38. An equilateral $\triangle ABC$ is inscribed in a circle with centre O. If AO, BO & CO are drawn then $\angle AOB$ is equal to
a) 60° b) 30° c) 120° d) 90°

39. The square of a rational number is
a) positive b) greater than the number
c) always even d) both a &b above

40. The square root of 167281 is
a) 49 b) 490 c) 409 d) 94

41. If n is a non-perfect squre number then $\sqrt{n}$ is *a/an*
a) rational number b) positive integer
c) irrational number d) none of the above

42. The value of $\sqrt[3]{0.00064}$ is
a) 0.0008 b) 0.0004 c) 0.04 d) 0.08

43. The value of $\sqrt{5}\times\sqrt{5}\times\sqrt{5}\times\sqrt{5}\times\sqrt{5}\times\sqrt{5}\times\sqrt{5}$ is
a) $\sqrt[6]{5}$ b) $\sqrt[3]{6}$ c) 125 d) none of the above

44. The sum of three consecutive odd numbers is 12 more than the first number. What is the middle number?
a) 1 b) 3 c) 5 d) 7

45. Cube root of the product $3\times(-1)\times(-3)\times3\times(-1)\times(-3)\times(-1)\times(-3)$ is
a) -3 b) 3 c) 729 d) none of the above

46. $a+b$ and $a-b$ are the sides of two squares. The difference in their areas will be
a) $2ab$ b) $4a^2b^2$ c) $2a^2b^2$ d) $4ab$

47. An article is sold with a rebate of 10% and still gain 25%. What is the cost price if the marked price is Rs. 100?
a) Rs. 90 b) Rs. 75 c) Rs. 72 d) Rs. 100

48. A man had to pay a sum of Rs. 22050 after two years @ 5% compounded annually. Find the sum of money borrowed?
a) Rs. 22000 b) Rs. 22050 c) Rs. 44100 d) Rs. 20000

49. Which of the following is correct?
a) $P=\frac{RT}{I}$ b) $P=\frac{A\times(100)^n}{(100+r)^n}$ c) $P=\frac{(100+r)-I}{A}$ d) none of the above

50. Square root of 0.000529 is
a) 230 b) 23 c) 0.023 d) 0.23

The Ends

Class-VIII Math

(27)

18th STATE LEVEL COMPETITION - 2017

ORGD. BY : THE UNITED DEVELOPMENT ASSN. (UDA) KHANGABOK
H.Q. KHANGABOK, THOUBAL (MANIPUR)
Regd. No. 3/SR/TH/1999

CLASS-VIII (MATHS.) Time: 1½hrs.

INSTRUCTION:
1. There are 50 questions with four alternatives of which one is the correct/most appropriate answer. Each question carry 2 marks.
2. The correct/most appropriate choice should be marked in the answer sheet with a ball point pen only, by darkening the circle coresponding to the correct choice.
5. If any candidate is found using unfair means of any kind, he/she shall be expelled from the test without any prior warning.
6. Using any calculator/mobile phone etc. is strictly prohibited in exam. hall.
7. The decision of the Association with regard to the conduct of the Examination shall be final and binding to the candidate.

1. Which of the following is an odd perfect square?
a) 12345432 1 b) 1721 c) 9000 d) 4096
2. A perfect square leaves a remainder 0 or 1 on division by
a) 2 b) 3 c) 4 d) 3 or 4
3. $(n+1)^2-n^2$ is equal to
a) $(n-1)+n$ b) $(n+1)-n$ c) $(n+1)+n$ d) $2n-1$
4. Which of the following is correct? (Where $a=b+1$)
a) $a^2-b^2=a-b$ b) $a^2+b^2=a+b$ c) $a^2-b^2=a+b$ d) $a^2+b^2=a-b$
5. If the digits equidistant from the begining and end are the same, the number is called
a) repunit b) perfect square c) recurring d) palindrome
6. Find the least number by which 1200 must be multiplied so the product becomes a perfect squre.
a) 2 b) 3 c) 4 d) 5
7. The square root of the numbers 27225 and 252004 will of how of many digits?
a) 2 and 3 b) 3 and 4 c) 3 and 3 d) can not say
8. Find the least number that must be added to 56789 in order to obtain a perfect square.
a) 145 b) 332 c) 613 d) none of the above
9. Find the smallest number by which 3645 must be multiplied so that the product is a perfect cube.
a) 5 b) 15 c) 25 d) 20
10. The value of $\sqrt{75}\times\sqrt{27}$ is : a) 45 b) 75 c) 63 d) 54
11. While selling 180 plastic toys, James lost the selling price of 20 toys. Find the loss percent.
a) 20% b) 6% c) 10% d) none of the above

Turn Over

12. Mani purchased an article at 10% discount and sold it at the marked price. What is the gain percent.
    a) 10% b) 11% c) 9% d) $11\frac{1}{9}\%$
13. If $a+b+c=13$ and $ab+bc+ca=50$ then $a^2+b^2+c^2$ is equal to
    a) 69 b) 169 c) $\frac{169}{9}$ d) none of the abov
14. Choose the incorrect one
    a) $a^2+b^2=(a+b)^2-2ab$ b) $a^3+b^3=(a+b)^3-3ab(a+b)$
    c) $a^2-b^2=(a-b)^2-3ab^2+3a^2b$ d) none of the above
15. If $a+\frac{1}{a}=4$ then $a^3+\frac{1}{a^3}=$
    a) 64 b) 12 c) 52 d) none of the above
16. The difference of two numbers is 13 and their sum is 47, then the difference of their squares is
    a) 600 b) 610 c) 611 d) 60
17. The value of $\frac{(0.80)^3+(0.20)^3}{(0.80)^2-(0.80)\times(0.20)+(0.20)^2}$ is
    a) 100 b) 10 c) 1 d) none of the above
18. The n^{th} root of x^m is
    a) $\sqrt[m]{x^n}$ b) $\sqrt[n]{x/n}$ c) x^{mn} d) $x^{\frac{n}{m}}$.
19. The sum of the first 500 odd natural numbers is
    a) 150000 b) 500990 c) 250000 d) 450000
20. Which of the following is not a polynomial?
    a) 5 b) $5x$ c) $5x+1$ d) none of the above
21. Which of the following is a factor of $2x^5+x^4+1$
    a) $x+1$ b) $x-1$ c) $x+2$ d) $x-2$
22. Which of the following do not represent a linear equation in one variable?
    a) $x+a=b$ b) $ax+b=cx+d$ c) $\frac{x}{a}=b$ d) none of the above
23. A man was 30 years old when his son was born. Five years ago his age was 4 times his son's age. How old is the man and his son now?
    a) 15,45 b) 45,15 c) 35,5 d) 5,35
24. For any equation of the type $y=mx$ where m is any non zero positive integer, the graph will be
    a) a straight line b) will pass through origin
    c) will pass through 1st & 3rd quadrant d) all the above

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Class-VIII Math

25. If a line intersects two parallel lines then the angles between the parallel lines which are on the same side of the intercept are called
    a) alternate angles b) interior angles
    c) corresponding angles d) co-interior angles
26. The sum of a pair of co-interior angles is found to be $2x+30°$. The value of x is
    a) 30° b) 55° c) 75° d) 105°
27. AB is a line segment of length 6.4cm ,C is a point on AB such that AC:CB = 3:5 then the difference between AC and CB is
    a) 2cm b) 0.7cm c) 1.6cm d) 0.8cm
28. The diagonals are equal and bisect each other in a
    a) trapezium b) rhombus c) parallelogram d) rectangle
29. Diagonals bisect each other at 90° in a
    a) square b) rectangle c) rhombus d) a and c above
30. Opposite sides are equal; opposite angles are equal and diagonals are equal and bisect each other at 90°, then the quadrilateral is
    a) square b) rectangle c) parallelogram d) none of the above
31. If $\angle$ ABC of a rhombus ABCD is 60° then Δ ABC is
    a) isosceles b) equilateral c) scalene d) none of the above
32. In a parallelogram ABCD, $\angle B=(2x+15)°$ and $\angle C=(3x-20)°$. Then the value of x is
    a) 15° b) 20° c) 35° d) 40°
33. In a circle of radius 5cm with centre at O, BC is a chord and $\angle BOC=30°$. If D is any point on the major arc of the circle then $\angle BDC$ is equal to
    a) 30° b) 60° c) 15° d) 45°
34. Equal chords of a circle subtend angles at the centre with
    a) same measure b) different measure
    c) neither a nor b d) none of the above
35. A circle can be drawn touching all the vertices ABCD of a quadrilateral, then which of the following is false?
    a) ABCD is a cyclic quadrilateral b) $\angle A=C$
    c) $\angle B+D=180°$ d) none of the above
36. In a circle of radius 5cm with centre at O, AB is a chord with OC perpendicular to AB and is of length 3cm. Then the length of AC is
    a) 3cm b) 4cm c) 5cm d) none of the above
37. ABCD is a cyclic quadrilateral and AC is a diagonal with $\angle BAC=45°$ and $\angle ACB=65°$ then $\angle ADC$ is equal to
    a) 70° b) 110° c) 65° d) 45°

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