37. The ratio of volume of a cube of unit length to the volume a of sphere of radius of unit length (assuming $\pi=3$) is : a) 1:1 b) 1:3 c) 4:1 d) 1:4
38. The ratio of volume of a cylinder to that of cone of equal height and radius is a) 1:3 b) 3:1 c) 1:π d) 1:3 π
39. The angle subtended at the centre of any circle by an arc whose length is equal to the radius of the circle is : a) 60° b) 60^g c) 60^c d) 1^c
40. The circumference of a circle bears a constant ratio to its diameter. The constant ratio is a) an irrational number b) represented by π c) approximately equal to $\frac{22}{7}$ d) all the above are true
41. The relation between the sexagesimal (x) centesimal (y) and the circular system (z) of measurement of angles is a) $\frac{x}{100}=\frac{y}{180}=\frac{z}{\pi}$ b) $\frac{x}{100}=\frac{y}{\pi}=\frac{z}{180}$ c) $\frac{x}{180}=\frac{y}{180}=\frac{z}{\pi}$ d) none of the above
42. When a straight angle is divided into 200 equal parts one part is a) one radius b) one degree c) one grade d) none of the above
43. The angle of a regular polygon of 36 sides in degrees is a) 156° b) 180° c) 170° d) 360°
44. The relationship between Mean, Median and Mode is a) Mean-Mode=2(Mean-Median) b) 2Median=3Mean+Mode c) Mode=3Median-2 Mean d) none of these
45. In tossing a coin getting either Head or Tail are said to be a) Mutually exclusive Events b) Equally likely events c) trial events d) none of the above
46. The probability of getting an ace when a single card is choosen in random from a pack is a) 4 b) $\frac{1}{4}$ c) $\frac{1}{13}$ d) 0
47. Co-ordinates of the point of intersection of the graphs of $2x-y=2$ and $3x+2y=17$ is a) (3,2) b) (4,3) c) (3,4) d) (3, -4)
48. If x and y are the two interior angles on the same side of straight line falling on two straight lines m & n and if $x+y<180°$ then a) $m||n$ b) $m \perp n$ c) m and n will intersect d) none of these
49. A pair of linear equations in two variables may have a) no solution b) only one solution c) infinite solutions d) any of the above
50. The distance of any point $p(x,y)$ from origin in a cartesian co-ordinate plane is given by a) x^2-y^2 b) x^2+y^2 c) $(x^2+y^2)^{\frac{1}{2}}$ d) $(x^2-y^2)^{\frac{1}{2}}$

The End

Class-IX Math

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-IX (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. The set of integers consist of a) natural numbers only b) whole numbers only c) all negatives of natural numbers d) b & c above
2. The rational numbers that can be found between any two unequal rational numbers is a) 0 b) finite c) infinite d) none of the above
3. Every point on the number line correspond to any a) integer b) rational number c) real number d) none of the above
4. The length of the diagonal of a square of unit length is a) 1 b) 2 c) an irrational number d) none of the above
5. The set of real numbers include all a) natural numbers b) whole numbers c) integers d) all the above
6. Which of the following can not be represented on a number line? a) irrational numbers b) rational numbers c) real numbers d) none of the above
7. Every rational number can be represented by a) a terminating decimal b) non-terminating recurring decimal c) either a or b above d) none of the above
8. Every non-terminating & non-recurring decimal correspond to a) a rational number b) real number c) whole number d) none of the above
9. Which of the following is not a polynomial? a) -5 b) 0 c) x^2 d) x^{-2}
10. The degree of the polynomial $5x+\frac{1}{6x^{-3}}+5=0$ is a) 0 b) 1 c) 2 d) 3

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11. The polynomial with degree 4 is called
a) quadratic b) quartic c)Tetraquadratic d) none of the above
12. x^2+4x^2+x+1 is a polynomial called
a) quadratic b) cubic c) monic d) none of the above
13. $P(x)=0$ where $P(x)$ is a polynomial in x then
a) zero of the polynomial is 0 b) $P(x)$ is called zero polynomial
c) $P(x)=0$ is called polynomial equation d) none of the above
14. Which of the following is correct?
a) the zero of a polynomial is zero
b) linear polynomials in one variable have one or more zeros
c) a polynomial has only one zero
d) none of the above
15. Which of the following is a zero of the polynomial $4x^3-8x^2+x-2$?
a) 0 b) 1 c) $\frac{1}{2}$ d) 2
16. The factors of $8a^3-b^3-12a^2b+6ab^2$ is/are
a) $(a+b)(a-b)$ b) $(2a-b)^2$ c) $(2a-b)^3$ d) $(a-2b)^3$
17. The HCF of $16(x^2-3x+2)$, $24(x^2-4x+3)$ and $32(x^2+6x-7)$ is
a) $(x-1)(x-2)$ b) $24(x-1)$ c) $8(x+1)$ d) $8(x-1)$
18. If $P(yx)$ is a point in a certesian cordinate plane then
a) x is called the ordinate of P b) y is called the abscissa of P
c) both a & b are true d) none of the above are true
19. Which of the following points will lie on the y-axis?
a) (3,0) b) (-3,0) c) (0, -3) d) none of the above
20. The distance between $P(2,1)$ and $Q(-1,-2)$ is
a) $2\sqrt{3}$ b) $3\sqrt{2}$ c) $\sqrt{17}$ d) none of the above
21. How many solutions can be there for a linear equation in two variables?
a) only one b) only two c) 0 d) infinite
22. The graph of $y = c$ where c is a constant
a) passes through *origin* b) is parallel to y-axis
c) is parallel to x-axis d) cut x-axis at c
23. A unique line can be drawn passing through
a) one point b) two distinct points
c) neither a nor b d) none of the above

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Class-IX Math

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24. Which of the following is correct?
a) A ray is a part of a line
b) A ray is a part of a line with one end point
c) A line segment is part of a line with one end point
d) A line segment is a part of a line with no end points
25. The total number of exterior angles of a triangle is
a) 3 b) 4 c) 5 d) none of these
26. In a triangle ABC, AB=AC, $\angle A=40^\circ$. Find the measure of $\angle B$.
a) 60° b) 140° c) 70° d) 90°
27. The measure of an angle in a triangle is proportional to the length of the ----- side
a) adjacent b) longest c) opposite d) none of the above
28. Two concentric circles are of radii 4cm and 5cm. Find the length of the chord of the larger circle which touches the smaller circle.
a) 6cm b) 7cm c) 8cm d) 10cm
29. AB is a chord of a circle with centre O and if OP is perpendicular to AB then
a) OA=OB b) AP =PB c) $\angle APO = \angle OPB$ d) all the above are true
30. Any three points on a circle will be
a) on the same line b) collinear
c) non-collinear d) non of the above
31. AB is a minor arc of a circle with centre O. If P is a point on the major arc of the circle then , measure of $\angle APB$ is equal to
a) $\angle AOB$ b) $\frac{1}{2}\angle AOB$ c) $2\angle AOB$ d) none of the above
32. ABCD is a cyclic quadrilateral then, sum of $\angle A$ and $\angle C$ is equal to
a) $\angle A+\angle B$ b) $\angle B+\angle C$ c) 180° d) 120°
33. The area of a rectangle and curved surface area of a solid cylinder of rafius 7cm are equal to 440cm². Find the length of the rectangle whose breadth is equal to the height of the cylinder
a) 10cm b) 44cm c) 22cm d) 40cm
34. The total surface area of a cone of slant height l and radius r is give by
a) $\pi r^2 l$ b) $\pi r^2 + l$ c) $\pi r(l+r)$ d) $\pi r^3 l$
35. The curved surface area of a cone of slant height 10cm and radius 7cm is
a) 220cm b) 440cm² c) 220cm² d) 22cm²
36. Find the capacity of a bucket of height 21cm and radii of the top and bottom of 14cm and 7cm respectively.
a) 7456 b)7564cm c) 7654cm³ d) 7546cm³

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