

Duration : 60 min.
Class : 9th

Maximum Marks : 180
Subject : MATHEMATICS



International Talent Search Examination - 2022-23

अंतराष्ट्रीय प्रतिभा खोज परीक्षा - २०२२-२३

Organized by

Savitri Skill Development Institute, Training Partner with
Ministry of Micro Small & Medium Enterprises (MSME), Govt. of India.



TEST BOOKLET

Name :

Class : School:

Father's Name : Father's Occupation :

Mother's Name : Mother's Occupation :

Categories : Gen OBC SC ST

Correspondence Address :

Date of Birth :

Father's Contact No :

Home/Mother's Contact No. :

WhatsApp No. :

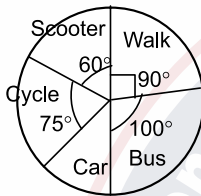
Basic Instructions:

- Ensure that your personal data has been entered correctly.
- Immediately after opening the test booklet verify that all the pages are printed properly and are in order. If there is a problem with your test booklet, immediately inform the invigilator. You will be provided with the replacement.
- All questions are compulsory.
- For every correct answer you will be awarded with 4 marks and for all incorrect answer 1 mark will be deducted.
- Directions for answering the questions are given. Read those directions carefully and answer the question by circling the bubble in the OMR Sheet Provided to you. Test booklet/OMR Sheet will be submitted at the end of the examination.
- Follow the instructions given by the invigilator. Students found violating the instructions will be disqualified.
- Rough work can be done separately or on the Question paper.
- Please fill the bubbles in OMR sheet with Blue or Black pen only.
- Do not tear the question paper or OMR sheet else you will be disqualified in the examination.

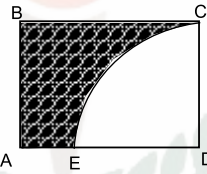
CLASS-9 MATHEMATICS

1. The number of rational numbers between any two given rational numbers is
(A) finite (B) can't say (C) infinite (D) two
2. A father's age is five times that of his son. After five years his age will be four times that of his son. The present age of father is
(A) 45 years (B) 55 years (C) 75 years (D) 65 years
3. What will be the length of the longest rod which can be put on the floor of a rectangle room measuring 12 metres in length and 5 metres breadth?
(A) 13 m (B) 14 m (C) 15 m (D) 12 m
4. If the diagonal of a square floor is m , then the area of the floor is
(A) 16 sq. m (B) 36 sq. m (C) 49 sq. m (D) 64 sq. m

Directions (5-6): 1800 people uses 4 modes of transport and walking



5. How many people do not use any mode of transport?
(A) 0 (B) 1800 (C) 360 (D) 450
6. What percentage of people use scooter as a mode of transport?
(A) 25% (B) 30% (C) 16.66% (D) 6.66%
7. Nayan has currency notes of denominations Rs. 20, Rs. 10 and Rs. 5 respectively. The ratio of the number of these notes is 3 : 4 : 5. If Nayan has a total amount of Rs. 50,000, then how many notes of each denomination does he have respectively?
(A) 1200, 1600, 1800 (B) 1200, 2000, 1600 (C) 1200, 1800, 2000 (D) 1200, 1600, 2000
8. Three angles of a 7 sided polygon are 130° each, and the remaining four angles are equal. The value of each equal angle is
(A) 127° (B) 130° (C) 82.5° (D) 127.5°
9. The square root of 7056 is
(A) 74 (B) 94 (C) 64 (D) 84
10. The cube root of 857375 is
(A) 95 (B) 85 (C) 105 (D) 75
11. The smallest number by which 256 should be multiplied to obtain a perfect cube is
(A) 8 (B) 4 (C) 3 (D) 2
12. A man bought two horses for Rs. 25000 each. He sold them gaining 25% on the first and losing 25% on the second in the whole there, is
(A) $6\frac{1}{4}\%$ loss (B) $6\frac{1}{4}\%$ gain (C) no loss no gain (D) none of these
13. When 75% of a number added to 75 the result is the number again. The number is
(A) 150 (B) 300 (C) 360 (D) 450
14. The value of $6\frac{1}{4}\%$ of 272 is
(A) 16 (B) 17 (C) 18 (D) 19
15. 2% of Ram's money is equal to 3% of Mahesh has. Mahesh has Rs. 300. How much does Ram has?
(A) Rs. 200 (B) Rs. 450 (C) Rs. 350 (D) Rs. 600

16. If $A : B = 5 : 4$, $B : C = 6 : 7$, then $A : C$ is equal to
 (A) 30 : 15 (B) 15 : 14 (C) 14 : 15 (D) 12 : 13
17. Two numbers are in the ratio of 3 : 4. When 4 is subtracted from both, the ratio becomes 5 : 7, the numbers are
 (A) 12, 16 (B) 18, 24 (C) 24, 32 (D) 30, 40
18. The compound interest on Rs. 32000 for 3 years at the rate of 10% p.a. gives amount
 (A) Rs. 42592 (B) Rs. 42590 (C) Rs. 43592 (D) Rs. 44592
19. The product of $(x + 5)(x + 7)$ is
 (A) $x^2 + 12x + 30$ (B) $x^2 - 12x + 35$ (C) $x^2 - 14x + 70$ (D) $x^2 + 12x + 35$
20. $(5p - 6q)^3$ is equal to
 (A) $125p^3 - 216q^3 + 450p^2q - 540pq^2$ (B) $125p^3 - 216q^3 - 450p^2q + 540pq^2$
 (C) $125p^3 - 216q^3 + 450p^2q + 540pq^2$ (D) $125p^3 + 216q^3 - 450p^2q + 540pq^2$
21. The value of $(a + 2b)^3 + (a - 2b)^3$ is equal to
 (A) $2a(a^2 + 12b^2)$ (B) $2a(a^3 + 12b^2)$ (C) $2a(a^3 + 12b^3)$ (D) $2a(a^2 + 12b^3)$
22. How many edges does a cube have?
 (A) 6 (B) 12 (C) 8 (D) 10
23. $\left(\frac{125}{64}\right)^{-2/3}$ is equal to
 (A) $\frac{4}{5}$ (B) $\frac{16}{25}$ (C) $\frac{25}{16}$ (D) $-\frac{16}{25}$
24. A photocopying machine can give 60 copies in 5 minutes. How many copies can it give in 1 hour?
 (A) 600 (B) 800 (C) 720 (D) 1200
25. In the given circle with centre 'D' has a radius of 4 units and rectangle ABCD has perimeter of 20 units. The perimeter of the shaded region is

 (A) $2(6 + p)$ (B) $3(6 + p)$ (C) $2(10 + p)$ (D) $4(6 + p)$
26. The compound interest on Rs. 2000 at the rate of 10% p.a. for one year when interest is compounded half yearly is
 (A) Rs. 2205 (B) Rs. 2225 (C) Rs. 2025 (D) Rs. 2250
27. $\left[\left(\frac{81}{16}\right)^{-2/3}\right]^{-2/5}$ is equal to
 (A) $\left(\frac{3}{2}\right)^{16/15}$ (B) $\frac{4}{9}$ (C) $-\frac{9}{4}$ (D) $-\frac{4}{9}$
28. Express $\frac{2}{5}\sqrt{\frac{2}{5}}$ as a pure radical
 (A) $\sqrt{\frac{4}{25}}$ (B) $\sqrt{\frac{16}{50}}$ (C) $\sqrt{\frac{8}{25}}$ (D) $\sqrt{\frac{8}{125}}$
29. $63x^2 - 112y^2$ is equal to
 (A) $7(4x + 3y)(4x - 3y)$ (B) $7(3x - 4y)^2$ (C) $7(3x + 4y)^2$ (D) $7(3x + 4y)(3x - 4y)$
30. In a class test containing 20 questions, 4 marks are given for every correct answer and (-2) marks for every incorrect answer. Aniket attempted all questions but only 12 of his answers are correct. What is his total score?
 (A) 32 (B) 30 (C) 48 (D) 40

31. The additive identity of rational numbers is
 (A) 0 (B) 1 (C) - 1 (D) none of these
32. What should be subtracted from $-\frac{4}{5}$ to get -5 ?
 (A) $\frac{22}{5}$ (B) $\frac{21}{5}$ (C) $-\frac{21}{5}$ (D) $-\frac{23}{5}$
33. $\frac{1}{5} \times \left(5 \times \frac{1}{2}\right) = \left(\frac{1}{5} \times 5\right) \times \frac{1}{2}$
 The above equation follows which property?
 (A) commutative (B) associative (C) distributive (D) None of these
34. When 60 is subtracted from 60% of a number the result is 60. The number is
 (A) 120 (B) 160 (C) 360 (D) 200
35. The value of $37\frac{1}{2}\%$ is equal to
 (A) $\frac{1}{8}$ (B) $\frac{1}{3}$ (C) $\frac{3}{4}$ (D) $\frac{3}{8}$
36. The square root of 7921 is
 (A) 79 (B) 69 (C) 81 (D) 89
37. Express $\sqrt{300}$ as a mixed radical
 (A) $10\sqrt{3}$ (B) $3\sqrt{10}$ (C) $100\sqrt{3}$ (D) $3\sqrt{100}$
38. The cube root of 17576 is
 (A) 36 (B) 26 (C) 16 (D) 46
39. The value $64^{4/3} \times 27^{-2/3}$
 (A) 144 (B) 24 (C) $\frac{1}{144}$ (D) $\frac{1}{24}$
40. A boy gets Rs. 200 per month and spends 60% of it on eatables and 15% on books. How much does he saves?
 (A) Rs. 40 (B) Rs. 25 (C) Rs. 50 (D) Rs. 75
41. A train can cover a distance of 50 km in 2 hours. How much distance can be covered in 10 hours
 (A) 500 km (B) 200 km (C) 300 km (D) 250 km
42. $\left\{\left[(256)^{-1/4}\right]^{-1/2}\right\}^2$ is equal to
 (A) $\frac{1}{4}$ (B) 4 (C) $\frac{1}{16}$ (D) 16
43. 59X7 is divisible by 9. If x is a digit, then the value of X is
 (A) 5 (B) 7 (C) 8 (D) 6
44. The product of $(x + 7)(x + 8)$ is
 (A) $x^2 + 15x + 56$ (B) $x^2 - 15x + 56$ (C) $x^2 + 15x + 64$ (D) $x^2 + 15x + 48$
45. $(2x + 5y)^2 - (2x - 5y)^2$ is equal to
 (A) $8x^2 + 50y^2$ (B) $8x^2 - 50y^2$ (C) $-40xy$ (D) $40xy$