) �P Ϙ 8 ∀ Ⅎ 5 B Ƨ 6   (B) �P Ϙ 8 ∀ Ⅎ 5 B Ƨ 6   (C) �P Ϙ 8 ∀ ᖵ 5 B Ƨ 9   (D) �P Ϙ 8 ∀ Ⅎ 5 B Ƨ 6

7. In a cricket match, five batsman A, B, C, D and E scored an average of 36 runs, D scored 5 more than E, E scored 8 fewer than A, B scored as many as D and E combined, B and C scored 107 between them. How many runs did E score?
   (A) 62   (B) 45   (C) 20   (D) 36

8. 4, 8, 16, ?, 64
   (A) 20   (B) 30   (C) 32   (D) 34

Space for rough work

MATHEMATICS

9. The value of $(-5) + (-4) - (-4) - (-5) + (-5) + (-4) - (-5) + (-4)$ is

   (A) -4 (B) -5 (C) 0 (D) -8

10. A fraction which can be expressed as the sum of a natural number and a proper fraction is called

    (A) Complex fraction   (B) Simple fraction

    (C) Mixed fraction   (D) Proper fraction

11. The mean of first seven whole number is

    (A) 21   (B) 7   (C) 3   (D) 35

12. If $\dfrac{0.5z + 4}{1.2z + 6} = \dfrac{5}{3}$, then z =

    (A) 4   (B) -4 (C) -8 (D) 8

13. In the figure, AOB is a line, then $x =$

    (A) 80^0 (B) 70^0 (C) 65^0 (D) 40^0

14. Sum of two integers is 62. If one of the integer is -48 then the other is
    (A) 14   (B) - 14   (C) -110   (D) 110

15. Ajay's father is 4 times as old as he is. After twenty years, his age will be twice that of Ajay's, then, their present ages are

    (A) 10, 40   (B) 7, 28   (C) 12, 48   (D) 10, 15

16. The supplement of an acute is a/an _____ angle.
    (A) Acute   (B) Obtuse   (C) Right   (D) Straight

17. What should be added to $\dfrac{7}{5}$ to make it $\dfrac{9}{5}$

Space for rough work

(A) $\dfrac{2}{5}$ (B) 4   (C) $\dfrac{4}{5}$ (D) $\dfrac{3}{5}$

18. If a, b and c are the sides of a triangle, then
 (A) $a - b > c$ (B) $c > a + b$ (C) $c = a + b$ (D) $b < c + a$

19. A triangle whose lengths of sides are 5cm, 12cm and 13cm. The triangle is
 (A) Obtuse-angled triangle   (B) Acute-angled triangle
 (C) Right-angled triangle   (D) Triangle is not formed

Space for rough work

PHYSICS

20.   Relation between Celsius and Kelvin is

(A) $C = K - 273.16$

(B) $K = C - 273.16$

(C) $\dfrac{C}{100} = K - 273.16$

(D) $C = \dfrac{K - 273.16}{100}$

21.   An iron weight at 45 ^{0}C is dipped in a bucket containing water 45 ^{0}C. The heat

(A) Flow from water to iron weight

(B) Flow from iron weight to water

(C) Not flow between them

(D) Both (A) and (B)

22.   A balloon is going upwards with velocity 12 m/sec. it releases a packet when it is at a height 65 m from the ground. How much time the packet will take to reach the ground?

(A) 5 sec.   (B) 6 sec.   (C) 7 sec.   (D) 8 sec.

23.   A particle starts with a velocity of 5 m/s and moves with a uniform acceleration of 2.5 m/s^2 its velocity after 4 sec. is

(A) 10 m/s   (B) 15 m/s   (C) 20 m/s   (D) 25 m/s

24.   A body starting from rest is moving with a uniform acceleration of 8 m/s^2. Then the distance travelled by it in 5th second will be

(A) 36 m   (B) 40 m   (C) 100 m   (D) zero

25.   Ampere is the unit of
(A) Length
(B) Temperature
(C) Luminous intensity
(D) Current

26.   Which of the following instrument is used to measure electric potential?

(A) Ammeter

(B) Voltmeter

(C) Galvanometer

(D) None of these

Space for rough work

CHEMISTRY

27.   Which of the following is not a chemical change?

(A) Rusting of iron   (B) Cooking of food

(C) Digestion of food   (D) Freezing of water

28.   Brown colour of the apple after cutting is

(A) Physical change   (B) Chemical change

(C) Biological change   (D) No change

29.   Basicity of acetic acid is

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

30.   Which is not an acid?

(A) NaH_2PO_2 (B) NaH_2PO_3

(C) NaH_2PO_4 (D) None of these

31.   Non-metallic oxides are generally

(A) Basic   (B) Amphoteric

(C) Acidic   (D) None of these

32.   Acidity of milk of Magnesia is

(A) 2   (B) 3

(C) 4   (D) 1

33.   What is the formula of rust is

(A) Fe_2O_3 (B) $Fe_3O_4.xH_2O$

(C) $Fe_2O_3.xH_2O$ (D) $FeO.xH_2O$

Space for rough work

BIOLOGY

34.   Plants obtain carbon dioxide from air through

   (A) Stomata in leaf   (B) Xylem of root   (C) Vein of leaf   (D) Hair of root

35.   Which of the following is a parasitic plant?

   (A) Cucumber   (B) Amarbel   (C) Bitter gourd   (D) Bottle gourd

36.   Name the largest gland in the body –

   (A) Liver   (B) Pancreas   (C) Gall bladder   (D) Salivary gland

37.   In grass eating animals like cows and buffaloes, the food is partially digested and is called

   (A) Flux   (B) Curd   (C) Glue   (D) Cud

38.   Lime water turns _____ when CO_2 is passed through it

   (A) Yellowish   (B) Milky

   (C) Bluish   (D) Green

39.   The percentage of carbon dioxide in inhaled air and exhaled air is

   (A) 0.04% and 4.4%   (B) 0.44% and 4.04%

   (C) 0.004% and 4.04%   (D) 4.4% and 0.04%

40.   Valves are present in

   (A) Arteries   (B) Veins

   (C) Capillaries   (D) Both (A) and (B)

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Space for rough work