MATHEMATICS

Class – VI, 2010

1. The sum of the greatest 5-digit number and the smallest 5-digit number is :

   (A) 100000 (B) 109999 (C) 10999 (D) 99999

2. The measure of one angle of two adjacent complementary angle is 43°. The difference of the two angles is :

   (A) 180′ (B) 420′ (C) 240′ (D) 360′

3. In a complex, there are 2 rows of rooms. Each row has 3 rooms. The perimeter of each room is 56m. If all the rooms are square in shape. Find the total space occupied by the rooms.

   (A) 196 sq.m. (B) 588 sq.m. (C) 1176 sq.m. (D) 1224 sq.m.

4. The difference between the sum of the face values of 3 and 7 and sum of the place values of 5 and 8 in 35.78 is :

   (A) 4.92 (B) 3 (C) 4.98 (D) 23

5. $5^5 \div 5^7 =$ _____

   (A) 5 (B) 25 (C) $\frac{1}{5}$ (D) $\frac{1}{25}$

6. Two clocks are set to chime at intervals of 3 and 7 hours respectively. They start simultaneously from monday noon. What is the earliest time at which they chime together ?

   (A) 10 pm Monday (B) 9 am Tuesday (C) 5 am Tuesday (D) Tuesday noon

7. If x% of y is z. Then y% of x is :

   (A) x (B) y (C) z (D) xy

8. If one of the angles of an isosceles triangle be 120°. The measure of one remaining angle is :

   (A) 60° (B) 30° (C) 120° (D) 45°

9. Which number is to be subtracted from 1936 so that the remainder when divided by 9, 10 and 15 leaves remainder 7 in each case ?

   (A) 39 (B) 46 (C) 90 (D) 21

10. A flower garden is 15 metre breadth and perimeter is 7 decameter. The area of the garden is :

(A) 150 sq.m. (B) 44 sq.m. (C) 1050 sq.m. (D) 300 sq.m.

11. The simple interest on Rs.4250 for 4 years at the rate of 6% per annum is :

(A) Rs.102 (B) Rs.1020 (C) Rs.680 (D) Rs.1440

12. If one number is three times the another number and their difference is 28. The smaller number is :

(A) 10 (B) 12 (C) 16 (D) 14

13. A mobile handset is sold for Rs.18000 at a loss of 10%. Its cost price is :

(A) Rs.20000 (B) Rs.16000 (C) Rs.30000 (D) Rs.19000

14. If two numbers are relatively prime, which of the following is true ?

(A) LCM of the two numbers is the (B) HCF of the two numbers is one.

(C) There is no common factors other than 1. (D) All the above.

15. If 'x' is a negative integer, then $\frac{x}{|x|}$ equals:

(A) x (B) $-x$ (C) 1 (D) -1

16. Find the least number which when divided by 8, 12 and 20 leaves remainders 3, 7 and 15 respectively.

(A) 120 (B) 125 (C) 115 (D) 110

17. Santa scored $66\frac{2}{3}$% marks in an examination. The total mark of the exam is 342. The mark scored by him is :

(A) 228 (B) 200 (C) 288 (D) 240

18. The length and breadth of a rectangular field are 2.5 Hm and 75 m. The ratio of the breadth to its length is :

(A) 1 : 3 (B) 3 : 10 (C) 1 : 30 (D) 3 : 14

19. If 'P' represent an even natural number, its improper factors are :

(A) 1 and P (B) 2, 4 and 8 (C) 1, 2 and P (D) There is no factor

20. A man borrowed a sum of Rs.36000 from a friend on a promise that the sum would be cleared at the end of 4 years with an interest of 10% per annum. However, on the expiry of the time, he could pay Rs.50000 and a new shirt to clear the debt. The cost of the shirt is :

(A) Rs.144 (B) Rs.600 (C) Rs.1000 (D) Rs.400

21. There are _____ points on a line.

(A) two (B) three (C) four (D) infinite

22. Two numbers are in the ratio 2 : 3. They are in the ratio of 3 : 4, if 8 is added to both of them. The numbers are :

(A) 4, 6 (B) 40, 60 (C) 16, 24 (D) 32, 48

23. The value of $3 - 2x$, if $5 + x = 9 - x$ is :

(A) 1 (B) -1 (C) 2 (D) -2

24. If the two co-interior angles of a pair of parallel lines are in the ratio 3 : 6. The measure of the two angles are :

(A) 30 : 60 (B) 90 : 180 (C) 60 : 120 (D) 45 : 90

25. A petrol mix 16% kerosene. How many 'l' of petrol will be required if a retailer wants to mix 36 l of kerosene ?

(A) 225 l (B) 576 l (C) 324 l (D) 144 l

26. 669126 is divisible by :

(A) 5 (B) 11 (C) 4 (D) 6

27. The sum of the four consecutive even numbers is 972. The greatest number is :

(A) 242 (B) 246 (C) 244 (D) 248

28. Which of the following are co-prime ?

(A) 35 & 98 (B) 13 & 117 (C) 17 & 112 (D) 23 & 115

29. A path 2 metres wide, running around a square garden has an area of 384 square metres. Find the area of the square garden enclosed by the path.

(A) 2304 m^2 (B) 1936 m^2 (C) 1600 m^2 (D) 2116 m^2

30. Chaoton bought 2 score of mangoes at Rs.200. He sold them at Rs.60 for 4 mangoes. The selling price of 2 score of mangoes is :

(A) Rs.300 (B) Rs.600 (C) Rs.144 (D) Rs.250

31. One angle of a linear pair is 90°. The another angle should be :

(A) right angle. (B) acute angle. (C) obtuse angle. (D) straight angle.

32. The product of two numbers is 1200. If their quotient be $\frac{3}{4}$. The smaller number is :

(A) 20 (B) 30 (C) 40 (D) 60

33. The first angle of a triangle is twice the second angle and the third angle is 72°. The measure of the second angle is :

(A) 108° (B) 45° (C) 72° (D) 36°

34. The length of a garden is 20 metre and breadth 15 metre. There is a 5 metre width path around outside of the garden. The area of the path is :
(A) 300 sq.m. (B) 350 sq.m. (C) 450 sq.m. (D) 400 sq.m.

35. A man spends 10% of his monthly income on house rent and 30% of it on food. Find how much is left for other expenses if his monthly income is Rs.10000.
(A) Rs.7000 (B) Rs.9000 (C) Rs.4000 (D) Rs.6000

36. The value of $ab^2 + bc^2 + ca^2$, when $a = 3, b = 2$ & $c = 1$ is :
(A) 23 (B) 11 (C) 14 (D) 21

37. Which of the following number is exactly divisible by 11 ?
(A) 4835283 (B) 2714379 (C) 5682248 (D) 102030

38. What is to be added to 'x' so that the sum becomes y ?
(A) $y + x$ (B) $y - x$ (C) $\frac{x}{y}$ (D) $\frac{y}{x}$

39. The nearer approximation of circumference is :
(A) 2 times radius (B) 3 times diameter
(C) 3.14 times diameter (D) 2.14 times diameter

40. Find the least number which when divided by 2, 3, 4, 5 and 6 leaves remainder 1 in each case but leaves no remainder when divided by 7.
(A) 231 (B) 301 (C) 181 (D) 561

41. Which of the following statement is true ?
(A) Interest + Amount = Principal
(B) Principal × 100 = Interest × Rate × Time
(C) Time = $\frac{\text{Principal} \times 100}{\text{Interest} \times \text{Rate}}$
(D) Amount − Interest = Principal

42. The cost of 15 metres of clothes is Rs.400. The cost of 45 metres of clothes is :
(A) Rs.800 (B) Rs.1000 (C) Rs.1200 (D) Rs.15000

43. A park of 15 m 30 cm length and 12 m 20 cm breadth is to be surrounded by 4 layers of wire. Find the length of barbed wire required.
(A) 27 m 50 cm (B) 220 m (C) 55 m (D) 165 m

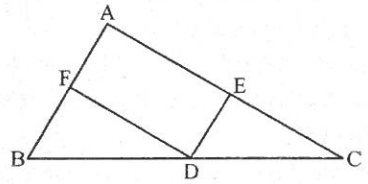
44. The monthly income of a man is Rs.16000 and the expenditure is Rs.15200. If his monthly income increases by 10% and his expenditure increases by 15%. The amount he saved in a month is :
(A) Rs.120 (B) Rs.480 (C) Rs.600 (D) Rs.152

45. The measure of two angles of a triangle are 40° and 60°. The measure of the opposite exterior angle of two angle is :

(A) 80° (B) 100° (C) 140° (D) 120°

46. 1 square metre = _____.
(A) 10 square decimeter (B) 100 square decimeter
(C) 10 square decameter (D) 100 square decameter

47. In fig.I, AB and DE perpendicular to AC, DF perpendicular to AB. All the angles congruent to ∠BFD are :



(A) ∠FBD, ∠DFA, ∠FAE (B) ∠BCA, ∠ABD, ∠BAC
(C) ∠FDB, ∠DEA, ∠AED (D) ∠DFA, ∠BAC, ∠AED, ∠CED

48. The value of $\frac{\frac{1}{3} of \frac{1}{4} \div \frac{1}{12} + \frac{1}{3} \div \frac{1}{4} of \frac{1}{12}}{\left(\frac{1}{3} + \frac{1}{4} - \frac{1}{12}\right) \div \left(\frac{1}{5} - \frac{1}{6}\right) - 1}$ is :
(A) $\frac{17}{14}$ (B) $\frac{14}{17}$ (C) 6 (D) 12

49. Which of the following property does not hold true in the operation of substraction ?
(A) Closer property.
(B) The substraction of a number from zero gives the number itself.
(C) The substraction of a number from zero gives the number itself in negative form.
(D) None of the above.

50. Which of the following may be the measure of angles of a triangle ?
(A) 30°, 80°, 100° (B) 40°, 90°, 80° (C) 70°, 80°, 30° (D) 60°,120°, 30°

2011

1. We cannot divide a number by :
(A) 1 (B) 2 (C) 5 (D) 0

2. Subtract –6 from 0 and add –4 to it. The resulting number is :

(A) +2 (B) –10 (C) +10 (D) –2

3. $\frac{3}{5} =$ _____

(A) $\frac{3}{500}\%$ (B) 20 % (C) 60 % (D) 0.60 %

4. A boy had 8 toys, each costing Rs. 12. He broke 2 toys and the remaining 6 toys, he sold at Rs. 15 each. His gain or loss is :

(A) Rs. 6 gain (B) Rs. 6 loss (C) Rs. 8 gain (D) Rs. 8 loss

5. A sum of money double itself in 20 years. The rate of interest is :

(A) 3 % (B) 4 % (C) 5 % (D) 10 %

6. How many times does the digit 5 occur in the unit's place if we consider all the natural numbers from 4 to 98 ?

(A) 9 (B) 10 (C) 8 (D) 4

7. The HCF of 96 and 128 is :

(A) 4 (B) 8 (C) 64 (D) 32

8. State the property $(a \times b) \times c = a \times (b \times c)$:

(A) Closure property (B) Commutative property

(C) Associative property (D) Distributive property

9. The enrolment in a school increased by 12 % from 1990 to 1991. In 1990, there were 1400 students enrolled. The number of enrolment students in 1991 were :

(A) 168 (B) 1232 (C) 1568 (D) 1412

10. Angou and Babu together can do a piece of work in 6 days and Angou alone can do it in 9 days. In how many days can Babu alone do it ?

(A) 12 days (B) 16 days (C) 18 days (D) 14 days

11. A farmer borrowed Rs. 3000 from a landlord at the interest rate of 3 % per month. After one year, he cleared the amount by giving Rs. 4000 and a hen. The worth of the hen is :

(A) Rs. 40 (B) Rs. 80 (C) Rs. 120 (D) Rs. 100

12. $3^0 =$ _____

(A) $\frac{60'}{3}$ (B) $3 \times 90'$ (C) $180'$ (D) All the above

13. 300 kg of rice are bought at the rate of Rs. 10 per kg and sold at 5 % loss. Calculate the selling price per kg.

(A) Rs. 8.50 (B) Rs. 9.50 (C) Rs. 11.50 (D) Rs. 8.00

14. The greatest number of 3-digits which is exactly divisible by 32 and 48 is :

(A) 999 (B) 960 (C) 990 (D) 950

15. The first three terms of a proportion are respectively 25, 10 and 15. The fourth term is :

(A) 6 (B) 10 (C) 7 (D) 5

16. Find the integer which is 5 less than 2.

(A) 3 (B) –3 (C) 7 (D) –7

17. If '*a*' and '*b*' are co-primes and both are factors of a number '*c*', then :

(A) $a + b$ will always be a factor of c (B) $a - b$ will always be a factor of c

(C) $a \times b$ will always be a factor of c (D) $a \div b$ will always be a factor of c

18. The number of pieces each 25 cm long which can be cut from a ribbon of 10 m is :

(A) 4 (B) 40 (C) 41 (D) 42

19. What is the complement of supplement of 130^0 ?

(A) 50^0 (B) 90^0 (C) 40^0 (D) 180^0

20. A's weight is 15 % more than B and B's weight is 5 % less than C. If A weighs 92 kg, then the weight of C is :

(A) 72 kg (B) $74\frac{4}{19}$ kg (C) 84 kg (D) $84\frac{4}{19}$ kg

21. Purnima purchased 8 notebooks for Rs. 25. How much should he pay if she has to buy 3 dozens of them ?

(A) Rs. 200 (B) Rs. 96.50 (C) Rs. 288 (D) Rs. 112.50

22. Four bells ring simultaneously and afterwards at intervals of 3, 4, 10 and 12 minutes. After what time will they ring together again ?

(A) 40 minutes (B) 1 hour 20 mins. (C) 1 hour (D) 3 minutes

23. The HCF of $x, 2x, 3x$ and $7x$ where x is a natural number is :

(A) $2x$ (B) x (C) $3x$ (D) $7x$

24. I have 45 sweets with me. I distributed them between Sachin and Yuvaraj in the ratio 2 : 3. The share of Yuvaraj is :

(A) 18 (B) 27 (C) 30 (D) 20

25. In a school library, there are 20,000 books out of which 15 % are Manipuri books, 20 % Hindi and the remaining are English. The number of Hindi books is :

(A) 4000 (B) 3000 (C) 13000 (D) 8000

26. How much does Rs. 2400 amounts to in $2\frac{1}{2}$ years at 5 % ?

(A) Rs. 2150 (B) Rs. 2200 (C) Rs. 2550 (D) Rs. 2700

27. If 10 is subtracted from 4 times a number, the result is 42. The number is :

(A) 13 (B) 8 (C) 10 (D) 15

28. If '*a*' be the dividend, '*b*' the divisor, '*q*' the quotient and '*r*' the remainder. Then '*a*' is divided by '*q*', the remainder would be :

(A) *b* (B) *r* (C) 1 (D) None of these

29. Determine the number nearest to 10000 which is exactly divisible by each of 2, 3, 4, 5, 6 and 7.

(A) 9660 (B) 10080 (C) 9960 (D) 10020

30. Simplify :

$$3x-(2x-y)+(x-2y)-(x-y)$$

(A) $x-4y$ (B) $-4y$ (C) $2x-3y$ (D) x

31. Which number is to be subtracted from 1936 so that the remainder when divided by 9, 10 and 15 leaves remainder 7 in each case ?

(A) 56 (B) 51 (C) 32 (D) 39

32. The speed of a train is 120 km/hr. It is increased by 10 %. The increase in speed of the train is :

(A) 12 km/hr (B) 132 km/hr (C) 10 km/hr (D) 130 km/hr

33. If $5y+6=6y+5$, the value of *y* is :

(A) 0 (B) 1 (C) 2 (D) 3

34. A car travelling at 80 km/hr covers a distance of 120 km in $1\frac{1}{2}$ hours. If the speed of the car increases to 100 km/hr, how long will it take to reach the same distance ?

(A) 60 minutes (B) 64 minutes (C) 72 minutes (D) 82 minutes

35. The smallest common factor of any two even number is :

(A) 1 (B) 2 (C) smaller number (D) larger number

36. The value of x if $\frac{x}{2}+\frac{x}{3}+\frac{x}{4}=26$ is :

(A) 24 (B) 78 (C) 32 (D) 12

37. A number became 9 when reduced by 10 %. The number is :

(A) 8 (B) 10 (C) 90 (D) 100

38. When $x=2, y=-3$ and $z=-4$, $\frac{xy^2}{z}$ is :

(A) -9 (B) $\frac{-9}{2}$ (C) $\frac{9}{2}$ (D) 9

39. The LCM of two numbers is 2079 and their HCF is 27. If one of the numbers is 189, the other number is :

(A) 11 (B) 77 (C) 297 (D) 329

40. The length of a rectangular field is 8 metres less than 2 times its width. If the perimeter of the field is 56 metres, the width of rectangular field is :

(A) 16 metres (B) 12 metres (C) 10 metres (D) 14 metres

41. Ramesh spends 15 % of his salary on house rent and 20 % of his salary on food. He left Rs. 1300. The amount that he spend on food is :

(A) Rs. 400 (B) Rs. 200 (C) Rs. 800 (D) Rs. 500

42. x % of $y =$ _____

(A) $\frac{x}{100}\times y$ (B) y % of x (C) $\frac{yx}{100}$ (D) All the above

43. One of the angles of a triangle is equal to the sum of the other two. The measure of that angle is :

(A) 90^0 (B) 60^0 (C) 115^0 (D) 180^0

44. 15 iron balls of the same size weigh 10 kg 50 gm. How many will weigh 4 kg 690 gm ?

(A) 7 (B) 8 (C) 4 (D) 9

45. Subtract the sum of $2+x-x^2+6x^3$, $2+3x-4x^2$ and $3-2x^3+4x-3x^2$ from $6+8x-4x^2+10x^3$ is :

(A) $2x^3-3x^2+2x-1$ (B) $3x^3-4x^2+1$

(C) $8x^3-2x+6$ (D) $6x^3+4x^2-1$

46. Mohan obtained 25 marks more and his friend Rajen 3 marks less than the minimum required for pass on a certain class test. How many more marks did Mohan obtain than Rajen ?

(A) 28 (B) 22 (C) 23 (D) 27

47. In a group of 25 boys, every boy carried at least a pen. There were 20 blue pens and 18 red pens. How many boys carried pens of both colour ?

(A) 16 (B) 12 (C) 15 (D) 13

48. The property of a triangle is :

(A) Sum of the angles of a triangle is 180^0.

(B) The sum of any two sides is always greater than the third side.

(C) The measure of an exterior formed when one side is produced is equal to the sum of the two opposite interior angles.

(D) All the above

49. The multiplicative inverse of -10 is :

(A) 10 (B) -10 (C) $\frac{1}{10}$ (D) $-\frac{1}{10}$

50. One of the following is a multiple of 11. Find the number.

(A) 6946500 (B) 989732 (C) 3514376 (D) 1164602

2012

1. The sum of the largest and smallest whole numbers each of 4-digits is :

(A) smallest 5-digit number + 999 (B) largest 5-digit number – 999

(C) smallest 4-digit number + 999 (D) largest 4-digit number – 999

2. The value of $\frac{2^5 \times 4^6}{8^7}$ is :

(A) 8 (B) $\frac{1}{8}$ (C) 16 (D) $\frac{1}{16}$

3. Find the sum of all 3-digit numbers which are exactly divisible by 72, 80 and 120.

(A) 630 (B) 840 (C) 720 (D) 1440

4. If the cost of 3 quintal 30 kg wheat be ₹ 429, find the cost of 3 quintal wheat.

(A) ₹ 450 (B) ₹ 420 (C) ₹ 390 (D) ₹ 370

5. A football team played 20 matches. The team won 12 matches, lost 5 and the remaining matches ended in a draw. The percentage of matches ended in a draw is :

(A) 15 % (B) 25 % (C) 60 % (D) 10 %

6. How many lines can be drawn passing through three collinear points ?

(A) Only one (B) Only three (C) Infinite (D) No line can be drawn.

7. An angle is one-half of its complement and one-fifth of its supplement. The magnitude of the angle is :

(A) 50^0 (B) 30^0 (C) 40^0 (D) 20^0

8. The portion of the circular region enclosed by an arc and the chord joining the end points of the arc is called :

(A) An arc of the circle. (B) A sector of the circle.

(C) A diameter of the circle. (D) A segment of the circle.

9. Find the number such that four times the number subtracted from ten times number is equal to 960.

(A) 160 (B) 640 (C) 16 (D) 64

10. A stick of 92 cm is broken into three pieces in the ratio 4 : 5 : 7. The length of the smallest part is :

(A) 21 cm (B) 23 cm (C) 25 cm (D) 29 cm

11. Which of the following are co-prime ?

(A) 35 & 98 (B) 13 & 117 (C) 17 & 112 (D) 23 & 115

12. Mohan has been paying for a house on an equal monthly instalment basis. He has already paid the instalments for 7 years. The cost of the house is ₹ 138000. If the instalment is ₹ 1500 per month, how many more instalments does he have to pay ?

(A) 85 instalments (B) 42 instalments (C) 8 instalments (D) 32 instalments

13. The value of $5-\left[5-\left\{5-\left(5-\overline{5-5}\right)\right\}\right]$ is :

(A) 0 (B) 30 (C) –25 (D) 25

14. A rectangular room 3.30 m by 5.25 m is to be paved with square tile of the same size. The number of tiles will be needed is :

(A) 570 (B) 590 (C) 640 (D) 770

15. The monthly salary of Gopal is ₹ 2250. His expenses and saving are in the ratio 7 : 2. If he continues that the expenses is reduced by ₹ 250 and saving is increased by ₹ 250. Then the ratio of the new ratio of his new expenses and saving for a year is :

(A) 7 : 2 (B) 5 : 4 (C) 4 : 3 (D) 2 : 1

16. Express 525 gm as percent of 12.25 kg :

(A) $42\frac{6}{7}\%$ (B) $8\frac{3}{7}\%$ (C) $21\frac{5}{7}\%$ (D) $4\frac{2}{7}\%$

17. By how much is x more than y ?

(A) $x+y$ (B) $x-y$ (C) $x \div y$ (D) $x \times y$

18. Two angles of a triangle are complement to each other. The measure of its third angle is :

(A) 45^0 (B) 60^0 (C) 90^0 (D) 120^0

19. The earth revolves round its own axis once in 24 hours. How long will it take to turn through an angle of 45^0 ?

(A) 8 hours (B) 4 hours (C) 3 hours (D) 6 hours

20. The length and breadth of a rectangle are '$3l$' and '$3b$' respectively. The perimeter of the rectangle is :

(A) $2(l+b)$ (B) $3(l+b)$ (C) $6(l+b)$ (D) $12(l+b)$

21. When 20 % of a number is added to two-fifth of it, the result is 450. The number is :

(A) 650 (B) 750 (C) 585 (D) 735

22. How many 4-digit numbers are there in all ?

(A) 1000 (B) 4000 (C) 5000 (D) 9000

23. The highest point on earth is Mount Everest 9 km above the sea level. The lowest point is the Mariannas Trench in the Pacific, 11 km below sea level. What is the distance between these two extremes ?

(A) 2 km (B) 10 km (C) 20 km (D) 12 km

24. Arrange the numbers 21, 56, 24, 9 so as to form a proportion :

(A) 21, 56, 24, 9 (B) 21, 56, 9, 24 (C) 56, 21, 9, 24 (D) 21, 24, 9, 56

25. A dealer bought 18 tables at ₹ 550 per table. He sold 12 of them at ₹ 600 per table and the remaining tables at ₹ 450 per table. His profit or loss on this transaction is :

(A) ₹ 900 loss (B) ₹ 400 profit

(C) ₹ 900 profit (D) neither profit nor loss

26. The solution of x in the equation $5x+6=21+2x$ is :

(A) 15 (B) 10 (C) 5 (D) 0

27. 5^0 = _____.

(A) 300 " (B) 30 " (C) 18000 " (D) 200 "

28. ABC is a triangle such that $AB \perp BC$ and the side AB is produced upto D forming an exterior angle CBD. The sum of two opposite interior angles of $\angle CBD$ is :

(A) 90^0 (B) 60^0 (C) 45^0 (D) 120^0

29. x % per annum is equal to :

(A) $\frac{x}{6}$ % per diem (B) $\frac{x}{12}$ % per mensem (C) $\frac{x}{6}$ % per mensem (D) $\frac{x}{12}$ % per diem

30. If you are asked to subtract –5 from 5 and then to multiply the result so obtained by 5. What will be your answer ?

(A) 0 (B) 1 (C) 25 (D) 50

31. If the walking speed of a man is 2 m/sec, then in an hour he will cover a distance of :

(A) 3.6 km (B) 5.4 km (C) 7.2 km (D) 8.6 km

32. How many composite numbers are there from 0 to 50 ?

(A) 33 (B) 34 (C) 35 (D) 36

33. The weights of A and B are 60 kg and 45 kg respectively. The weights of C and D are 44 kg and 33 kg respectively. Compare the ratio of the weights of A and B with the ratio of the weights of C and D.

(A) The ratio of the weights of A and B is greater than the ratio of the weights of C and D.

(B) The ratio of the weights of A and B is less than the ratio of the weights of C and D.

(C) The ratio of the weights of A and B is same with the ratio of the weights of C and D.

(D) None of the above.

34. Cost of 19 tables is ₹ 10279. The number of tables that can be purchased in ₹ 54100 is :

(A) 100 tables (B) 54 tables (C) 85 tables (D) 79 tables

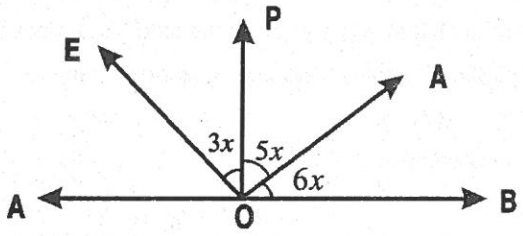
35. Ashok lent ₹ 1000 to his friend Anil at 4·% per annum for 9 months. What amount should Anil give to Ashok at the end of the period to clear the loan ?

(A) ₹ 1100 (B) ₹ 1030 (C) ₹ 1050 (D) ₹ 1020

36. If A = $2x^2 + 3xy - 5y^2$, B = $-5x^2 + 2xy + 3y^2$ and C = $3x^2 - 5xy + 2y^2$. The value of A+B+C = _____.

(A) $-10xy$ (B) $5x^2 + 5y^2$ (C) $10x^2$ (D) 0

37. From the adjoining figure $m\angle AOE = ?$



(A) 9⁰ (B) 27⁰ (C) 45⁰ (D) 54⁰

38. The floor of a square room is made up of square blocks. The sides of the room and the block are 10 m and 2 m respectively. How many blocks are there in all ?

(A) 50 (B) 25 (C) 60 (D) 30

39. Which is the biggest ?

(A) 90 % of 70 (B) 80 % of 80 (C) 70 % of 80 (D) 60 % of 100

40. A number has only one factor. Then the number is :

(A) Prime number

(B) Composite number

(C) Both prime and composite number

(D) Neither prime nor composite number

41. If two horses are worth 3 oxen and 5 oxen are worth 120 sheep and one sheep is worth ₹ 50. The price of a horse is :

(A) ₹ 1200 (B) ₹ 1800

(C) ₹ 3600 (D) ₹ 360

42. The volume of petrol in a tank is twice that of the other. If we draw out 25 litres from the first and add it to the other, the volume of the petrol in each tank will be the same. The linear equation to find the volume of each tank is :

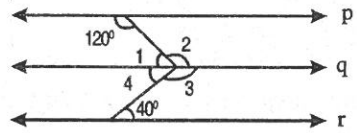
(A) $2x - 25 = x + 25$ (B) $x - 25 = 2x + 25$

(C) $2x + 25 = x + 25$ (D) $2x - 25 = 25 - 25$

43. The place value of 6 in 430.69 is :

(A) 6 (B) 60 (C) 6 tenths (D) 6 hundredths

44. In the figure pIIqIIr. Then the value of $\angle 1, \angle 2, \angle 3$ & $\angle 4$ are respectively :



(A) 60⁰, 120⁰, 160⁰ & 40⁰ (B) 60⁰, 120⁰, 140⁰ & 40⁰

(C) 120⁰, 60⁰, 40⁰ & 120⁰ (D) 60⁰, 150⁰, 140⁰ & 40⁰

45. Angou and Babu together can do a piece of work in 6 days and Angou alone can do it in 9 days. In how many days can Babu alone do it ?

(A) 12 (B) 14 (C) 16 (D) 18

DIRECTIONS : (Q.46 - Q.50) The questions gives four statements (A), (B), (C) & (D) of which one is incorrect. That is your ANSWER.

46. (A) A number with O as its units digit is always divisible by 2 and 10.

(B) A number divisible by 9 is also divisible by 6.

(C) A number divisible by 2 and 3 is always divisible by 6.

(D) A number divisible by 2 and 4 is always divisible by 8.

47. (A) $(a+b)+c = a+(b+c)$ (B) $(a-b)-c = a-(b-c)$

(C) $(a \times b) \times c = a \times (b \times c)$ (D) $(a+b) \times c = a \times c + b \times c$

48. (A) Any positive integer is greater than any negative integer.

(B) Zero is less than every integer.

(C) If an integer is less than another integer, then it is less than any integer greater than the another integer.

(D) The smaller integer is on the left side of the number line and the larger integer is on the right side.

49. (A) HCF of two or more number is a factor of their LCM.
(B) The LCM of any two number is lessthan and equal to the larger number.
(C) HCF of 2 or more number can never be zero.
(D) The product of two numbers is equal to the product of their HCF & LCM.

50. For a pair of parallel line and a transversal :
(A) the pair of alternate angles are equal.
(B) the pair of corresponding angles are equal.
(C) the pair of vertically opposite angles are equal.
(D) the pair of co-interior angles are equal.

2013

1. The product of the successor of 126 and predecessor of –398 is :
(A) 50673 (B) 50419 (C) –50673 (D) –50419

2. What smallest number must be added to a million, so that the sum is divided by 46 ?
(A) 40 (B) 6 (C) 32 (D) 8

3. Triangle ABC is a right triangle right angled at B. Then $\angle A$ and $\angle C$ are :
(A) Acute angles (B) Right angles (C) Obtuse angles (D) Reflex angles

4. Ramesh has ₹ 600. He spends 15 % on books, 20 % on cloths and 25 % on food. Find how much money did he save ?
(A) ₹ 360 (B) ₹ 240 (C) ₹ 200 (D) ₹ 320

5. The least number which when divided by the number 6, 9, 18 and 45 leaves remainder 2, 5, 14 and 41 respectively is :
(A) 356 (B) 176 (C) 86 (D) 41

6. The length and breadth of a rectangle are x cm and y cm respectively. If both the dimensions are reduced by 3 cm each, the area of the new rectangle is :
(A) $x \times y$ (B) $x(x \times y)$ (C) $(x-3) \times y$ (D) $(x-3)(y-3)$

7. Subtract the complement of 40^0 from its supplement, the difference is :
(A) 50^0 (B) 140^0 (C) 180^0 (D) 90^0

8. When a transversal intersect a pair of intersecting lines, then which of the following is true ?
(A) All the pairs of alternate angles are equal.
(B) All the pairs of corresponding angles are equal.

(C) All the pairs of vertically opposite angles are equal.
(D) All the pairs of co-interior angles are equal.

9. Which of the following is greater inequality ?
(A) 3 : 2 (B) 5 : 3 (C) 7 : 5 (D) All the above

10. The sum of two whole numbers is 56 and their difference is 14. Then the larger whole number is :
(A) 40 (B) 45 (C) 30 (D) 35

11. Cost of 5 books and 20 notebooks is ₹ 400. If the cost of one book be ₹ 40. Then the cost of one notebook is :
(A) ₹ 20 (B) ₹ 15 (C) ₹ 10 (D) ₹ 5

12. The equation of the statement given below : 'A number added by its three-fourth is 80' is :
(A) $x+\frac{3}{4}=80$ (B) $x+\frac{3}{4}x=80$ (C) $x+\frac{4}{3}=80$ (D) $x+\frac{4}{3}x=80$

13. The measure of two angles of a triangle are 107^0 and 41^0, then the measure of the third angle is :
(A) 32^0 (B) 108^0 (C) 139^0 (D) 56^0

14. x % of y is $13x$, then the value of 'y' is :
(A) 700 (B) 880 (C) 1200 (D) 1300

15. There are four prime numbers written in ascending order. The product of the first three is 385 and that of the last three is 1001. The last number is :
(A) 11 (B) 13 (C) 17 (D) 19

16. A toy gun cost ₹ 375. It is sold at a profit of 20 %. The selling price of the toy gun is :
(A) ₹ 420 (B) ₹ 450 (C) ₹ 480 (D) ₹ 520

17. The measure of two complementary angles are $(2x+3)^0$ and $(3x-8)^0$. The value of 'x' is :
(A) 90 (B) 19 (C) 180 (D) 15

18. The difference when $5x-7$ is subtracted from $8x+2$ is :
(A) $3x+9$ (B) $3x-5$ (C) $3x+5$ (D) $3x-9$

19. It is given that
1 right angle = 90^0,

$1^0 = 60'$,

$1' = 60''$.

Then 2 right angles is equal to :

(A) $180'$ (B) $120'$ (C) $7200''$ (D) $648000''$

20. The value of the algebraic expression $ax^2 + bx + c$, when $a = -2$, $b = 3$, $c = 1$ and $x = -1$ is :

(A) –6 (B) –4 (C) 6 (D) 4

21. A sum of ₹ 800 is deposited in a bank at the rate of 5 % simple interest per annum. In how many years will this sum increase to become ₹ 1000 ?

(A) 2 years (B) 3 years (C) 4 years (D) 5 years

22. Which of the following is false ?

An equation is _____.

(A) an equality without literal numbers

(B) an equality with one or more literal numbers

(C) an algebraic expression having equal to (=) sign

(D) any two algebraic expression connected by the sign of equal to (=) sign

23. If $4 : x :: x : 9$, then the value of x is :

(A) 6 (B) $9/4$ (C) 18 (D) $2/3$

24. The number 77 is divided into two parts such that HCF of two parts is 11 and their LCM is 110. The smaller of the two parts is :

(A) 11 (B) 22 (C) 44 (D) 55

25. $\overrightarrow{OX}$ is a number ray representing the whole number system with O as the initial point A,B,C,D,E,F,G,H,I etc. represent respectively 1, 2, 3, 4, 5, 6, 7, 8, 9, ..., then (OC + OG – DH) represent at the point :

(A) D (B) E (C) F (D) G

26. In IPL cricket final match Chennai Super Kings scored 126 runs at the end of 10 Overs and Mumbai Indians scored 147 runs at the end of 10 Overs. The ratio of their run scored at the end of 10 Overs was :

(A) 3 : 4 (B) 6 : 7 (C) 4 : 5 (D) 7 : 8

27. What is the 100th odd number ?

(A) 201 (B) 199 (C) 197 (D) 203

28. If 6 men or 12 women can do a work in 24 days. In how many days can 2 men and 4 women do the work ?

(A) 72 days (B) 56 days (C) 42 days (D) 36 days

29. Two straight lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect each other at O. If $\angle BOD = 110^0$, then the measure of $\angle COA$ is :

(A) 110^0 (B) 70^0 (C) 150^0 (D) 20^0

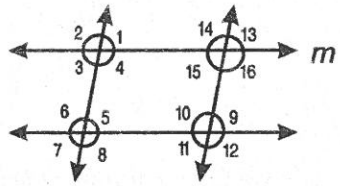
30. The value of 'x' in the equation $\frac{2x+1}{3} + 6 = \frac{x-1}{4} + 5$ is :

(A) $\frac{5}{19}$ (B) $\frac{-5}{19}$ (C) $-3\frac{4}{5}$ (D) $3\frac{4}{5}$

31. If a transversal intersect a pair of lines in which the pair of co-interior angles are supplementary then the two pair of lines are :

(A) intersecting lines (B) parallel lines (C) concurrent lines (D) None of these

32. In the given figure, $m \| l$ and p||q, if $\angle 1 = 68^0$, then the measure of $\angle 9$ is :



(A) 68^0 (B) 112^0 (C) 22^0 (D) 134^0

33. In an election for selecting the captain of the school there are two candidates from class X students. One candidate gets 43 % votes and defeated by 420 votes. The total number of votes polled is :

(A) 3000 (B) 1000 (C) 2500 (D) 2800

34. Three bells begin tolling at the same time and continued to do so at intervals of 21, 28 and 30 minutes respectively. The bells will toll together again after :

(A) 7 minutes (B) 17 hours 30 mins (C) 26 hours 15 mins (D) 73 hours 30 mins

35. $9^3 - 8^3$ is divisible by :

(A) 3 (B) 8 (C) 11 (D) 7

36. Which of the following is false ?

(A) $R = \frac{100 \times I}{P \times T}$ (B) $T = \frac{100 \times I}{P \times R}$ (C) $A = P + \frac{100 \times I}{R \times T}$ (D) $100 \times I = P \times R \times T$

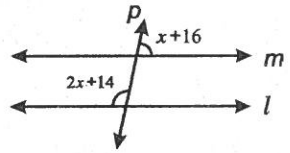
37. The solution of the equation $7-3y=3-7y$ is :
(A) 3 (B) –3 (C) 1 (D) –1

38. There are 264 girls and 408 boys in a school. These children are to be divided into groups of equal number of boys and girls. The maximum number of boys or girls in each group will be :
(A) 11 (B) 17 (C) 24 (D) 26

39. When a number is divided by 125 the remainder is 82. When the same number is divided by 25, the remainder will be :
(A) 8 (B) 9 (C) 6 (D) 7

40. The difference of the largest and smallest 5-digit number formed by the digits 6, 0, 3 and 5 is :
(A) 89999 (B) 3474 (C) 36474 (D) 33333

41. In the given figure $m \| l$ and p is a transversal then the value of x is :



(A) 50 (B) 80 (C) 90 (D) 180

42. The co-efficient of x^3 in $5x^4+x^2+6x-5$ is :
(A) 5 (B) 1 (C) 0 (D) 6

43. How many common factors are there in the given numbers 352 and 624 ?
(A) 5 (B) 16 (C) 4 (D) 8

44. The marks obtained by a student of class X in Mathematics, English, Social Science and Science are in proportion in the examination organised by MEC in 2012. He obtained 20 marks, 18 marks and 36 marks in Mathematics, English and Science respectively. The mark obtained by him in Social Science was
(A) 38 (B) 32 (C) 40 (D) 30

45. A man bought an article for ₹ 500 and sold for ₹ 600. His profit percent is :
(A) 10 % (B) 15 % (C) 20 % (D) 25 %

46. Which of the following is false ?
(A) The sum of the three angles of a triangle is 180^0.
(B) The sum of any two sides of a triangle is greater than the third side.
(C) The measure of an exterior angle of a triangle is equal to the sum of the two opposite interior angles.

(D) The sum of two angles of a triangle is always greater than the third side.

47. The sum of two integers is smaller than one of them, then the other integer is :
(A) positive (B) negative (C) 0 (D) 1

48. Which of the following are co-prime ?
(A) 35 and 98 (B) 13 and 117 (C) 17 and 112 (D) 23 and 115

49. A stick of length 92 cm is broken into three pieces in the ratio 4 : 5 : 7. The length of the smallest part is :
(A) 21 cm (B) 23 cm (C) 25 cm (D) 29 cm

50. If 59 * 26 is divisible by 11, then the digit replacing (*) will be :
(A) 0 (B) 1 (C) 2 (D) 3

2014

1. Which digit in the number 879463 has the highest face value ?
(A) 90 (B) 8 (C) 9 (D) 800000

2. Which one of the following statements is false ?
(A) If a, b and c are three whole numbers, then $(a \times b) \times c = a \times (b \times c)$.
(B) If a, b and c are three whole numbers and $b > c$, then $a \times (b-c) = a \times b - a \times c$.
(C) If a is any whole number, then $0 \times a = a \times 0 = a$
(D) Division of any whole number by 1 gives the whole number itself as quotient.

3. The equivalent of 100 million in Indian system of numeration is :
(A) 1 Lakh (B) 10 Crores (C) 10 Lakhs (D) 1 Crore

4. $3 \times 1 + 4 \times 100000 + 2 \times 1000 + 1 \times 10 + 9 \times 100 + 3 \times 10000000 = ?$
(A) 30402931 (B) 4302913 (C) 30429103 (D) 30402913

5. Find the number of the difference between greatest six digit number and the smallest seven digit numbers.
(A) Ninetynine (B) One (C) Ten (D) Ninety

6. Find the result when 88 is substracted from the difference of the greatest 5-digit number and the smallest 5-digit number formed from the digits 3, 4, 5, 9, 0 without repetition.
(A) 60752 (B) 69268 (C) 65059 (D) 64883

7. The result obtained when cube of fortynine is divided by the square of seven is again multiplied with the square of seven. What is the final result ?

(A) $(7^2)^3$ (B) 49^2 (C) 49×7 (D) 7

8. Fill in the blanks :

$(1000000)^3 \div 100^{14} = \frac{1}{\quad}$

(A) 10^3 (B) 100^{12} (C) $(100^2)^9$ (D) $(10^2)^5$

9. If x is a negative integer and y is the successor of x, then value of $x - y$ is :

(A) 0 (B) –1 (C) 1 (D) –2

10. What number should be added to –799 so as to make 344 ?

(A) 455 (B) –1302 (C) –344 (D) 1143

11. The sum of 10 + (–10) + 10 + (–10) + ... + upto 20 terms is :

(A) 200 (B) 0 (C) –200 (D) 1

12. The value of the expression $1 - 2 + 3 - 4 + 5 - 6 + \ldots\ldots\ldots + 29 - 30$ is :

(A) –14 (B) –15 (C) 0 (D) 1

13. Which of the following numbers is a multiple of 35 ?

(A) 123413 (B) 70070 (C) 111115 (D) 80090

14. Find the value of :

$$4\frac{1}{4} \div \left[17 \div \left\{20 - 3\left(-7 + \overline{5+3}\right)\right\}\right]$$

(A) $\frac{2231}{40}$ (B) $14\frac{1}{4}$ (C) $\frac{17}{4}$ (D) $\frac{970}{92}$

15. What are all the common multiples of 6 and 7 lying between 200 ?

(A) 42,82,123,164 (B) 28,78,120,188

(C) 60,70,120,140 (D) 42,84,126,168

16. Write the smallest and the greatest digit in the blank space of 8 ___ 4217 so that the number formed is divisible by 3.

(A) Smallest digit = 1, Greatest digit = 9

(B) Smallest digit = 3, Greatest digit = 7

(C) Smallest digit = 2, Greatest digit = 8

(D) Smallest digit = 4, Greatest digit = 6

17. The HCF of three numbers is 15. The 1st number lies between 60 and 80, 2nd number lies between 40 and 50 and the 3rd number lies between 25 and 35. Find the LCM of the three numbers.

(A) 5332 (B) 1102 (C) 6750 (D) 3150

18. The ratio of two numbers is 7 : 9, then the consequent is 207. Find the antecedent.

(A) 189 (B) 63 (C) 161 (D) 273

19. Mother wants to divide ₹ 594 between her daughters Chaobi and Tombi in the ratio of their ages. If Chaobi and Tombi are 15 years old and 12 years old respectively, find how much Tombi will get.

(A) ₹ 264 (B) ₹ 196 (C) ₹ 330 (D) ₹ 439

20. A can do a piece of work in 9 hrs. B can do the work in 12 hrs and C can do it in 18 hrs. If they start together at 13 : 00 hours, when will the work be finished ?

(A) 5 pm (B) 5 am (C) 4 pm (D) 4 am

21. The total population of trees in a forest is 5600 and if $14\frac{1}{2}$ % of population of the trees are pineapple trees, find the numbers of other types of trees in the forest.

(A) 5348 (B) 3976 (C) 4788 (D) 812

22. Find the increase or decrease percentage of total population of cows and buffaloes if 25 % of cows increase and 12 % of buffaloes decrease from the population of 8000 and 12000 respectively.

(A) 0.28 % decrease (B) 2.8 % increase

(C) 2.8 % decrease (D) 28 % increase

23. Two supplementary angles are such that the measure of larger angles is 54^0 more than the smaller. What is the measure of larger angles ?

(A) 117^0 (B) 63^0 (C) 126^0 (D) 54^0

24. The measure of two supplementary angles are $(5x+9)^0$ and $(6x+17)^0$. Find the measure of the first angle.

(A) 14^0 (B) 180^0 (C) 101^0 (D) 79^0

25. Pick out the false one from the following statements :

(A) Any two angles formed by intersecting two lines and are not adjacent are called vertically opposite angle.

(B) A right angle is the supplement of itself.

(C) Zero angle is complement of a right angle and the complement of a straight angle.

(D) None of the above.

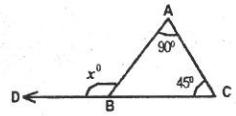
26. Find the value of 35 % of ₹ 900.

(A) ₹ 450 (B) ₹ 315 (C) ₹ 350 (D) ₹ 700

27. The second angle of a triangle is thrice the first angle and the third angle is twice the second angle. Find the third angle.

(A) 108^0 (B) 54^0 (C) 18^0 (D) 64^0

28. Find x^0.



(A) 180^0 (B) 45^0 (C) 135^0 (D) 100^0

29. Which of the following are true ?

(i) A triangle in which all the three angles are 90^0 is Acute angled triangle.

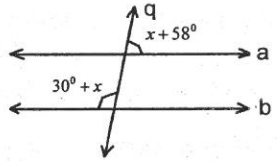
(ii) A triangle in which all three sides are not equal in length is called an Isosceles triangle.

(iii) A triangle in which all the three sides are equal in length are called Equilateral triangle.

(iv) A triangle in which one of the angles is 90^0 is called an Obtuse angled triangle.

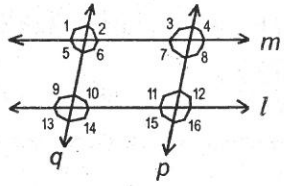
(A) Only (ii) (B) Only (iii) (C) (ii) and (iii) (D) (ii) and (iv)

30. Find x in degree and where q is a transversal of pair of parallel lines a and b.



(A) 46^0 (B) 92^0 (C) 58^0 (D) 30^0

31. In the figure m||l and q||p, find $m\angle 10$ and $m\angle 15$ if $m\angle 8 = 85^0$.



(A) $m\angle 10 = 85^0$, $m\angle 15 = 95^0$ (B) $m\angle 10 = m\angle 15 = 85^0$

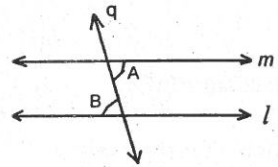
(C) $m\angle 10 = 95^0$, $m\angle 15 = 85^0$ (D) $m\angle 10 = m\angle 15 = 95^0$

32. Two parallel lines are intersected by a transversal, then each pair of _____ angles are supplementary.

(A) corresponding (B) alternate

(C) co-interior (D) vertically opposite

33. In the figure, m||l and q is a transversal of lines m and l. By which method of angles you are going to show that $\angle A = \angle B$.



(A) Alternate angles (B) Corresponding angles

(C) Vertically opposite angles (D) Allied angles

34. Find the value of $\frac{4}{3}x + \frac{18}{2}y - \frac{23}{14}z - 19$ when $x = \frac{1}{2}, y = \frac{1}{3}, z = \frac{7}{2}$.

(A) $21\frac{1}{12}$ (B) $\frac{297}{12}$ (C) $-12\frac{1}{21}$ (D) $\frac{-253}{12}$

35. What must be added to the sum of $-3x^2 + 12xy + y^2 + 9$ and $-x^2 + 26xy - 13y^2 + 10$ to get $20x^2 - 50xy - 12y^2 + 18$?

(A) $23xy - 24x^2$

(B) $24x^2 - 88xy - 1$

(C) $83x^2 - 22xy + 3$

(D) $42x^2 - 13xy$

36. How many terms do the following algebraic expression have ?

$2 \times xy - 4 \times x + 15 \times z - 6 \times ab + 7 \div b$

(A) Five (B) Four (C) Twelve (D) Ten

37. Find the value of x when $3x + \frac{1}{2} - 13 = 6x + 16$.

(A) $\frac{-56}{7}$ (B) $6\frac{9}{3}$ (C) $9\frac{3}{6}$ (D) $\frac{-57}{6}$

38. Find the value of z if the sum of $\frac{2}{3}$ and z is half of z.

(A) $\frac{2}{3}$ (B) $\frac{4}{3}$ (C) $\frac{1}{2}$ (D) $\frac{5}{2}$

39. Find $3x+2y+6z$ if $x=6a-2b+12c$, $y=2a-3b+10c$, $z=10a+8b-10c$.

(A) $2(14a-36b+2c)$ (B) $28a+36b-4c$

(C) $82a+36b-4c$ (D) $2(14a-36b+2c)$

40. What is the co-efficient of b in "2a + 3b" ?

(A) 2a + 3 (B) 2a (C) b (D) 3

41. Choose the true statement from the following :

(i) Actual cost is the money paid by the retailer to the wholesaler to buy goods.

(ii) Overheads is the money spent on transportation, handling, rent, staff salary, maintenance, etc. by the retailer in purchase of goods.

(iii) If the cost price is greater than selling price, it is gain.

(iv) If cost price is smaller than the selling price, it is profit.

(A) (i) only (B) (i) and (ii)

(C) (i), (ii) and (iii) (D) (i), (ii) and (iv)

42. An article is sold at the loss of 15 % and the cost of the article is ₹ 5000. Find the selling price.

(A) ₹ 750 (B) ₹ 5225 (C) ₹ 4250 (D) ₹ 5750

43. Michael has an article that cost ₹ 600 and sells it to Niran at a profit of 5 % and Niran sells it to Peterson at a profit of 20 %. If Peterson sells it to Sanamacha at ₹ 800, what is his profit or loss ?

(A) ₹ 44 (B) ₹ 56 (C) ₹ 126 (D) ₹ 54

44. Find the amount when Principal = ₹ 1800, rate of interest = 12 % per annum and time = 3 months.

(A) ₹ 54 (B) ₹ 1854 (C) ₹ 96 (D) ₹ 1896

45. Find the amount of ₹ 5500 for 3 years at 2 percent per mensem.

(A) ₹ 3690 (B) ₹ 5596 (C) ₹ 8690 (D) ₹ 9460

46. Which of the following is true ?

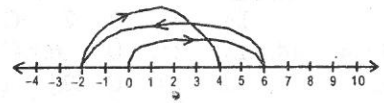
(A) $6+(-2)>-5+10$

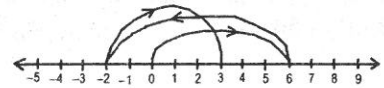
(B) $|-6|+|-9|=-9+(-6)$

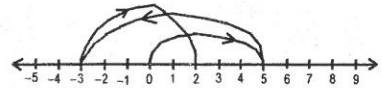
(C) $(1+3)^2-2=-14$

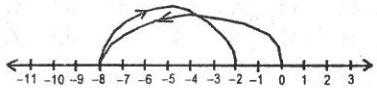
(D) $a(-1)^2+c(-2)+d(-3)=a-2c-3d$

47. The sum of 6, – 8 and 5 on the number line is equal to :

(A) 

(B) 

(C) 

(D) 

48. Twelve less than the result when x is divided by 8 is equal to :

(A) $\frac{x}{8}-12$ (B) $\frac{8}{x}-12$ (C) $\frac{x}{8}=12$ (D) $\frac{8}{x}=-12$

49. Find the third proportional to 0.2, 12.

(A) 144 (B) 0.24 (C) 36 (D) 720

50. Sanajaoba earns ₹ 5000 in 15 days. How much will he earn in 9 days ?

(A) ₹ 3000 (B) ₹ 15000

(C) ₹ 45000 (D) ₹ 8000

****

Answers

2010

1. B	2. C	3. C	4. A	5. D	6. B	7. C	8. B	9. A	
10. D	11. B	12. D	13. A	14. D	15. D	16. C	17. A	18. B	
19. A	20. D	21. D	22. C	23. B	24. C	25. A	26. D	27. B	
28. C	29. D	30. B	31. A	32. B	33. D	34. C	35. D	36. A	
37. C	38. B	39. C	40. B	41. D	42. C	43. B	44. A	45. B	
46. B	47. D	48. A	49. B	50. C					

2011

1. D	2. A	3. C	4. B	5. C	6. B	7. D	8. C	9. C	
10. C	11. B	12. C	13. B	14. B	15. A	16. B	17. C	18. B	
19. C	20. D	21. D	22. C	23. B	24. B	25. A	26. D	27. A	
28. B	29. B	30. D	31. D	32. A	33. B	34. C	35. A	36. A	
37. B	38. B	39. C	40. B	41. A	42. D	43. A	44. A	45. D	
46. A	47. D	48. D	49. D	50. A					

2012

1. A	2. D	3. C	4. C	5. A	6. A	7. B	8. D	9. A	
10. B	11. C	12. C	13. A	14. D	15. D	16. D	17. B	18. C	
19. C	20. C	21. B	22. D	23. C	24. B	25. D	26. C	27. C	
28. A	29. C	30. D	31. C	32. B	33. C	34. A	35. B	36. D	
37. D	38. B	39. B	40. D	41. B	42. A	43. C	44. B	45. D	
46. D	47. B	48. B	49. B	50. D					

2013

1. C	2. A	3. A	4. B	5. C	6. D	7. D	8. C	9. D	
10. D	11. C	12. B	13. A	14. D	15. B	16. B	17. B	18. A	
19. D	20. B	21. D	22. A	23. A	24. B	25. C	26. B	27. B	
28. D	29. A	30. C	31. B	32. A	33. A	34. A	35. D	36. C	
37. D	38. C	39. D	40. C	41. A	42. C	43. A	44. C	45. C	
46. D	47. B	48. C	49. B	50. A					

MATHEMATICS

Class – VII, 2010

1. There was enough fodder for 200 cattles in a farm for 40 days. But the owner of the farm bought 50 more cattles. How long will the fodder last ?
   (A) 35 days (B) 32 days
   (C) 30 days (D) 45 days

2. The width of a rectangle is two-third its length. If the perimeter is 180 m, find the dimensions of the rectangle.
   (A) 108 m & 72 m (B) 100 m & 80 m
   (C) 36 m & 54 m (D) 30 m & 90 m

3. Two rational numbers $\frac{u}{v}$ and $\frac{r}{s}$ are equivalent, if :
   (A) $uv = rs$ (B) $ur = vs$
   (C) $us = vr$ (D) $us = vs$

4. Which of the following is a factor of $81x^2 - 1$?
   (A) $9x^4 + 1$ (B) $9x - 1$
   (C) $x^2 - 9$ (D) $x^2 - 3$

5. Lanchenba had 13 toffees with him. Out of these, he gave some toffees to Leisemba and Lamnganba. If Lamnganba got 3 toffees less than Leisemba and 2 toffees are left with Lanchenba. How many toffees did Leisemba get ?
   (A) 10 (B) 4
   (C) 3 (D) 7

6. A packet of biscuit is in the form of a cuboid. Its length is 20 cm, breadth 10 cm and height 5 cm. These packet are placed in a big cubical box whose edge is 0.5 m long. How many packet are there in the box ?
   (A) 100 (B) 125
   (C) 150 (D) 25

7. One number is three times another. Their sum is 48. The equation formulated from the problem is :
   (A) $x + 3 = 48$ (B) $3x + x = 48$
   (C) $3x = 48$ (D) $\frac{x}{3} = 48$

8. A ladder of length 10 m leans against a vertical wall on the same horizontal plane and touches a mark on the wall at a height 8 m above the plane. How far is the foot of the ladder from the wall ?

(A) 6 m (B) 36 m

(C) 4 m (D) 5 m

9. How many angles are there in a segment of a circle ?

(A) Only two (B) Only four

(C) Innumerable (D) Only one

10. If the sum of all edges of a cube is 36 cm, then the volume of that cube is :

(A) 9 cm^3 (B) 27 cm^3

(C) 219 cm^3 (D) 729 cm^3

11. x and y vary directly with each other. When x is 10 and y is 15. Which of the following is not a possible pair of corresponding values ?

(A) 2 and 3 (B) 8 and 12

(C) 15 and 20 (D) 25 and 37.5

12. The cost of a car decrease every year by 15%. If the price of a new car is Rs.84000, how much will it be worth after 2 years ?

(A) Rs.60000 (B) Rs.60690

(C) Rs.60960 (D) Rs.71400

13. Simplify : $\left(\frac{1}{8}\right)^{-2}+\left(\frac{1}{4}\right)^{-2}+\left(\frac{1}{9}\right)^{-2}$

(A) 145 (B) $\frac{1}{145}$

(C) $\frac{1}{161}$ (D) 161

14. In what time will the simple interest on Rs.8750 at 9% per annum be the same as that on Rs.12500 at 10.5 % per annum in 4 years ?

(A) 6 years (B) 6 years 8 months

(C) 6 years 2 months (D) 6 years 10 months

15. Two angles of a triangle are of equal measure and each is one third of the measure of the third angle. Find the measures of the three angles of the triangle.

(A) 54^0, 54^0 & 72^0 (B) 36^0, 36^0 & 108^0

(C) 50^0, 50^0 & 80^0 (D) 26^0, 26^0 & 128^0

16. $\left(2^{-5}\div 4^2\right)\times 16^{-1}$ is equal to :

(A) 2^{-2} (B) 2^{-5}

(C) 2^{-16} (D) 2^{-13}

17. For which of the following rational numbers, the multiplicative inverse does not exist ?

(A) 0 (B) $-\frac{1}{2}$

(C) $\frac{-2}{-3}$ (D) $\frac{3}{4}$

18. Bui sells an article for Rs.342 and loses 5%. What would have been his gain or loss % if he sells it for Rs.396 ?

(A) 5% loss (B) 10% gain

(C) 15% gain (D) 20% gain

19. The point of concurrent of the medians of a triangle is called :

(A) centroid. (B) orthocentre.

(C) circumcentre. (D) incentre.

20. A room 12 m by 8 m is to be carpeted at the rate of Rs.30.00 per sq.m. Find the cost.

(A) Rs.2880 (B) Rs.3000

(C) Rs.2800 (D) Rs.2000

21. A father is 26 years older than his son. If the total age of the father and son is 56 years, then the age of the son is :

(A) 30 years (B) 15 years

(C) 25 years (D) 10 years

22. In ΔABC, $\angle B = 55^0$, $\angle C = 70^0$. Then the triangle is :

(A) Equilateral triangle (B) Isosceles triangle

(C) Right triangle (D) Obtuse angled triangle

23. Sanarei walks 4 km in 1 hour. The distance covered in 24 second is :

(A) $26\frac{2}{3}$ m (B) 26 m

(C) $24\frac{2}{3}$ m (D) 24 m

24. How many 4 m cubes can be cut from a cuboid measuring 20m × 12m × 8m ?
(A) 30 (B) 20
(C) 40 (D) 50

25. Each angle of a triangle may be :
(A) an acute angle. (B) an obtuse angle.
(C) a right angle. (D) a straight angle

26. The sum of a whole number and its successor is 47. What is the number ?
(A) 23 (B) 24
(C) 46 (D) 48.

27. What percent of Rs.10 is 25 paise ?
(A) 0.25% (B) 30%
(C) 2.5% (D) 3.5%

28. The solution of the equation $2y = 5y - \frac{18}{5}$ is :

(A) $\frac{18}{5}$ (B) $\frac{18}{15}$

(C) $\frac{15}{18}$ (D) $\frac{5}{18}$

29. If Chingkhei rides his scooter at a speed of 20 km/hr, he reaches his office 5 minutes late. If he rides at 30 km/hr speed, he reaches 5 minutes early. The distance between his home and office is :
(A) 10 km (B) 15 km
(C) 20 km (D) 30 km

30. Evaluate : $\frac{176 \times 176 - 156 \times 156}{176 + 156}$
(A) 20 (B) 332
(C) 27456 (D) 0

31. The longer side of a parallelogram is 6.8 cm and the shorter side is $\frac{3}{4}$ of the longer side. The perimeter of the parallelogram is :

(A) 23 cm (B) 22.8 cm
(C) 11.9 cm (D) 23.8 cm

32. The surface area of the four walls of a room is :
(A) $l \times b \times h$ (B) $6l^2$
(C) $2(l+b) \times h$ (D) $2(l \times b + b \times h + l \times h)$

33. On the number line, which of the following rational numbers lies on the right most ?
(A) $\frac{-3}{7}$ (B) $\frac{3}{-7}$
(C) $\frac{-3}{-7}$ (D) $\frac{0}{7}$

34. If the selling price of an article is equal to the cost price of 15 articles, then in the transaction, there is a :
(A) loss of $66\frac{2}{3}\%$ (B) loss of 40%
(C) gain of $66\frac{2}{3}\%$ (D) gain of 40%

35. Which of the following is a Pythagorean Triplet ?
(A) (3, 4, 6) (B) (5, 7, 13)
(C) (8, 24, 26) (D) (8, 15, 17)

36. Which one of the following is false :
(A) $\left(\frac{p}{q}\right)^m \times \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} \times \frac{r}{s}\right)^m$ (B) $\left(\frac{p}{q}\right)^m \div \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} \div \frac{r}{s}\right)^m$
(C) $\left(\frac{p}{q}\right)^m + \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} + \frac{r}{s}\right)^m$ (D) $\left(\frac{p}{q}\right)^m \times \left(\frac{p}{q}\right)^n = \left(\frac{p}{q}\right)^{m+n}$

37. ABCD is a parallelogram and $\angle A = 60^0$, then $\angle C$ = _____ ?
(A) 120^0 (B) 60^0
(C) 180^0 (D) 360^0

38. $\frac{1}{4}x^2 + x + 1$ equals :
(A) $\left(\frac{1}{2} + x\right)^2$ (B) $\left(\frac{1}{2}x + 1\right)^2$
(C) $\left(\frac{1}{2}x - 1\right)^2$ (D) $\left(\frac{1}{2} - x\right)^2$

39. If $x+\frac{1}{x}=4$, the value of $x^2+\frac{1}{x^2}=$?

(A) 16 (B) 8

(C) 14 (D) 20

40. In ΔABC, AB = BC and $m\angle B = 80^0$, then $m\angle C$ equals :

(A) 30^0 (B) 50^0

(C) 80^0 (D) 100^0

41. Two pipes A and B can fill a cistern in 12 minutes and 15 minutes respectively. There is a third pipe C which can empty it in 20 minutes. If all the three pipes are open at the same time, how long will it take to fill the cistern ?

(A) 8 minutes (B) 6 minutes

(C) 10 minutes (D) 47 minutes

42. In an examination result, 51% candidates is passed while 784 candidates failed. The number of candidates passed in the examination is :

(A) 816 (B) 1600

(C) 216 (D) 612

43. The length of a rectangular field is twice its breadth and its area is 2 hectares.The cost of fencing the field at Rs.5 per metre is :

(A) Rs.3000 (B) Rs.5000

(C) Rs.2000 (D) Rs.1000

44. The commutative property for addition of rational numbers states that :

(A) $(p+q)\times r = (p\times r)+(q\times r)$ (B) $p+q=q+p$

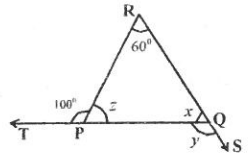
(C) $p+(q+r) = (p+q)+r$ (D) $p+0 = p$

45. Which of the following is not in standard form :

(A) 2.3×10^5 (B) 3.9×10^{-6}

(C) 0.5×10^7 (D) 1.5×10^6

46. In ΔPQR, QP is produced to T and RQ to S. $(\angle RPT = 100^0, \angle PRQ = 60^0)$ The values of $x, y \& z$ are :



(A) $50^0, 150^0$ & 90^0 (B) $40^0, 160^0$ & 80^0

(C) $40^0, 140^0$ & 80^0 (D) $50^0, 140^0$ & 80^0

47. The concurrent point of orthocentre, centroid, circumcentre and incentre are at the same point, then the triangle is :

(A) Scalene triangle. (B) Isosceles triangle.

(C) Equilateral triangle. (D) There is no such triangle

48. Two circles are said to be congruent if they have same :

(A) centre. (B) chords.

(C) radii. (D) arcs.

49. The sum of the two rational numbers is 1. One of the number is $\frac{-2}{7}$, the other number is :

(A) $\frac{2}{7}$ (B) $\frac{5}{7}$

(C) $\frac{8}{7}$ (D) $\frac{9}{7}$

50. Which of the following is not a congruence cisterion ?

(A) AAS (B) AAA

(C) SAS (D) ASA

****

2011

1. $\frac{p}{q}$ is a terminating decimal, the prime factors of q should be :

   (A) 2 and 5 (B) 3 and 7

   (C) 2 and 3 (D) None of these

2. Two trains 300 m and 340 m long are running at speeds of 42 km/hr and 54 km/hr respectively in opposite directions. The required time for the two trains to pass each other is :

   (A) 54 sec (B) 34 sec

   (C) 24 sec (D) 14 sec

3. The sum of the two acute angles of a right angled triangle is :

   (A) Acute angle (B) Right angle

   (C) Obtuse angle (D) Straight angle

4. All the four sides of a quadrilateral are equal. Then the quadrilateral is always a :

   (A) Square (B) Rhombus

   (C) Rectangle (D) Parallelogram

5. Which of the following rational number can be written as a rational number with denominator 42 ?

   (A) $\frac{1}{22}$ (B) $\frac{3}{4}$

   (C) $\frac{-6}{7}$ (D) $\frac{-7}{8}$

6. The sum of the three consecutive odd natural numbers is 27. The middle number is :

   (A) 7 (B) 11

   (C) 9 (D) 13

7. The length of the two legs of a right triangle are 28 cm and 45 cm. The length of the hypotenuse is :

   (A) 47 (B) 53

   (C) 57 (D) 56

8. A contractor employed 15 men to construct a brick wall in 20 days. Due to emergency, he had to complete the work in 12 days. The number of additional men that he must engage to finish the work in time is :

   (A) 25 (B) 10

   (C) 7 (D) 5

9. A, B and C can do a work in 6, 12 and 24 days respectively. In what time can they together do it ?

   (A) 3 days (B) $\frac{7}{24}$ days

   (C) $3\frac{3}{7}$ days (D) $4\frac{3}{5}$ days

10. A line segment both of whose end points lie on the circle is called :

    (A) Radius (B) Diameter

    (C) Chord (D) None of these

11. If the cost price of 8 items be the same as the selling price of 6 items, the profit percent is :

    (A) 25 % (B) $12\frac{1}{2}$ %

    (C) 40 % (D) $33\frac{1}{3}$ %

12. In a college, there are 56 percent science students, 30 percent arts students and the remaining 119 are commerce students. How many students are there in all in the college ?

    (A) 850 (B) 950

    (C) 1050 (D) 1250

13. Chaothoi is 3 years older than Ram. If 12 is added to Chaothoi's age and 3 is subtracted from Ram's age, then Chaothoi will be 3 times as old as Ram. The present age of Ram is :

    (A) 15 years (B) 13 years

    (C) 12 years (D) 10 years

14. 15 men can do a work in 30 days. Then 30 men can do the same work in :

    (A) 15 days (B) $\frac{15}{30}$ days

    (C) 2 days (D) $\frac{15}{30} \times 100$ days

15. At what sum of money amounts to Rs. 3885 in 146 days at 9 % per annum ?

(A) 2480 (B) 3620

(C) 3750 (D) 3800

16. The angle in a semi-circle is a/an :

(A) Acute angle (B) Obtuse angle

(C) Right angle (D) Straight angle

17. A number added by its three-fifth is 80. The number is :

(A) 50 (B) 80

(C) 60 (D) 40

18. In order to subtract one binomial from another binomial. We must :

(A) multiply all the like terms

(B) multiply all the unlike terms

(C) change the sign of each term from + to – and – to + of the algebraic expression to be subtracted.

(D) All the above

19. The diagonals of a parallelogram are :

(A) equal (B) intersect each other

(C) bisect each other (D) parallel to each other

20. Ali and Salim together can finish a work in 10 days. Salim alone can finish the work in 30 days. Ali alone can finish the work in :

(A) 20 days (B) 16 days

(C) 18 days (D) 15 days

21. Which one of the following rational numbers is a non-terminating decimal ?

(A) $\frac{7}{2}$ (B) $\frac{13}{5}$

(C) $\frac{17}{10}$ (D) $\frac{19}{15}$

22. If $p = s + 3$, the value of p when $p + s + 4 + 3 = 0$ is :

(A) 2 (B) 3

(C) –3 (D) –2

23. A man spends 75 % of his income. His income is increased by 20 % and he increases his expenditure by 10 % of the earlier one. His saving is increased by :

(A) 10 % (B) 15 %

(C) 25 % (D) 50 %

24. A dealer bought 6 ceiling fans for Rs. 7350. At what price would he sell each one to have 8 % profit ?

(A) 1252 (B) 1323

(C) 1340 (D) 1320

25. $\frac{x}{y}\left(\frac{p}{q}+\frac{r}{s}\right)=\frac{x}{y}\times\frac{p}{q}+\frac{x}{y}\times\frac{r}{s}$ is a/an :

(A) Closure property (B) Commutative property

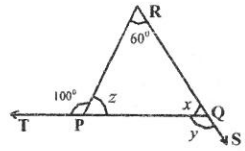
(C) Associative property (D) Distributive property

26. A is twice as good as B, then A will take :

(A) twice B takes to do the work (B) only half the time B takes to do the work

(C) same as B takes to do the work (D) double time B takes to do the work

27. In the given figure, the value of x, y and z are :



(A) 40°, 140°, 80° (B) 60°, 120°, 60°

(C) 80°, 40°, 120° (D) 120°, 60°, 60°

28. The measure of one angle of a quadrilateral is 50 and the remaining are in the ratio 2 : 3 : 5. The remaining angles are :

(A) 80°, 100°, 122° (B) 60°, 90°, 150°

(C) 62°, 93°, 155° (D) 30°, 90°, 180°

29. The multiplicative inverse of the rational number $\frac{1}{5}$ is :

(A) 5 (B) $-\frac{1}{5}$

(C) 1 (D) None of these

30. One of the factor of $2x + 3y - 2ax - 3ay$ is :

(A) $(3x - 2y)$ (B) $(1 - a)$

(C) $(3x + 2y)$ (D) $(1 + a)$

31. A student walks 3 km north from his house and turns east and walks 4 km, then reach his school. The shortest distance between the school and his house is :

(A) 5 km (B) 12 km

(C) 7 km (D) 3 km

32. Two quantities x and y are said to vary inversely as each other, then :

(A) $\frac{x_1}{y_1} = \frac{x_2}{y_2}$ (B) $x_1 y_2 = x_2 y_1$

(C) $\frac{x_1 x_2}{y_1 y_2} = 1$ (D) $\frac{x_1 y_1}{x_2 y_2} = 1$

33. A sum of money amounts to Rs. 1210 in 3 years at 7 % per annum. Find the sum.

(A) Rs. 1200 (B) Rs. 1000

(C) Rs. 800 (D) Rs. 900

34. The length of a diagonal of a square whose side 4 cm is :

(A) $4\sqrt{2}\ cm$ (B) $6\sqrt{2}\ cm$

(C) $8\sqrt{2}\ cm$ (D) $10\sqrt{2}\ cm$

35. Which of the following cannot be the sides of a triangle ?

(A) 3cm, 5cm, 9cm (B) 4cm, 5cm, 6cm

(C) 4cm, 6cm, 9cm (D) None of these

36. 5 bags of rice weigh 300 kg. The local MLA supplies 3 metric tones of rice to the victims of flood. The number of bags he supplied is :

(A) 80 (B) 40

(C) 60 (D) 50

37. A fruit seller bought a score of apples at Rs. 160 and sold at Rs. 5 per apple. His profit or loss percent is :

(A) 20 % profit (B) 37.5 % loss

(C) 50 % profit (D) 60 % loss

38. The point A is at the exterior of a circle with centre O. B is on the circumference of the circle and P is at the interior of the circle. Which one of the following is true ?

(A) OA = OB = OP (B) OA < OB < OP

(C) OB = OP but OA is greatest (D) OP < OB < OA

39. Evaluate $\frac{3x^2 - 3x + 18}{x + 1}$ for $x = 3$.

(A) 0 (B) 9

(C) 6 (D) 8

40. A child had a certain number of peanuts and went to zoo. He gave two-third of these to the squirrels and one-fourth of the remaining to the crows. He was left with 12 peanuts. The number of peanuts he had in the beginning was :

(A) 50 (B) 58

(C) 60 (D) 48

41. $\frac{Circumference}{Diameter} =$ _____

(A) π (B) 3.14

(C) $\frac{22}{7}$ (D) All the above

42. Chaoba rows 12 km downstream in 3 hours and he rows 12 km upstream in 6 hours. Find the speed of the stream.

(A) 1 km/hr (B) 2 km/hr

(C) 3 km/hr (D) 4 km/hr

43. Four points A,B,C,D are on a line taken in order such that the distance BC is thrice the distance AB and the distance CD is twice the distance AB. If A is on 2 cm mark of the ruler and D is on 14 cm mark, the measure of AC is :

(A) 2 cm (B) 4 cm

(C) 8 cm (D) 10 cm

44. The distance between the ages of two persons is 20 years. After ten years, the older will be 2 times the age of the younger. What will be the age of the younger after 5 years ?

(A) 20 years (B) 15 years

(C) 10 years (D) 35 years

45. Petrol price has increased by 25 %. A man intends to keep his expenditure on petrol unchanged. He should reduce the consumption of the quantity by :

(A) 25 % (B) 15 %

(C) 20 % (D) 18 %

46. The number of boys in a class is 4 times the number of girls. Which of the following number cannot be the total number of students in the class ?

(A) 44 (B) 45

(C) 60 (D) 80

47. A and B are two points on the circle with centre O, CD is a diameter. Then, the sum of $\angle CAD$ and $\angle CBD$ is :

(A) 90^0 (B) 180^0

(C) 120^0 (D) 60^0

48. Which of the following is false :

(A) $\left(\frac{p}{q}\right)^m \times \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} \times \frac{r}{s}\right)^m$

(B) $\left(\frac{p}{q}\right)^m \div \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} \div \frac{r}{s}\right)^m$

(C) $\left(\frac{p}{q}\right)^m + \left(\frac{r}{s}\right)^m = \left(\frac{p}{q} + \frac{r}{s}\right)^m$

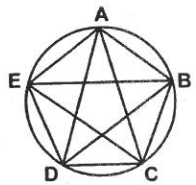
(D) $\left(\frac{p}{q}\right)^m \times \left(\frac{p}{q}\right)^n = \left(\frac{p}{q}\right)^{m+n}$

49. The sum of all the angles of a quadrilateral is :

(A) 360^0 (B) 180^0

(C) 90^0 (D) 540^0

50. In the given figure, $\angle DAC = 30^0$ and $\angle EBD = 40^0$, then $\angle DBC = ?$



(A) 70^0 (B) 30^0

(C) 40^0 (D) None of these

****

2012

1. A number '*k*' is a rational number, then *k* may be :

(A) integer (B) fraction

(C) either integer or fraction (D) neither integer nor fraction

2. By what number should 4^{-3} be divided to get the quotient 2^{-1} ?

(A) 4^{-2} (B) 2^5

(C) 4^2 (D) 2^{-5}

3. Assuming land to be uniformly fertile, the area of land and yield on it vary :

(A) directly with each other.

(B) inversely with each other.

(C) neither directly nor inversely with each other.

(D) sometimes directly and sometimes inversely with each other.

4. Selling price of 5 pens is equal to the cost price of 6 pens. The profit or loss percent is :

(A) 10 % profit (B) 20 % profit

(C) 25 % profit (D) 5 % profit

5. On simplification $(a+b)(a-b)-a^2-b^2$ equals :

(A) 0 (B) $2a^2$

(C) $2b^2$ (D) $-2b^2$

6. (3, 4, 5) is a pythagorean triplet, then which of the following is not a pythagorean triplet ?

(A) $(3n, 4n, 5n)$ (B) $(3n^2, 4n^2, 5n^2)$

(C) $(3^2n, 4^2n, 5^2n)$ (D) None of these

7. A quadrilateral may have four :

(A) right angles (B) acute angles

(C) obtuse angles (D) straight angles

8. The number of boys in a class is 4 times the number of girls. Which of the following number can not be the total number of the students in the class ?

(A) 44 (B) 45

(C) 60 (D) 80

9. Which of the following may lie outside the triangle ?

(A) Centroid (B) Incentre

(C) Orthocentre (D) Vertex

10. A can do a piece of work in 7 days and B can do the same work in 10 days. If they work together, how many days would it take to complete the work ?

(A) $3\frac{2}{17}$ days (B) $4\frac{2}{17}$ days

(C) $5\frac{2}{17}$ days (D) $6\frac{2}{17}$ days

11. What percent of 1 kg is 5 gms ?

(A) 0.5 % (B) 0.05 %

(C) 0.005 % (D) 0.0005 %

12. A class has 40 students. 90 % of these students took the final examination, two thirds of which passed. How many students passed in the final exam ?

(A) 22 (B) 24

(C) 26 (D) None

13. If 'x' is a rational number such that $x=\frac{p}{q}$ then $\left(x^{-1}\right)^{-1}=?$

(A) $\frac{q}{p}$ (B) $\frac{p}{q}$

(C) $-\frac{p}{q}$ (D) $-\frac{q}{p}$

14. If $p=\left(\frac{3}{5}\right)^{-5}\times\left(\frac{3}{5}\right)^{3}\times\left(\frac{3}{5}\right)^{0}$, the value of p^{-2} is :

(A) $\frac{9}{25}$ (B) $\frac{81}{625}$

(C) $\frac{25}{9}$ (D) $\frac{625}{81}$

15. If 2 cm on a map represent 5 km, what area is represented by an area of 8 sq.cm ?

(A) 125 sq.km (B) 25 sq.km

(C) 50 sq.km (D) 20 sq.km

16. If x % of y gives z, then z as a percent of y is :

(A) x % (B) y %

(C) z % (D) none of these

17. –2 is not the solution of the equation :

(A) $x+2=0$ (B) $x-1=2$

(C) $2x+5=1$ (D) $2x+9+x=x+5$

18. Which of the following statements is correct ?

(A) All squares are congruent.

(B) All circles having the same centre are congruent.

(C) Two triangles having equal areas are congruent.

(D) Two line segments of the same length are congruent.

19. The median from a vertex of a ΔABC is perpendicular to the opposite side. Then the ΔABC is a/an :

(A) Isosceles triangle.

(B) Equilateral triangle.

(C) either isosceles or equilateral triangle.

(D) Scalene triangle.

20. A fruit seller bought a score of apples at ₹ 160 and sold at ₹ 5 per apple. His profit or loss percent is :

(A) 20 % profit (B) 37.5 % loss

(C) 50 % profit (D) 60 % loss

21. In ΔABC, AB = BC and $m\angle B=80^0$, then $m\angle C$ equals :

(A) 30^0 (B) 50^0

(C) 80^0 (D) 100^0

22. Which one of the following rational numbers is a non-terminating decimal ?

(A) $\frac{7}{2}$ (B) $\frac{13}{5}$

(C) $\frac{17}{10}$ (D) $\frac{19}{15}$

23. My brother is 6 years younger than me. If after 7 years our ages are in the ratio 8 : 7. Find my brother's age.

(A) 35 (B) 25

(C) 40 (D) 30

24. The area of the four walls of a cuboid is :

(A) $l\times b\times h$ (B) $2(lb+bh+hl)$

(C) $2(l+b)$ (D) $2h(l+b)$

25. The difference of the simple interest for ₹ 200 for three years and that of six years is ₹ 30. What is the rate of the simple interest ?
(A) 7 % (B) 6 %
(C) 5 % (D) 4 %

26. Any number when divided by 2 gives its remainder as 0 and _____.
(A) 1 (B) 2
(C) 3 (D) 5

27. Y varies directly as X, which Y is 8, X is 2. Find k, the constant of variation.
(A) $k = 4$ (B) $k = 8$
(C) $k = 12$ (D) $k = 16$

28. $\left(2^{-5} \div 4^{2}\right) \times 16^{-1}$ is equal to :
(A) 2^{-2} (B) 2^{-5}
(C) 2^{-16} (D) 2^{-13}

29. If the length of a radius of a circle is 2 cm, then the length of its every chord is :
(A) less than 4 cm. (B) less than 2 cm.
(C) less than or equal to 4.
(D) less than or equal to 2.

30. The longer side of a parallelogram is 28 cm and the shorter side is $\frac{3}{4}$ of the longer side. The perimeter of the parallelogram is :
(A) 49 cm (B) 70 cm
(C) 35 cm (D) 98 cm

31. There are three consecutive even numbers such that if the first be divided by 4, the second by 2 and the third by 11, the sum of all quotients is 35. The second number is :
(A) 20 (B) 40
(C) 24 (D) 42

32. The product of two monomials is a monomial. Then, the product of two equal binomials is a :
(A) monomial (B) binomial
(C) trinomial (D) none of these

33. A sum of money doubles itself in 5 years. Find the rate percent per annum.
(A) 10 % p.a. (B) 15 % p.a.
(C) 20 % p.a. (D) 25 % p.a.

34. If 495 candidates fail in an examination, where the result declared in 55 % passed. The total number of candidates who appeared at the examination :
(A) 1000 (B) 900
(C) 45 (D) 1100

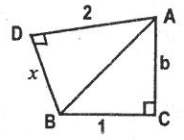
35. The associative property for addition of rational number states that :
(A) $(p+q)+r = p+(q+r)$ (B) $(p+q)r = (p \times r)+(q+r)$
(C) $p+q = q+p$ (D) $p+0 = p = 0+p$

36. It is given four rational numbers $\frac{9}{10}, \frac{13}{15}, \frac{17}{30}, \frac{7}{12}$. Which one is the greatest ?
(A) $\frac{7}{12}$ (B) $\frac{17}{30}$
(C) $\frac{13}{15}$ (D) $\frac{9}{10}$

37. Find the selling price of an article which was bought for ₹ 325 and sold at a profit of 12%.
(A) ₹ 350 (B) ₹ 354
(C) ₹ 360 (D) ₹ 364

38. If $ab\,x = (2a+3b)^2 - (2a-3b)^2$. The value of x is :
(A) 24 (B) 10
(C) 12 (D) 20

39. In the adjoining figure, AB is the hypotenuse of the two right triangles ABC and ADB. If $\overline{BC} = 1$, $\overline{AC} = b$ and $\overline{AD} = 2$, then $\overline{BD}$ equals :
(A) $\sqrt{b^2+1}$ (B) $\sqrt{b^2-3}$
(C) b^2+5 (D) $\sqrt{b^2+1}+2$



40. The point of concurrence of the perpendicular bisectors of the sides of a triangle is called :
(A) incentre (B) circumcentre
(C) centroid (D) orthocentre

41. A ladder of length 10 m leans against a vertical wall on the same horizontal plane and touches a mark on the wall at a height 8 m above the plane. How far is the foot of the ladder from the wall ?
(A) 6 m (B) 36 m

(C) 4 m (D) 5 m

42. In a firm there are 40 workers. The total wages of these 40 workers is ₹ 10080. The rational number to represent number of worker and wages of a person.

(A) $\frac{10}{63}$ (B) $\frac{10080}{40}$

(C) $\frac{40}{10080}$ (D) $\frac{63}{10}$

43. 1 hectare is equal to :

(A) 100 m^2 (B) 1000 m^2

(C) 10000 m^2 (D) 100000 m^2

44. Angles in a semi circle are always :

(A) Acute (B) Equal

(C) Obtuse (D) None of these

45. A number when divided by 3 is reduced by 20. The number is :

(A) 75 (B) 60

(C) 45 (D) 30

46. To draw the incircle of ΔABC, we must draw the three :

(A) Medians (B) Altitudes

(C) Angle bisectors (D) Perpendicular bisectors

47. Convert $6/40$ into percentage :

(A) 40 % (B) 25 %

(C) 15 % (D) 5 %

48. The difference of $\frac{23}{7}$ and $\frac{22}{7}$ is divided by the product of $\frac{3}{5}$ and $\frac{35}{2}$, the quotient is :

(A) $\frac{21}{2}$ (B) 1

(C) $\frac{2}{147}$ (D) $\frac{3}{2}$

49. A mobile dealer has just enough money to buy 28 mobiles worth ₹ 21000 each. If each mobile was to cost ₹ 8400 more. Then how many mobile would he be able to buy with the same amount of money ?

(A) 20 (B) 22

(C) 25 (D) 26

50. The least number of 5 digits which 53 as a factor is :

(A) 10101 (B) 90011

(C) 10017 (D) 70191

****

2013

1. The numerator of an equivalent rational number of $-\frac{4}{7}$ with 42 as denominator is :

(A) 24 (B) –24

(C) 6 (D) –6

2. Angles in a semicircle are always :

(A) Acute (B) Equal

(C) Obtuse (D) None of these

3. Find the number which when multiplied by 7 is as much above 132 as it was originally below it.

(A) 22 (B) 33

(C) 39 (D) 43

4. Two quantities 'x' and 'y' are said to vary inversely as each other if :

(A) their reciprocals remain constant.

(B) their ratio remains constant.

(C) their product remains constant.

(D) None of these.

5. In triangle ABC, AD, BE and CF are the altitudes of the triangle and AB = BC = CA. G is the orthocentre of the triangle. If AD = 6 cm, then GD = ? :

(A) 1 cm (B) 2 cm

(C) 3 cm (D) 4 cm

6. For selecting school captain there was a vote between two students of class X. One student got 62 % and won the vote. He got 144 votes (students) more than

the other. The total number of students in the school who joined the vote is :

(A) 600 (B) 500

(C) 800 (D) 700

7. The factors of $x^4 + 4$ is :

(A) $(x^2+2)(x^2+2)$ (B) $(x^2+2)(x^2-2)$

(C) $(x^2-2x+2)(x^2+2x+2)$ (D) $(x^2-2x-2)(x^2+2x-2)$

8. The expanded form of 900230 is :

(A) $9\times10^5+2\times10^2+3\times10$ (B) $9\times10^5+2\times10^4+3\times10$

(C) $9\times10^5+2\times10^2+3\times1$ (D) $9\times10^5+2\times10^3+3\times10$

9. 6 % of the workers were dead in making the railway. If 282 workers are still alive, the number of workers dead in making the railway were :

(A) 22 (B) 20

(C) 19 (D) 18

10. What is the number when one-third of which added to 5 gives 8 ?

(A) 3 (B) 9

(C) 12 (D) 15

11. The adjacent angles of a rhombus are in the ratio 2 : 3. The measure of the larger angle is :

(A) 180^0 (B) 72^0

(C) 108^0 (D) 360^0

12. The outer dimensions of a closed box are 52 cm, 35 cm and 30 cm. The box is made of wooden plank uniform thickness 1 cm. The cost of the wood used at ₹ 12.50 per dm^3 is :

(A) ₹ 105 (B) ₹ 150

(C) ₹ 109 (D) ₹ 190

13. A man can do a work in x days and B can do the same work in y days. Then the number of days taken by A and B together to complete the work is :

(A) $\frac{xy}{x-y}$ (B) $\frac{x-y}{xy}$

(C) $\frac{xy}{x+y}$ (D) $\frac{x+y}{xy}$

14. A sum of money is double itself on simple interest in 4 years. In how many years will it amount to eight times itself ?

(A) 28 years (B) 24 years

(C) 32 years (D) 16 years

15. A fraction $\frac{p}{q}$ can be expressed as a terminating decimal if q has no prime factors other than :

(A) 2, 3 (B) 3, 5

(C) 2, 5 (D) 2, 3, 5

16. Tina covers 100 m in 12.5 seconds. The distance that she covers in 5.25 min is :

(A) 2520 m (B) 820 m

(C) 2020 m (D) 1500 m

17. If $2x^3 - 2x^2 + x - a$ equal to 5 when $x = 2$, then the value of a is :

(A) 4 (B) 5

(C) 3 (D) 6

18. The teacher says that the highest mark obtained by a student in her class is 7 more than twice the lowest marks. The highest score is 87. The linear equation for the above statement is :

(A) $7x + 2 = 87$ (B) $7x - 2 = 87$

(C) $2x + 7 = 87$ (D) $2x - 7 = 87$

19. If the radius of a circle is 8 cm., then the length of the longest chord is :

(A) 8 cm (B) 12 cm

(C) 14 cm (D) 16 cm

20. The value of

$\left(\frac{x^p}{x^q}\right)^{p+q} \times \left(\frac{x^q}{x^r}\right)^{q+r} \times \left(\frac{x^r}{x^p}\right)^{r+p}$ is :

(A) 0 (B) 1

(C) x (D) x^{p+q+r}

21. An 'Are' is the area of a square of side :

(A) 1 Km (B) 1 Hm

(C) 1 Dm (D) 1 m

22. The number of boys in a class is 4 times the number of girls. Which of the following number can not be the total number of students in the class ?

(A) 44 (B) 45

(C) 60 (D) 80

23. If the two legs of a right triangle are equal and the square of hypotenuse is 100 cm^2, then the length of each leg is :

(A) 10 cm (B) $5\sqrt{2}$ cm

(C) $10\sqrt{2}$ cm (D) $13\sqrt{2}$ cm

24. The ratio of the surface area of the two cubes whose volumes are in the ratio 27 : 64 is -

(A) 3 : 4 (B) 6 : 8

(C) 9 : 16 (D) 12 : 24

25. O is a point on the side AC of ΔABC such that AO = OC. Also O is the circumcentre of the triangle. What kind of triangle is it ?

(A) Equilateral triangle (B) Acute angled triangle

(C) Right angled triangle (D) Obtuse angled triangle

26. Ranendrajit purchased a motorcycle for ₹ 40000. He paid ₹ 1500 for road tax and 100 as licence fee. Later he sold the motor cycle to Tina at a profit of 20 %. The amount that Tina paid to Ranendrajit for the motor cycle is :

(A) ₹ 49920 (B) ₹ 50000

(C) ₹ 49950 (D) ₹ 51930

27. If $\left(\frac{7}{5}\right)^2 \times \left(\frac{7}{5}\right)^{a+5} = \left(\frac{7}{5}\right)^8$, then a is :

(A) –1 (B) 0

(C) 1 (D) 2

28. The sum of the measure of two opposite angles of a parallelogram is 140^0. The measure of all the angles of the parallelogram are :

(A) $60^0, 120^0, 60^0, 120^0$ (B) $90^0, 90^0, 90^0, 90^0$

(C) $80^0, 100^0, 80^0, 100^0$ (D) $70^0, 110^0, 70^0, 110^0$

29. A rectangular tank has a volume 90 m^3. The amount of water that can hold by the tank is :

(A) 90 l (B) 90 kl

(C) 900 l (D) 900 kl

30. Doren's salary is half of Suresh. If Doren got 50 % raised in his salary and Suresh got 25 % raised in his salary, then increase percent in combined salaries of both is :

(A) $23\frac{1}{13}\%$ (B) $33\frac{1}{13}\%$

(C) 33 % (D) 30 %

31. A is two years younger than B. If B is x years old, how old was A two years ago ?

(A) $x-4$ (B) $x-2$

(C) $x+2$ (D) $x+4$

32. A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall. The distance of the foot of the ladder from the wall is :

(A) 3 m (B) 6 m

(C) 8 m (D) 9 m

33. There are two cubes 'A' and 'B' such that the cube A has a side twice as long as that of cube B. The ratio of the volume of cube A to that of cube B is :

(A) 4 : 1 (B) 2 : 1

(C) 6 : 1 (D) 8 : 1

34. A cyclist travels for 10 hours, the first half at 21 Km per hour and the rest at 24 Km per hour. The distance travelled by the cyclist is :

(A) 230 Km (B) 226 Km

(C) 228 Km (D) 224 Km

35. The diagonals of a quadrilateral are of length 6 cm and 8 cm. If the diagonals bisect each other, then the quadrilateral is a :

(A) Parallelogram (B) Square

(C) Rectangle (D) Trapezium

36. D, E and F are the mid points of the sides BC, CA and AB of triangle ABC. O is the point of intersection of the perpendicular bisectors of the sides CA and AB. Which of the following statements is true ?

(A) OD = OE (B) OE = OF

(C) $OE \perp OF$ (D) $OD \perp BC$

37. The supplement of an angle is 4 times to its complement. Then the angle is :

(A) 90^0 (B) 45^0

(C) 30^0 (D) 60^0

38. The coefficient of y^2 in the expression $2x^2y - 10xy^2 + 5y$ is :

(A) $5 - 10x$ (B) 5

(C) $-10x$ (D) $2x^2$

39. If a rational number $\frac{p}{q} = \left(\frac{5}{-3}\right)^3 \div \left(\frac{-3}{5}\right)^{-3}$ then the value of $\left(\frac{p}{q}\right)^{-10}$ is :

(A) –1 (B) 0

(C) 1 (D) can not determine

40. If the sum of the edges of a cube is 36 cm, then the volume of that cube is :

(A) 9 cm^3 (B) 27 cm^3

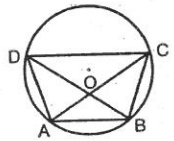
(C) 219 cm^3 (D) 729 cm^3

41. While in arranging the ascending order of the rational numbers, $\frac{3}{10}, \frac{1}{2}, \frac{2}{5}, \frac{4}{10}$, the right most rational number is :

(A) $\frac{3}{10}$ (B) $\frac{1}{2}$

(C) $\frac{2}{5}$ (D) $\frac{4}{10}$

42. In the adjoining figure which of the following is false :



(A) $\angle ADB = \angle ACB$

(B) $\angle DCA = \angle DBA$

(C) $\angle BDA = \angle BDC$

(D) $\angle CAB = \angle CDB$

43. 5 bags of rice weigh 300 kg. The local MLA supplies 3 metric tones of rice to the victim of flood. The number of bags he supplies is :

(A) 80 (B) 40

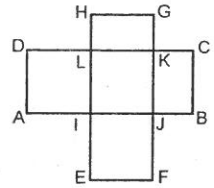
(C) 60 (D) 50

44. If 2 cm on a map represent 5 km., what area is represented by an area of 8 sq. cm ?

(A) 125 sq. km (B) 25 sq. km

(C) 50 sq. km (D) 20 sq. km

45. How many rectangles are there in the given figure ?



(A) 2 (B) 11

(C) 5 (D) 7

46. The solution of the equation $-4 = 2(p - 2)$ is :

(A) 0 (B) 1

(C) 5 (D) 7

47. 0.1 as percent is :

(A) 1 % (B) 10 %

(C) 100 % (D) 0.1 %

48. Ramesh purchased an item for ₹ 800 and sold the same at ₹ 1000. The gain percent is :

(A) 25 % (B) 20 %

(C) 40 % (D) 50 %

49. If $\frac{-3}{-5} = \frac{9}{?}$, then ? = _____.

(A) 15 (B) –15

(C) 9 (D) –9

50. A contractor engaged some men to do a work in 18 days at Mao. Due to Bandh and Blockade 6 of them were not able to reach there and remaining men did the work in 20 days. The number of men engaged by the contractor was :

(A) 50 (B) 52

(C) 56 (D) 60

****

2014

1. Which number system holds true that every number has its multiplicative inverse ?
   (i) Rational number (ii) Integer
   (iii) Natural number (iv) Whole number
   (A) (i) only (B) (i) & (ii) only
   (C) (iii) only (D) (iii) & (iv) only

2. A group of 500 men has provisions for 30 days.
   In the above statement number of men is represented by 'x' and number of days is represented by 'y'. Which of the following condition is true ?
   (A) $x \propto y$ (B) $x \propto \frac{1}{y}$
   (C) $\frac{x_1}{y_1} = \frac{x_2}{y_2}$ (D) All the above

3. Any point on the perpendicular bisector of BC of a triangle ABC is equidistance from :
   (A) the vertices A, B and C (B) the three sides AB, BC and CA
   (C) the two angles $\angle A$ and $\angle C$ (D) the two vertices B and C

4. How many bricks each of which is 10 cm long, 2 cm wide and 5 cm thick will be required to build a wall of 5 m long, 4 m high and 1 m thick ?
   (A) 2000 (B) 20000
   (C) 200000 (D) 2000000

5. A sum of ₹ 375 amounts to ₹ 495 in 'x' years at the rate of 8 % per annum. Then x = _____.
   (A) 4 years (B) 3 years
   (C) 2 years (D) 6 years

6. The lateral surface area of a cube is :
   (A) $4\ell^2$ (B) $6\ell^2$
   (C) $2h(\ell+b)$ (D) $3\ell^2$

7. A square field contains 64 square hectometres. How long will it take to walk round it at the rate of 8 km/hour ?

   (A) 20 minutes (B) 22 minutes
   (C) 24 minutes (D) 26 minutes

8. A boy goes 15 m due North and then 8 m due West. His distance from the starting point is :
   (A) 23 m (B) 17 m
   (C) 18 m (D) 20 m

9. Two unlike terms makes two binomials, one by adding the two terms and other by subtracting the two terms. The product of these two binomials is a :
   (A) monomial (B) binomial
   (C) trinomial (D) either monomial or binomial

10. How many points are there between 2 and 3 on the number line which represent rational number ?
    (A) Only one (B) Only two
    (C) Infinite number of points (D) No point

11. One factor of the algebraic expression $4x^2 + 8x + 4$ is :
    (A) $4x + 4$ (B) $2x + 2$
    (C) $4x - 4$ (D) $2x - 2$

12. The sum of three consecutive odd natural numbers is 27. The middle number is :
    (A) 5 (B) 7
    (C) 9 (D) 11

13. The product of a whole number and a rational number is the rational number :
    (A) whose numerator is the product of the whole number and denominator of the rational number and whose denominator is the numerator of the original rational number
    (B) whose numerator is the product of the whole number and numerator of the rational number and whose denominator is the denominator of the original rational number.
    (C) whose denominator is the product of the whole number and denominator of the rational number and whose numerator is the numerator of the original rational number.
    (D) whose numerator is the product of the whole number and numerator of the rational number and whose denominator is the numerator of the original rational number.

14. AB is a chord of a circle with centre O which subtends 90^0 on a segment which is divided by the chord AB. The measure of the angle which the chord AB subtend on the other segment is :

(A) 45^0 (B) 60^0

(C) 90^0 (D) 180^0

15. If V_1 be the speed of the boat in still water and V_2 be the speed of the stream then the resultant speed of the boat up-stream is :

(A) $V_1 - V_2$ (B) $V_1 + V_2$

(C) $\frac{S}{V_1 + V_2}$ (D) $\frac{S}{V_1 - V_2}$

16. A shopkeeper professes to sell his goods at cost price, but uses a weight of 900 grams for a kilogram weight. Then his real gain percent is :

(A) 10 % (B) 20 %

(C) $12\frac{1}{5}\%$ (D) $11\frac{1}{9}\%$

17. The median from a vertex of a ΔABC is perpendicular to the opposite side. Then the ΔABC is a/an :

(A) isosceles triangle (B) equilateral triangle

(C) either isosceles or equilateral triangle (D) neither isosceles nor equilateral triangle

18. Which of the following is non-terminating decimal ?

(A) $\frac{23}{0.25}$ (B) $\frac{18}{1.35}$

(C) $\frac{57}{1.9}$ (D) $\frac{42}{4.8}$

19. If the cost price of 8 items be the same as the selling price of 6 items. The profit percent is :

(A) 25 % (B) $12\frac{1}{2}\%$

(C) 40 % (D) $33\frac{1}{3}\%$

20. The capacity of 5 kilolitre is equal to the volume of :

(A) 5 km^3 (B) 5 m^3

(C) 5 dm^3 (D) 5 cm^3

21. The centroid, orthocentre, circumcentre and incentre of a triangle are coincide to one another, then the triangle is :

(A) equilateral triangle (B) isosceles triangle

(C) right angled triangle (D) acute angled triangle

22. In a triangle ABC, AB = 10 cm, BC = 6 cm and CA = 8 cm, then :

(A) $\angle C = 90^0$ (B) $\angle A = 45^0$

(C) $\angle B = 90^0$ (D) $\angle B = 45^0$

23. A sum of money at simple interest amount to ₹ 1680 in two years and ₹ 1800 in 5 years, then the rate % per annum is :

(A) 30 % (B) 10 %

(C) 2.5 % (D) 5.5 %

24. Ali and Salim together can finish a work in 10 days. Salim alone can finish it in 30 days. How long will Ali take to finish the same job alone ?

(A) 12 days (B) 20 days

(C) 10 days (D) 15 days

25. Which of the following is not a property of rational number ?

(A) The sum of any two rational numbers is a rational number.

(B) The difference of any two rational numbers is a rational number.

(C) The product of any two rational numbers is a rational number.

(D) None of the above.

26. The ratio of the number of boys and girls participated in the 22nd State Level Mathematics and Science Competition organised by Moral Education Centre was 3:2. 10 % of the boys and 20 % of the girls absent in the examination. The percentage of the students who attended the exam was :

(A) 86 % (B) 85 %

(C) 50 % (D) 70 %

27. A chord of a circle divides two segments the angle formed by the chord on different segments are equal. The chord is :

(A) the longest chord of the circle. (B) the shortest chord of the circle.

(C) any chord of the circle. (D) There is no such chord.

28. Sanalemba can do a work in 45 days and Yaiphaba can do the same work in 50 days. The number of days taken by Sanalemba and Yaiphaba together to complete the work is :

(A) $\frac{45\times50}{50-45}$ (B) $\frac{50-45}{45\times50}$

(C) $\frac{45\times50}{50+45}$ (D) $\frac{50+45}{45\times50}$

29. An algebraic expression having more than one term is called :

(A) Monomial (B) Binomial

(C) Trinomial (D) Multinomial

30. By what number should we multiply $\left(\frac{-3}{5}\right)^9$ to get $\left(\frac{5}{-3}\right)$?

(A) $\left(\frac{-3}{5}\right)^{-10}$ (B) $\left(\frac{5}{-3}\right)^{10}$

(C) $\left(\frac{-3}{5}\right)^{-8}$ (D) $\left(\frac{5}{-3}\right)^{8}$

31. When two objects approach each other or recede each other, the rate at which they do so is called :

(A) Direct variation (B) Inverse variation

(C) Relative speed (D) Time taken

32. The three rational numbers $\frac{4}{10}, \frac{1}{5}$ and $\frac{6}{15}$ can be represented by the points PQ and R respectively on the number line. Out of these points which of the following lies on the right most on the number line.

(A) P (B) Q

(C) P and Q (D) P and R

33. 6 % of the workers were dead in making the railway. If 282 workers are still alive, the number of workers dead in making the railway are :

(A) 18 (B) 19 (C) 20 (D) 22

34. If $\frac{x+b}{a+b}=\frac{x-b}{a-b}$, then :

(A) $x=a$ (B) $x=b$

(C) $a=b$ (D) $x=a=b$

35. The area of cardboard to make a closed rectangular box 24 cm long, 16 cm wide and 8 cm high is :

(A) 3072 cm^2 (B) 96 cm^2

(C) 1408 cm^2 (D) 108 cm^2

36. Which of the following is true ?

(A) Diagonals of a parallelogram bisect each other.

(B) Opposite sides of a parallelogram are equal.

(C) Opposite angles of a parallelogram are equal.

(D) All the above.

37. The median and perpendicular bisector of a side of a triangle is same, then the triangle is :

(A) Equilateral triangle (B) Right isosceles triangle

(C) Obtuse angled triangle (D) Acute angled triangle

38. The sum or difference of two monomials of like terms is a :

(A) Binomial (B) Multinomial

(C) Monomial (D) All the above

39. If P % of Q is R. Which of the following is false ?

(A) Q % of P = R (B) R % of Q = P

(C) $\left(\frac{\frac{PQ}{100}}{Q}\times100\right)\%$ of $Q=R$ (D) $\left(\frac{\frac{QR}{100}}{R}\times100\right)\%$ of $P=R$

40. Triangle PQR is a right triangle right angled at Q whose two sides PQ and QR are 16 cm and 12 cm, then PR = ?

(A) 8 cm (B) 18 cm

(C) 20 cm (D) 22 cm

41. Angles in a semi-circle are always :

(A) Equal (B) 90^0 (C) Right angle (D) All the above

42. Inradius is a line :

(A) perpendicular from the point of intersection of the three perpendicular bisectors to one side of the triangle.

(B) perpendicular from the point of intersection of the three angle bisectors to one side of the triangle.

(C) perpendicular from the point of intersection of the three medians to one side of the triangle.

(D) perpendicular from the point of intersection of the three altitudes to one side of the triangle.

43. A cubic decimetre of gold is extended uniformly by harmering so as to cover an area of 1 are. The thickness of the gold sheet is :

(A) 1000 cm (B) 100 cm

(C) 0.001 cm (D) 0.0001 cm

44. Nongpoknganba bought two plastic toys at same price. He sold them at same price. He received ₹ 282 on selling the two toys at a loss of 6 %. Then the cost price of a toy is :

(A) 120 (B) 300

(C) 141 (D) 150

45. The orthocentre of an obtuse angled triangle ABC, obtuse angled at B is at the point H. Then the orthocentre of the ΔACH is :

(A) at the interior of ΔABC (B) at the exterior of ΔABC

(C) at the vertex B of ΔABC (D) at the vertex H of ΔACH

46. Two angles of a triangle are of equal measure and each is one third of the measure of the third angle. Find the measures of the three angles of the triangle.

(A) 54^0, 54^0 & 72^0 (B) 36^0, 36^0 & 108^0

(C) 50^0, 50^0 & 80^0 (D) 26^0, 26^0 & 128^0

47. In a mathematical practical examination your teacher gave you three pieces of wire, two of them were equal length of $3\frac{3}{4}$ m and other $5\frac{1}{2}$ m. Your teacher said to join the pieces of wire together end to end and make an equilateral triangle. What was the length of one side of the triangle so formed ?

(A) 13 m (B) $4\frac{1}{3}$ m

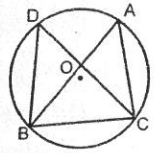
(C) $3\frac{1}{4}$ m (D) 6 m

48. The sum of all edges of a cube is 36 cm, then the volume of that cube is :

(A) 9 cm^3 (B) 27 cm^3

(C) 219 cm^3 (D) 729 cm^3

49. In the given figure AB = AC and $\angle ABC = 65^0$, then the measure of $\angle BDC$ is :



(A) 50^0 (B) 60^0

(C) 65^0 (D) 120^0

50. In a triangle ABC, AD is a median whose length is 24 cm, G is the centroid of the triangle then DG = ?

(A) 16 cm (B) 8 cm

(C) 20 cm (D) 6 cm

****

Answers

2010

1.	B	2.	C	3.	C	4.	B	5.	D	6.	B	7.	B	8.	A	9.	C
10.	B	11.	D	12.	C	13.	D	14.	B	15.	B	16.	D	17.	A	18.	B
19.	A	20.	A	21.	B	22.	B	23.	A	24.	A	25.	A	26.	A	27.	C
28.	B	29.	A	30.	A	31.	D	32.	C	33.	C	34.	C	35.	D	36.	C
37.	B	38.	B	39.	C	40.	B	41.	C	42.	A	43.	A	44.	B	45.	C
46.	C	47.	C	48.	C	49.	D	50.	B								

2011

1.	A	2.	C	3.	B	4.	B	5.	C	6.	C	7.	B	8.	B	9.	C
10.	C	11.	D	12.	A	13.	C	14.	A	15.	C	16.	C	17.	A	18.	C
19.	C	20.	D	21.	D	22.	D	23.	D	24.	B	25.	D	26.	B	27.	A
28.	C	29.	A	30.	B	31.	A	32.	D	33.	B	34.	A	35.	A	36.	D
37.	B	38.	D	39.	B	40.	D	41.	D	42.	A	43.	C	44.	B	45.	C
46.	A	47.	B	48.	C	49.	A	50.	B								

2012

1.	C	2.	D	3.	A	4.	B	5.	D	6.	C	7.	A	8.	A	9.	C
10.	B	11.	A	12.	B	13.	B	14.	B	15.	C	16.	A	17.	B	18.	D
19.	C	20.	D	21.	B	22.	D	23.	A	24.	D	25.	C	26.	A	27.	A
28.	D	29.	C	30.	D	31.	D	32.	C	33.	C	34.	D	35.	A	36.	D
37.	D	38.	A	39.	B	40.	B	41.	A	42.	A	43.	C	44.	B	45.	D
46.	C	47.	C	48.	C	49.	A	50.	C								

2013

1.	B	2.	B	3.	B	4.	C	5.	B	6.	A	7.	C	8.	A	9.	D
10.	B	11.	C	12.	A	13.	C	14.	A	15.	C	16.	A	17.	B	18.	C
19.	D	20.	B	21.	C	22.	A	23.	B	24.	C	25.	C	26.	A	27.	C
28.	D	29.	B	30.	B	31.	A	32.	D	33.	D	34.	D	35.	A	36.	D
37.	D	38.	C	39.	C	40.	B	41.	B	42.	C	43.	D	44.	C	45.	B
46.	A	47.	B	48.	A	49.	A	50.	D								

2014

1.	C	2.	B	3.	D	4.	C	5.	A	6.	A	7.	C	8.	A	9.	A
10.	D	11.	C	12.	B	13.	C	14.	D	15.	C	16.	C	17.	C	18.	B
19.	A	20.	B	21.	A	22.	A	23.	C	24.	D	25.	D	26.	A	27.	A
28.	C	29.	D	30.	A	31.	C	32.	D	33.	A	34.	A	35.	C	36.	D
37.	B	38.	C	39.	B	40.	C	41.	D	42.	B	43.	C	44.	D	45.	C
46.	B	47.	B	48.	B	49.	A	50.	B								

SCIENCE

CLASS VI - 2010

1. In which layer of the Earth does the soil exist ?
   (A) Mantle (B) Crust
   (C) Magma (D) Core
2. The least saline sea water is found in :
   (A) Red Sea (B) Dead Sea
   (C) Baltic Sea (D) Arabian Sea
3. The life of the Ocean are known as :
   (A) Ocean life (B) Water life
   (C) Aquatic life (D) Marine life
4. The biggest planet in the solar system is :
   (A) Saturn (B) Uranus
   (C) Jupiter (D) Mars
5. The study of the interaction between biotic and abiotic component in the particular habitat is called :
   (A) Ecosystem (B) Ecotype
   (C) Ecofriendship (D) Ecology
6. Socio-cultural environment is a :
   (A) man-made environment.
   (B) natural environment.
   (C) non-living environment.
   (D) meira paibi's environment.
7. Vultures are :
   (A) Scavengers (B) Carnivores
   (C) Producers (D) Omnivores
8. The metal used to make electric-wires is :
   (A) Copper (B) Gold
   (C) Sodium (D) Tin

9. _____ is an insulator.
   (A) Alluminium (B) Rubber
   (C) Silver (D) Gold
10. Dynamo was first invented by :
   (A) Alexander Grahm Bell
   (B) Thomas Alva
   (C) Edison
   (D) Michael Faraday
11. Diffusion is faster in :
   (A) Solid (B) Liquid
   (C) Gas (D) Aqueous solution
12. Light cannot pass through :
   (A) transparent materials
   (B) translucent materials
   (C) pure water
   (D) opaque materials
13. Milk is :
   (A) a mixture (B) a compound
   (C) a transparent liquid (D) heterogeneous mixture
14. The process of transferring the clear liquid without disturbing the sediment is called :
   (A) Sedimentation (B) Filtration
   (C) Decantation (D) Filtrate
15. The solid substance obtained by cooling the vapour is known as :
   (A) Solidified substance (B) Sublimate
   (C) Sediment (D) Alum
16. Sodium chloride is composed of sodium and chlorine, so it is a :
   (A) mixture (B) element
   (C) compound (D) impure substance
17. Chalk powder from water can be separated by :
   (A) Filtration (B) Evaporation
   (C) Sublimation (D) Loading

18. Elongation of spring balance is a :
   (A) Irreversible change (B) Periodic change
   (C) Fast change (D) Reversible change
19. The to and fro motion of a pendulum is called :
   (A) Orbital motion (B) Circular motion
   (C) Constellation (D) Oscillation
20. Cutting of wood forms :
   (A) a new substance. (B) no new substance.
   (C) a table. (D) none of the above.
21. Change of season is a :
   (A) Periodic change (B) Non-periodic change
   (C) Fast change (D) Undesirable change
22. In a chemical change :
   (A) the change is reversible.
   (B) composition of the substance does not change.
   (C) no new substance is formed.
   (D) composition of the substance changes.
23. 1 quintal = ?
   (A) 1000 kg (B) 1000 gram
   (C) 100 kg (D) 10000 kg
24. The device used to measure body temperature is called :
   (A) Laboratory thermometer. (B) Body thermometer.
   (C) Human thermometer. (D) Clinical thermometer.
25. The S.I. unit of volume is :
   (A) m^3 (B) cm^3
   (C) km^3 (D) m^2
26. The abbreviation of "deca" in the units of measurement is :
   (A) d (B) de
   (C) da (D) dc

27. Milli means _____.

(A) $\frac{1}{1000}$ th part (B) $\frac{1}{100}$ th part

(C) $\frac{1}{10000}$ th part (D) $\frac{1}{10}$ th part

28. Nelumbo nucifera is the scientific name of :

(A) Lily (B) Tulsi

(C) Lotus (D) Neem

29. Flowering plants are also known as :

(A) Cryptogams (B) Phanerogams

(C) Gymnosperms (D) Aquatic plant

30. Human beings include in the group of :

(A) Aves (B) Amphibia

(C) Pisces (D) Mammalia

31. Kingdom Protista include :

(A) minute organisms (B) non-motile organism

(C) all the plants (D) all the animals

32. The five kingdom classification was introduced by :

(A) Linneaus (B) H.W. Hittaker

(C) W.H. Whittaker (D) Robert Hook

33. Roots of the sunflower are :

(A) Fibrous root system (B) Stilt root system

(C) Prop root system (D) Tap root system

34. The innermost whorl of a complete flower is :

(A) Androecium (B) Gynoecium

(C) Calyx (D) Corolla

35. Chewing of food is called :

(A) Swallowing (B) Mastication

(C) Grinding (D) Tearing

36. A device that amplifies the sound of the heartbeat is :

(A) Sprectoscope (B) Thermometer

(C) Earpiece (D) Stethoscope

37. The largest sense organ in the human body is :

(A) Liver (B) Heart

(C) Skin (D) Kidney

38. Speed = ?

(A) $\frac{\text{Distance}}{\text{Time}}$ (B) $\frac{\text{Time}}{\text{Distance}}$

(C) Time × Distance (D) $\frac{\text{Distance}}{\text{Time} \times \text{Velocity}}$

39. The force acting when it contact with bodies :

(A) Magnetic force (B) Gravitational force

(C) Electrical force (D) Muscular force

40. The S.I. unit of pressure is :

(A) Angstrom (B) Pascal

(C) Newton (D) Hertz

41. _____ is used to measure the pressure of liquid.

(A) Manometer (B) Barometer

(C) Monometer (D) Liquipressure

42. The substances used to reduce the friction between moving parts are called :

(A) Oil (B) Grease

(C) Mobil (D) Lubricants

43. Which of the following is the first class lever ?

(A) Tongs (B) Nut cracker

(C) Scissors (D) Spade

44. Work done is due to the transfer of :

(A) work (B) energy

(C) force (D) pressure

45. _____ is the conversion of chemical energy into heat energy.

(A) Melting (B) Boiling (C) Burning (D) Fusion

46. Solar cells are also called :

(A) Photovoltaic cells (B) Voltaic cells

(C) Thermovoltaic cells (D) Daniel cells

47. Cereals, sugar and jaggery are called :

(A) body building foods. (B) protective foods.

(C) energy giving foods. (D) None of the above.

48. In Greek mythology, Hygeia is :

(A) the goddess of health. (B) the god of health.

(C) the goddess of wealth (D) the god of wealth.

49. Deficiency of vitamin A causes :

(A) Ricket (B) Berri-Berri

(C) Scurvy (D) Night blindness

50. Fish contain :

(A) vitamins (B) fats

(C) carbohydrates (D) proteins

****

2011

1. Glycerine and water can mix completely with water. They are said to be :

(A) Insoluble (B) Miscible

(C) Immiscible (D) Mixture

2. If there is any leakage of LPG, we can feel the smell. This is due to a property of gases known as :

(A) Diffusion (B) Transparency

(C) Conduction (D) Solubility

3. Mustard oil can be separated from water by using :

(A) Decantation process (B) Filtration

(C) Separating funnel (D) Centrifugation

4. In diary farms, milk is heated and then cooled suddenly to kill bacteria. Such a technique is called :

(A) Neutralisation (B) Pasteurisation

(C) Refrigeration (D) Fermentation

5. Which organisation maintain the National Standards for all S.I. units in India ?

(A) Department of Weights and Measures

(B) International Standard Time

(C) National Physical Laboratory

(D) International Bureau

6. Light cannot pass through thick wood. Thick wood is _____ object.

(A) a transparent (B) a translucent

(C) an opaque (D) a soft

7. A mixture of sand and water is an example of :

(A) Homogenous mixture (B) Heterogenous mixture

(C) Compound (D) None

8. When wood is burnt, it is changed into a black residue and smoke. This type of change is a :

(A) Reversible change (B) Irreversible change

(C) Convertible change (D) Renewable change

9. Kelvin is the unit of :

(A) Current (B) Energy

(C) Temperature (D) Time

10. It is not advisable to use a metal framed spectacle near a furnace because metals are _____ of heat.

(A) good conductors (B) bad conductors

(C) Insulator (D) None

11. Pure solid substances can be obtained by :
(A) Sublimation (B) Crystallisation
(C) Filtration (D) Decantation

12. Ripening of fruit is an example of :
(A) Physical change (B) Reversible change
(C) Chemical change (D) Undesirable change

13. 1 astronomical unit (A.U.) is the :
(A) average distance of moon from the earth.
(B) average distance of moon from the sun.
(C) average distance of sun from the earth.
(D) None of the above statement.

14. How many years make 1 decade ?
(A) 60 years (B) 10 years
(C) 24 years (D) 36 years

15. Cream can be separated from milk by the process of :
(A) Filtration (B) Centrifugation
(C) Decantation (D) Evaporation

16. Our earth is surrounded by an envelope of gases. This envelope of gases is called :
(A) Biosphere (B) Hydrosphere
(C) Atmosphere (D) Lithosphere

17. Plants make their own food by the process of :
(A) Chemosynthesis (B) Nutrient cycle
(C) Food chain (D) Photosynthesis

18. The scientific name of 'Tulsi' is :
(A) Ocimum sanctum
(B) Centella asiatica
(C) Mentha spicata
(D) Gynura cusimba

19. Name of the plant in which leaf is modified to catch or trap insects :
(A) Cassia (B) Sundew
(C) Pea (D) Cactus

20. The only planet in the solar system known to support life is :
(A) Earth (B) Mars
(C) Jupiter (D) Saturn

21. Every organism needs energy for carrying out life processes. The fundamental source of this energy comes from :
(A) Moon (B) Plants
(C) Sun (D) Animals

22. Orchid is an example of :
(A) Mesophytes (B) Hydrophytes
(C) Xerophytes (D) Epiphytes

23. Among the natural water, which form of water is the purest ?
(A) River water (B) Rain water
(C) Sea water (D) Spring

24. Grass is eaten by rat, which is eaten by snake and the snake is eaten by kite. This is an example of :
(A) Food chain (B) Energy flow
(C) Food web (D) Scavengers

25. Our doctors prescribed calcium tablets. They are made up of :
(A) Poriferans (B) Echinoderms
(C) Molluscan animals (D) Arthropods

26. In maize, leaves are without stalks. Such type of leaves is called :
(A) Sessile leaves (B) Leaf blade
(C) Leaf base (D) Modified leaves

27. "Ningthou Turel" is the local name of :
(A) Earth (B) Jupiter
(C) Milky way (D) Solar system

28. Dead plants and animals can be broken down by micro-organisms. Such substances are called :
(A) Non-biodegradable substances (B) Biodegradable substances
(C) Renewable substances (D) None

29. Some plants do not bear flowers. Such plants are known as :

(A) Phanerogams (B) Cryptogams

(C) Angiosperms (D) Xerophytes

30. Potato is an example of :

(A) modified stem (B) modified root

(C) modified leaf (D) modified flower

31. Besides kidneys, which of the following eliminates wastes in the form of sweat :

(A) Nails (B) Nose

(C) Skin (D) Hair

32. The scientific name of 'Heikru' is :

(A) Ananas comosus (B) Emblica officinalis

(C) Mangifera indica (D) Oryza sativa

33. A flower is said to be complete when all the _____ whorls are present.

(A) Two (B) Four

(C) Six (D) Five

34. A banyan tree have pillar like roots. Such roots are called :

(A) Prop roots (B) Fibrous roots

(C) Stilt roots (D) Tap roots

35. Which type of teeth helps in cutting and biting the food ?

(A) Incisors (B) Canine

(C) Molars (D) Premolars

36. A simple pendulum when suspended shows :

(A) Periodic motion (B) Non-periodic motion

(C) Oscillatory motion (D) Rotatory motion

37. Work done is measured by the product of the Force and the :

(A) Pressure applied (B) Distance

(C) Area of the work (D) Height

38. When we do work, we take the help of number of devices. Such devices are called :

(A) Machines (B) Industries

(C) Factories (D) None

39. The pressure of liquid can be measured using an instrument called :

(A) Barometer (B) Manometer

(C) Hygrometer (D) Hydrometer

40. The closest distance of Earth from the sun is :

(A) 152 million km (B) 112 million km

(C) 147 million km (D) 100 million km

41. The fixed point in which a lever moves freely is :

(A) Fulcrum (B) Power arm

(C) Weight arm (D) Screw

42. It is difficult to cook at high altitudes because when we go up at higher altitudes :

(A) the boiling point is increased. (B) the melting point is decreased.

(C) the boiling point is reduced. (D) None of the above statement.

43. A bus travels a distance of 120 km in 4 hours. What is the speed of the bus ?

(A) 30 km/hr (B) 20 km/hr

(C) 40 km/hr (D) 36 km/hr

44. If you comb your hair with a plastic comb and touches a bit of paper, it sticks. This is due to :

(A) Electrical force (B) Magnetic force

(C) Force of friction (D) Gravitational force

45. When we rub our hands, it becomes warm. This is due to change of Mechanical energy into :

(A) Chemical energy (B) Heat energy

(C) Sound energy (D) Muscular energy

46. A surface reaching from one level to a higher level obliquely is called :

(A) a wedge (B) a wheel

(C) an inclined plane (D) a pulley

47. All heavenly bodies attract each other due to :

(A) Magnetic force (B) Gravitational force

(C) Electrical force (D) Frictional force

48. Which of the following is a cold planet ?

(A) Earth (B) Jupiter

(C) Mars (D) Venus

49. Which of the following prevents harmful components of sunlight to reach earth ?

(A) Atmosphere (B) Lithosphere

(C) Hydrosphere (D) Ecosphere

50. The motion of a person sitting on a merry-go-round is :

(A) Oscillatory motion (B) Circular motion

(C) Rectilinear motion (D) Periodic motion

****

2012

1. What causes day and night ?

(A) Rotation of the earth. (B) Revolution of the earth.

(C) Evolution of the earth. (D) None of the above.

2. What does the envelop of air surrounding the earth called ?

(A) Hydrosphere (B) Lithosphere

(C) Atmosphere (D) Biosphere

3. Which of these is a biodegradable substance ?

(A) Plastics (B) DDT

(C) Eldrin (D) Cabbage

4. Oiled paper can be an example of :

(A) Transparent material (B) Opaque material

(C) Translucent material (D) All the above

5. What type of change is the melting of ice ?

(A) Chemical change

(B) Physical change

(C) Both physical as well as chemical change

(D) None of the above.

6. What is the altitude of a triangle whose area ia 100 m^2 and that of the base is 10 m ?

(A) 5 m (B) 10 m

(C) 20 m (D) 40 m

7. Name the kingdom of organisms which can manufacture their own foods.

(A) Kingdom Protista (B) Kingdon Fungi

(C) Kingdom Plantae (D) Kingdom Anemalia

8. Which part of the flower turns into seed ?

(A) Petals (B) Ovary

(C) Sepals (D) Ovules

9. The motion of a pendulum is :

(A) Rectilinear (B) Rotational

(C) Oscillatory (D) Non-periodic

10. Potential energy and kinetic energy are the types of :

(A) Sound energy (B) Chemical energy

(C) Heat energy (D) Mechanical energy

11. What is the S.I. unit of speed ?

(A) km/hr (B) m/sec

(C) km/sec (D) m/hr

12. Name the instrument used to measure the presence of liquids.

(A) Barometer (B) Thermometer

(C) Manometer (D) Odometer

13. The system which circulate the blood to all parts of the body is called :

(A) Digestive system (B) Circulatory system

(C) Respiratory system (D) Excretory system

14. A scientific name is made up of :
(A) One word (B) Two words
(C) Three words (D) Five words

15. How many years make 1 millennium ?
(A) 1 year (B) 10 years
(C) 100 years (D) 1000 years

16. What is the S.I. unit of temperature ?
(A) ^{o}C (B) K
(C) ^{o}F (D) R

17. Which one of these substances can undergo sublimation ?
(A) Sodium chloride (B) Ice
(C) Iron (D) Camphor

18. What do we call the matters which do not conduct electricity at all ?
(A) Conductors (B) Insulators
(C) Semi - conductors (D) Semi - insulators

19. What type of animal is a dog ?
(A) Herbivores (B) Carnivores
(C) Omnivores (D) None of these

20. What is the range of temperature that mammals can exist ?
(A) $0^{o}C$ to $30^{o}C$ (B) $-65^{o}C$ to $50^{o}C$
(C) $-50^{o}C$ to $65^{o}C$ (D) $1^{o}C$ to $100^{o}C$

21. Which one of these is a famous astronomer of ancient India ?
(A) Copernicus (B) Johanner Kepler
(C) Bhakara (D) Galileo Galilei

22. Which of these is a biotic component of the environment ?
(A) Air (B) Water
(C) Plants (D) Soil

23. Identify the heterogeneous mixture from the following :
(A) A mixture of sugar and water (B) A mixture of sand and water
(C) A mixture of glycerine and water (D) Air

24. Name the technique used in dairy farms to kill harmful bacteria by heating to a certain temperature and cooled suddenly.
(A) Evaporation (B) Crystillisation
(C) Pastuerisation (D) Centrifugation

25. 1 m^3 is exactly equal to :
(A) 1000 dm^3 (B) 1000 cm^3
(C) 1000 mm^3 (D) 1000 km^3

26. Identify the living matter :
(A) Glass (B) Stone
(C) Tree (D) All the above

27. The body of unicellular organisms is made up of :
(A) one cell (B) two cells
(C) three cells (D) four cells

28. What type of leaf is the rose leaf ?
(A) Simple leaf (B) Compound leaf
(C) Both (A) and (B) (D) Neither (A) nor (B)

29. The distance covered by a body in 6 hours is 30 km. What is its speed ?
(A) 30 km (B) 6 hours
(C) 5 km/hr (D) 6 km/hr

30. Scissors can be the example of :
(A) First class lever (B) Second class lever
(C) Third class lever (D) All the above

31. A body is displaced through a distance of 6 m due to a force of 300 N. What is the work done ?
(A) 294 J (B) 306 J
(C) 50 J (D) 1800 J

32. A force of 400 N acts on a body of surface area 0.04 m^2. The pressure exerted by the force on the surface is :
(A) 16 Pa (B) 1.0×10^4 Pa
(C) 4.0×10^5 Pa (D) 1.6×10^2 Pa

2013

1. Which type of teeth in omnivores is used for coarse grinding of food ?
   (A) Incesors (B) Canines
   (C) Premolars (D) Molars
2. Foods containing carbohydrates and fats are known as :
   (A) energy giving food. (B) body building food.
   (C) muscle building food. (D) bone building food.
3. The set of yarns interlaced at right angle with warps, are called :
   (A) Wefts (B) Warplet
   (C) Spindle (D) Looms
4. Steel is an example of :
   (A) Mixture (B) Compound
   (C) Element (D) Metal
5. Which of the following is not correct for the ripening of fruit ?
   (A) Slow change (B) Desirable change
   (C) Chemical change (D) Physical change
6. Identify the female reproductive part of a flower.
   (A) Calyx (B) Corolla
   (C) Androecium (D) Gynoecium
7. Which of these is a biotic component of an environment ?
   (A) Plants (B) Air
   (C) Water (D) Soil
8. How many metres make 1 megametre ?
   (A) 10 (B) 10^2
   (C) 10^3 (D) 10^6
9. Which of these is an example of insulator ?
   (A) Aluminium (B) Copper
   (C) Tap water (D) Rubber
10. What is the main component of atmosphere ?
    (A) Oxygen (B) Nitrogen
    (C) Hydrogen (D) Water vapour

11. Which of these is a good source of edible oil ?
    (A) Rapeseed (B) Carrot
    (C) Tomato (D) Potato
12. Name the disease caused by the deficiency of Vitamin D.
    (A) Beri-beri (B) Scurvy
    (C) Rickets (D) Goiter
13. Which of these is an important solute present in many of the soft drinks ?
    (A) Carbonmonoxide (B) Carbondioxide
    (C) Oxygen (D) Sulphuric acid
14. Identify the pure substance from the following :
    (A) Air (B) Water
    (C) Soil (D) Milk
15. Which of these is not a function of roots in plants ?
    (A) Fix the plant firmly into the soil.
    (B) Attract the pollinating insects.
    (C) Absorb water and minerals.
    (D) Protect the soil from being blown off or washed away.
16. Which of these is a unicellular organism ?
    (A) Human being (B) Cow
    (C) Amoeba (D) Dog
17. Which of the following organisms have the shortest average life span ?
    (A) Man (B) Elephant
    (C) Tortoise (D) Banyan tree
18. Identify the periodic motion(s) of the following :
    (A) Motion of an apple falling from a tree.
    (B) Motion of a car on a road.
    (C) Oscillation of a pendulum.
    (D) All the above.
19. Choose a magnetic material from the followings :
    (A) Wood (B) Paper
    (C) Rubber (D) Nickel

20. What do plants release during respiration ?

(A) Oxygen (B) Nitrogen

(C) Carbondioxide (D) All the above

21. Identify the hervivorous animal of the following :

(A) Lion (B) Panda

(C) Bear (D) Human beings

22. What nutrients does cereal have ?

(A) Carbohydrates, fibre, etc.

(B) Carbohydrates, fibre, vitamin, etc.

(C) Protein, vitamin, minerals, etc

(D) Carbohydrates, proteins, fats, vitamins, minerals, etc.

23. In which states of matter does the particles stay close to each other with some space in between ?

(A) Solid (B) Liquid

(C) Gas (D) None of these

24. The process of settling down heavier insoluble solid components in a mixture is called

(A) Sieving (B) Decantation

(C) Sedimentation (D) Filtration

25. What do we call the roots in some plants that develop from the lower part of the stem and grows downward toward the soil ?

(A) Tap root (B) Fibrous root

(C) Stilt root (D) Root hairs

26. In which organ system does heart belong ?

(A) Digestive system (B) Respiratory system

(C) Nervous system (D) Circulatory system

27. Plants growing in water are called :

(A) Xerophytes (B) Hydrophytes

(C) Epiphytes (D) Mesophytes

28. A cell has/have :

(A) +ve terminal only. (B) –ve terminal only.

(C) both +ve as well as –ve terminals. (D) Neither +ve nor –ve terminals.

29. How many poles does a magnet have ?

(A) One (B) Two

(C) Three (D) Four

30. Which gas is essential for burning substances ?

(A) Hydrogen (B) Nitrogen

(C) Oxygen (D) Carbondioxide

31. The example of an organism which can manufacture its own food is :

(A) Cabbage (B) Tiger

(C) Cow (D) Human beings

32. Which of these is not a natural fibre ?

(A) Silk (B) Coir

(C) Flax (D) Acrylic

33. Alcohol dissolves completely in water. So, these liquids are _____ liquids.

(A) Soluble (B) Solution

(C) Miscible (D) Immiscible

34. During the filtration of tea, the tea leaves left behind in the strainer is called :

(A) Residue (B) Filtrate

(C) Filter paper (D) Supernatent liquid

35. What do we call the stalk of a leaf ?

(A) Leaf lamina (B) Phylloclade

(C) Leaf base (D) Petiole

36. How many bones constitute a human skeleton ?

(A) 1 (B) 100

(C) 206 (D) 550

37. Which of the following is a carnivorous animal ?

(A) Deer (B) Dog

(C) Cow (D) Lion

38. What do we call the continuous and closed path for the flow of electric current ?

(A) Electric current (B) Electric circuit

(C) Conductor (D) Resistor

39. The total amount of water on Earth ____.

(A) is increasing (B) is decreasing

(C) remains the same (D) None of the above

40. What is the average composition of paper in domestic waste ?

(A) 2 % (B) 5 %

(C) 10 % (D) 60 %

41. When a few drops of iodine solution is dropped on a sample of food, the colour of the sample is observed to change to blue black. It indicates that the given sample contains :

(A) Protein (B) Starch

(C) Vitamins (D) Minerals

42. What do we call the process of separation of cotton fibres and seeds from cotton balls ?

(A) Weaving (B) Spinning

(C) Retting (D) Ginning

43. Oiled paper is a _____ material.

(A) Transparent (B) Opaque

(C) Translucent (D) Luminous

44. What type of change is the tearing of paper into small pieces ?

(A) Chemical change

(B) Physical change

(C) Both physical and chemical change

(D) Neither physical nor chemical change

45. Which of these is a modified stem ?

(A) Potato (B) Carrot

(C) Sweet potato (D) Turnip

46. What type of joint occurs in the wrist and ankle joints ?

(A) Pivot joint (B) Hinge joint

(C) Ball and socket joint (D) Gliding joint

47. What is the S.I. unit of temperature ?

(A) ^{o}C (B) ^{o}F

(C) K (D) R

48. Filament of a bulb is made up of :

(A) Tungsten (B) Chromium

(C) Aluminium (D) Platinum

49. The water in Sea and Oceans are useless for domestic, agricultural and industrial purpose because it contains :

(A) dissolved sugar (B) dissolved salt

(C) dissolved carbondioxide (D) bacteria

50. What is used as the composting agent in vermicomposting ?

(A) Plastics (B) Water

(C) Bacteria (D) Earthworm

****

2014

1. Which of the following plants is not a legume ?

(A) Beans (B) Peas

(C) Gram (D) Sunflower

2. Canines are :

(A) to cut food. (B) to tear flesh.

(C) for coarse grinding. (D) for fine grinding of food.

3. Crows are examples of :

(A) Herbivores (B) Carnivores

(C) Omnivores (D) Autotrophs

4. Beriberi is the deficiency disease of :

(A) Vitamin A (B) Vitamin B_1

(C) Vitamin C (D) Vitamin D

5. Which of the following nutrients is essential in building muscles, restoring and replacing tissues ?
(A) Protein (B) Carbohydrate
(C) Vitamin (D) Fat

6. The process by which cotton fibres are separated from the cotton seeds of the cotton balls is called :
(A) ginning (B) weaving
(C) spinning (D) knitting

7. Jute is cultivated during :
(A) Rainy season (B) Winter season
(C) Autumn season (D) Spring season

8. Retting is a process related with :
(A) Silk (B) Jute
(C) Cotton (D) Wool

9. Which of the following statements is correct ?
(A) There is no space between the particles of a liquid.
(B) Both solid and liquid have a fixed shape.
(C) The liquid does not have a fixed shape.
(D) In gas, the molecules move freely in one direction.

10. 5 ml of acetic acid is added in 1 litre of water, then :
(A) Acetic acid is the solvent and water is the solute.
(B) Both are solutes
(C) Both are solvents
(D) Acetic acid is the solute and water is the solvent.

11. Copper sulphate is added to water to form copper sulphate solution. The colour of the solution is :
(A) Pink (B) Yellow
(C) Blue (D) Orange

12. When some sugar is added in water the boiling point of water :
(A) increases (B) decreases
(C) remains constant (D) gets minimum

13. Separation of fine sand from gravel is done by :
(A) Winnowing (B) Hand picking
(C) Sieving (D) Decantation

14. Milk is a/an :
(A) pure substance (B) mixture
(C) compound (D) element

15. The occurence of lanslide is an example of :
(A) Reversible change (B) Chemical change
(C) Periodic change (D) Non-periodic change

16. Which of the following plants has tap root ?
(A) Mustard (B) Paddy
(C) Maize (D) Grass

17. Which of the following leaves are sessile leaves ?
(A) leaves with petiole (B) leaves with leaf blade
(C) leaves without petiole (D) leaves without leaf blade

18. Stigma is a portion of :
(A) Calyx (B) Gynoecium
(C) Androecium (D) Corolla

19. Which of the following systems controls and coordinates the different organs of the body ?
(A) Respiratory system (B) Muscular system
(C) Reproductive system (D) Nervous system

20. Which of the following organisms does not have a backbone ?
(A) Cockroach (B) Fish
(C) Frog (D) Snake

21. Fins are the organs of fish for :
(A) locomotion (B) reproduction
(C) digestion (D) excretion

22. The lost of water in the form of vapours from the plant is called :
(A) Evaporation (B) Transpiration
(C) Respiration (D) Photosynthesis

23. The plants growing and adapted in water are called :
(A) Xerophytes (B) Mesophytes

(C) Epiphytes (D) Hydrophytes

24. The process of sprouting of seed is called :
(A) Photosynthesis (B) Respiration
(C) Germination (D) Transpiration

25. $\frac{1}{100}$th part of 1 metre is :
(A) 1 millimetre (B) 1 centimetre
(C) 1 decametre (D) 1 kilometre

26. The motion of an object along a straight line is called :
(A) Circular motion (B) Rotational motion
(C) Periodic motion (D) Translational motion

27. The length of a wire is 2.375 metre, then the length of the wire in kilometre is :
(A) 0.2375 km (B) 0.02375 km
(C) 0.002375 km (D) 0.0002375 km

28. The current which is produced from a dry cell is :
(A) Direct Current (B) Alternating Current
(C) Both (A) and (B) (D) Neither (A) nor (B)

29. Which metal is used as electrode in a dry cell ?
(A) Copper (B) Zinc
(C) Aluminium (D) Silver

30. Which of the following things can conduct electricity ?
(A) Human body (B) Plastic
(C) Iron (D) Both (A) & (C)

31. A magnet can attract :
(A) Iron (B) Nickel
(C) Cobalt (D) All the above

32. Which of the following statements is wrong ?
(A) In a bar magnet, the force of attraction is maximum near the poles.
(B) A permanent magnet can have only one pole.
(C) Unlike poles attract.
(D) Like poles repel.

33. Which device can indicate direction ?
(A) Thermometer (B) Lactometer

(C) Magnetic compass (D) Speedometer

34. Which gas is necessary for burning ?
(A) Carbon dioxide (B) Hydrogen
(C) Oxygen (D) Nitrogen

35. Find the incorrect statement :
(A) Plants consume oxygen during respiration.
(B) Plants produce carbohydrates during night time.
(C) Chlorophyll is necessary for photosynthesis.
(D) Plants produce oxygen.

36. When an incense stick is lighted in a remote corner of a room, we smell it after some-time. This is due to :
(A) Diffussion (B) Condensation
(C) Evaporation (D) Osmosis

37. The major component of air is :
(A) Nitrogen (B) Carbon dioxide
(C) Hydrogen (D) Oxygen

38. What is the composting agent in Vermicomposting ?
(A) Ant (B) Earthworm
(C) Cockroach (D) Silkworm

39. How much volume of the solid waste is reduced by inceneration ?
(A) 20-30 percent (B) 30-40 percent
(C) 50-60 percent (D) 15-35 percent

40. The per capita production of solid waste in a town with average population is :
(A) 100-120 g (B) 400-500 g
(C) 300-400 g (D) 500-800 g

41. Which water is used at the Porompat Water Supply ?
(A) Lake water (B) Stream water
(C) Underground water (D) River water

42. $\frac{2}{3}$ of the earth is occupied by :
(A) Land (B) Water

(C) Air (D) River

43. Which of the following parts of the plant is not a part of the shoot system ?
(A) Buds (B) Branches
(C) Leaves (D) Roots

44. Parallel venation is seen in :
(A) Paddy leaves (B) Maize leaves
(C) Bamboo leaves (D) All the above

45. Pollen grains are produced from :
(A) Stigma (B) Corolla
(C) Anther (D) Ovule

46. How many pairs of ribs are found in the human body ?
(A) 8 (B) 10
(C) 12 (D) 14

47. Snails move using a muscular organ called :
(A) Foot (B) Longitudinal muscle
(C) Circular muscle (D) Belly scales

48. Which animal does not have a digestive system ?
(A) Rat (B) Tapeworm
(C) Butterfly (D) Dragonfly

49. The average life span of a tortoise is :
(A) 50 years (B) 75 years
(C) 100 years (D) 200 years

50. Choose the Xerophytes :
(A) Rose (B) Cactus
(C) Lily (D) Lotus

****

SCIENCE
CLASS - VII, 2010

1. Cement is obtained from :
(A) crushing the stones. (B) the river banks.
(C) Limestone. (D) hard rocks.

2. NGO'S stands for :
(A) Non-Government Organisations. (B) National Government Organisations.
(C) Non-Grant Organisations. (D) National-Grant Organisations.

3. The substance which have maximum solubility at room temperature is :
(A) Common salt (B) Copper sulphate
(C) Ammonium chloride (D) Sugar

4. Water decomposes into hydrogen and oxygen when heated above :
(A) 1500^0 C (B) 2000^0 C
(C) 1000^0 C (D) 100^0 C

5. The salinity of sea water is expressed in terms of :
(A) g / kg (B) g / *l*
(C) kg / k*l* (D) mg / m*l*

6. Soda water is an example of :
(A) Gas with liquid mixture. (B) Solid with liquid mixture.
(C) Liquid with liquid mixture. (D) Solid with gas mixture.

7. Compounds are :
(A) Heterogeneous (B) Homogeneous
(C) Heterogeneous or Homogeneous (D) None of the above.

8. The symbol of iron given by Alchemists is :
(A) I (B) Fe
(C) IR (D) Y

9. The chemical formula of sodium acetate is :
(A) CH_3COOH (B) CHCOONa
(C) CH_3COONa (D) CH_2COONa

10. All acids contain :

(A) Sulphur (B) Carbon
(C) Hydrogen (D) Nitrogen

11. Gastric juice is acidic due to presence of :
(A) Hydrochloric acid (B) Sulphuric acid
(C) Nitric acid (D) Carbonic acid

12. The colour of Ferric chloride is :
(A) Green (B) Red
(C) Orange (D) Yellow

13. Ammonium hydroxide is obtained by dissolving _____ in water :
(A) Hydrogen (B) Ammine
(C) Ammomide (D) Ammonia

14. 1 km^2 = ?
(A) 10000000 m^2 (B) 1000 m^2
(C) 1000 m^2 × 1000 m^2 (D) 100 m^2 × 100 m^2

15. The density of Gold is :
(A) 1.93×10^3 (B) 10.93×10^3
(C) 19.3×10^3 (D) 109.3×10^3

16. _____ is the S.I. unit of mass.
(A) Gram (B) Kilogram
(C) Pound (D) Milligram

17. Complete digestion of food is performed by :
(A) small intestine (B) stomach
(C) hydrochloric acid (D) teeth

18. Multiplication of cells is done by :
(A) Protoplasm (B) Nucleus
(C) Mitochondria (D) Cell membrane

19. The largest organ in the body is :
(A) Heart (B) Kidney
(C) Liver (D) Stomach

20. The enzyme present in the gastric juice of a young child is :
(A) gastric lipase (B) rennin
(C) pepsin (D) trypsin

21. _____ completely enclosed the heart.
(A) Tricuspid valve (B) Bicuspid valve
(C) Diastole (D) Pericardium

22. The urine is expelled outside through :
(A) Ureters (B) Nephrons
(C) Urethra (D) Urinary bladder

23. The phytohormone which promotes ripening of fruit is called :
(A) Cytokinins (B) Abscisic acid
(C) Ethylene (D) Gibberellins

24. Ear is known as :
(A) Photoreceptor (B) Mechanoreceptor
(C) Thermoreceptor (D) Phonoreceptor

25. Induction of movement by mechanical shocks is called :
(A) Seismonastic movement (B) Ciliary movement
(C) Flagellar movement (D) All the above

26. The process for the continuation of life on the earth is :
(A) Respiration (B) Reproduction
(C) Photosynthesis (D) Cloning

27. Flower of _____ are unisexual.
(A) mulberry (B) rose
(C) brinjal (D) china rose

28. The temporary union between individual of the same species is called :
(A) Conjugation (B) Automixis
(C) Syngamy (D) Zygote

29. Choose the correct statement :
(A) On heating, liquid expands more than gas.
(B) On heating, gas expands more than liquid.
(C) The expansion of solids is larger than liquids.
(D) Solid expands most on heating among the three states of matter.

30. The melting of water is :
(A) 0^0 C (B) 100^0 C
(C) -39^0 C (D) None of these

31. Which of the following substances have the least specific heat capacity ?

(A) Water (B) Lead

(C) Mercury (D) Ice

32. Sort out the false statement :

(A) The incident ray, the normal at the point of incidence and the reflected ray lie in the same plane.

(B) The angle of incidence is always equal to the angle of reflection.

(C) Light does not travel in straight line.

(D) Reflected ray is the ray reflected from the reflecting surface.

33. If the angle of incidence on a plane mirror is 25^0, then the angle between the incident and reflected ray is :

(A) 25^0 (B) 50^0

(C) 75^0 (D) 0^0

34. Which of the following is the fastest thing in the universe ?

(A) Light (B) Sound

(C) Cheetah (D) Moon

35. Which is known as the animal starch ?

(A) Galactose (B) Glucose

(C) Maltose (D) Glycogen

36. The daily requirement of carbohydrate in an adult is :

(A) 65 - 75 g per day (B) 100 - 200 g per day

(C) 400 - 500 g per day (D) 600 - 700 g per day

37. Children suffering from severe deficiency of thyroid secretion are known as :

(A) Goitre (B) Cretins

(C) Rickets (D) Anaemia

38. Nicotine present in tobacco damages :

(A) Lungs (B) Liver

(C) Bones (D) None of these

39. Orange are source of :

(A) Vitamin A (B) Vitamin B

(C) Vitamin C (D) Vitamin D

40. Which of the following materials is difficult to charge by friction ?

(A) Plastic comb (B) Iron rod

(C) Woolen cloth (D) Inflated rubber balloon

41. From which word does the word "electricity" derived ?

(A) Elektron (B) Electron

(C) Electrik (D) Electrick

42. Sort out the false statement :

An electroscope is used to -

(A) detect the presence of the electric charge.

(B) to see electrons.

(C) to test the nature of the charge.

(D) to compare the quantity of charge.

43. _____ produces the loudest sound in the world.

(A) Women (B) Elephant

(C) Blue whale (D) Aircraft

44. The unit of frequency is :

(A) metre / second (B) Km / Hr

(C) Hertz (D) Decibel

45. The insect which produce sound by rubbing their legs together is :

(A) Cricket (B) Bee

(C) Flies (D) Harinongnang

46. The hardest natural substance is :

(A) Rock (B) Diamond

(C) Iron (D) Graphite

47. When camphor is heated :

(A) it melts into a liquid.
(B) it changes directly into gaseous state.
(C) it does not undergoes sublimation.
(D) it remains as a solid only.

48. The stannum is the Latin name of :

(A) Antimony
(B) Sodium
(C) Silver
(D) Tin

49. Which of the following substances is not a solvent for common salt ?

(A) Kerosene
(B) Water
(C) Fruit juice
(D) Lime water

50. Which is the best conductor of electricity ?

(A) Distilled water
(B) Pure water
(C) Sea water
(D) Rain water

****

2011

1. Hardwater does not readily produce lather with ordinary soap. This is due to the presence of :
   (A) Bicarbonates
   (B) Chlorides
   (C) Sulphates of calcium and magnesium
   (D) All of the above.
2. Sublimation is a process involving conversion of substances from :
   (A) gaseous state to liquid state.
   (B) solid to gaseous state.
   (C) solid to liquid state.
   (D) gaseous to solid state.

3. Air is an example of :
   (A) Mixture
   (B) Compound
   (C) Element
   (D) Solution
4. Antacids are taken when we suffer from acidity. This is because antacids contain :
   (A) Basic solution
   (B) Acidic solution
   (C) Neutral solution
   (D) None of the above
5. For any given shape, if we increase all its dimensions by 'n' times, then its area increases by :
   (A) n times
   (B) n^2 times
   (C) n^3 times
   (D) $2n$ times
6. A book has 15 cm in length and 8 cm in breadth. What is the area of the book ?
   (A) 100 cm^2
   (B) 120 cm^2
   (C) 140 cm^2
   (D) 90 cm^2
7. Nambul river is one of the most polluted one among rivers of Manipur. Some of the measures to prevent it are :
   (A) Avoiding direct disposal.
   (B) Giving awareness of water pollution.
   (C) Avoiding draining of spent water and excessive use of fertilizers, detergents, etc.
   (D) All of the above.
8. There is banned in use of plastics. This is mainly because plastics are :
   (A) Biodegradable
   (B) Renewable
   (C) Non-biodegradable
   (D) Non-renewable
9. Which of the following is NOT a property of metals ?
   (A) High melting point
   (B) High density
   (C) Shiny appearance
   (D) Low boiling point
10. A turmeric stain on your white shirt turns red when washed with soap. It is because :
    (A) soap solution is acidic.
    (B) soap solution is basic.
    (C) soap solution is neutral.
    (D) None of the above.
11. A blue litmus paper turns red when dipped in a solution. The nature of solution is :
    (A) Acidic
    (B) Basic
    (C) Neutral
    (D) Hypertonic

12. In S.I. unit, length is measured in :
(A) cm (B) m
(C) mm (D) dm

13. In Manipur, limestones are found in :
(A) Chandel (B) Ukhrul
(C) Thoubal (D) Imphal

14. Symbols of calcium and cadmium respectively are :
(A) C and Ca (B) Cd and Ca
(C) Ca and Cd (D) Ca and C

15. % of water by weight in human body is :
(A) 80 % (B) 90 %
(C) 70 % (D) 60 %

16. The correct sequence of increasing level of organisation is :
(A) Tissues→Cells→Organ→Organ system
(B) Organ→Cells→Tissues→Organ system
(C) Cells→Tissues→Organ→Organ system
(D) Cells→Organ→Tissues→Organ system

17. Some organisms obtain their food through various means other than photosynthesis. Such organisms are called :
(A) Autotrophs (B) Heterotrophs
(C) Chemoautotrophs (D) None

18. A milk-curdling enzyme contained in the gastric juice of young children is :
(A) Pepsin (B) Rennin
(C) Trypsin (D) Gastric lipase

19. The colour of blood is red. This is due to the presence of a pigment called :
(A) Haemoglobin (B) Chlorophyll
(C) Myoglobin (D) Haematocyanin

20. Pumping action of heart has contraction phase and relaxation phase. The relaxation phase is called :
(A) Systole (B) Oxygenation
(C) Deoxygenation (D) Diastole

21. In plants, exchange of gases takes place through :
(A) Stomata (B) Xylem
(C) Phloem (D) All of the above

22. Leaves fell off from the trees. Which phytohormone is responsible for it ?
(A) Auxin (B) Ethylene
(C) Abscisic acid (D) Cytokinin

23. Sometimes when we accidentally touched a hot object, we withdraw our hand immediately. Such action is called :
(A) Modified Response (B) Reflex action
(C) Conditioned Response (D) Unconditional Response

24. When we touch the leaves of "Kangphal Ikaithabi", it closes its leaves. Such a movement is called :
(A) Phototrophic movement (B) Seismonastic movement
(C) Geotrophic movement (D) Tactic movement

25. Which sense organ helps us in maintaining our body balance ?
(A) Eye (B) Tongue
(C) Ear (D) Nose

26. In plants, translocation of water and minerals takes place through :
(A) Xylem (B) Phloem
(C) Leaves (D) Mid-rib of leaves

27. A fluid connective tissue that circulates in our body is :
(A) Tannins (B) Rennins
(C) Blood (D) Lymph

28. In preparing "Soibum, Hawaichar and Ngari", the process involved is :
(A) Digestion (B) Absorption
(C) Aerobic respiration (D) Fermentation

29. Excretory organ of Prawn is :
(A) Green gland (B) Flame cells
(C) Vacuole (D) Kidney

30. Movements induced by gravitational stimulus are called :
(A) Phototropism (B) Geotropism
(C) Heliotropism (D) Seismonastic movements

31. The powerhouse of the cell is :

(A) Golgi body (B) Plastids

(C) Mitochondria (D) Endoplasmic Reticulum

32. In Amoeba, locomotory organs are called :

(A) Pseudopodia (B) Flagella

(C) Cilia (D) None

33. Generally the food we eat contains some micro-organisms. Which organ is responsible to kill it ?

(A) Oesophagus (B) Gall Bladder

(C) Large intestine (D) Stomach

34. In woody stems, exchange of gases occurs through :

(A) Pith (B) Xylem

(C) Lenticels (D) Phloem

35. In human, growth rate becomes maximum during the age of :

(A) 10 - 12 years (B) 18 - 21 years

(C) 14 - 18 years (D) 6 - 10 years

36. Which among the following expand most on heating ?

(A) Solid (B) Liquid

(C) Gas (D) None

37. 1 Kcal = _____.

(A) 100 cal (B) 1000 cal

(C) 10 cal (D) 4.2 cal

38. A device used to detect the presence of electric charge is :

(A) Thermometer (B) Potometer

(C) Electroscope (D) Microscope

39. Like charges _____ and unlike charges _____ each other.

(A) Repel, attract respectively (B) Attract, repel respectively

(C) Attract, attract respectively (D) Repel, repel respectively

40. In human beings, the most important source of sound is :

(A) Larynx (B) Epiglottis

(C) Pharynx (D) Trachea

41. Materials which can be charged by rubbing are :

(A) Plastic (B) Glass rod

(C) Iron nail (D) All of the above

42. As seen from the earth, solar eclipse occur when :

(A) Moon passes between Sun and Earth.

(B) Earth passes between Sun and Moon.

(C) Sun passes between Moon and Earth.

(D) None of the above statement.

43. Through which substance does sound travel fastest ?

(A) Air (B) Water

(C) Steel (D) None

44. Sea breeze occurs when :

(A) Cool breeze blows from land towards the sea during day time.

(B) Cool breeze blows from sea towards the land during day time.

(C) Cool breeze blows from land towards the sea during night time.

(D) Cool breeze blows from sea towards the land during night time.

45. If we closely observe a shadow, we find two portions - completely dark and partially dark. The completely dark region is called :

(A) Umbra (B) Penumbra

(C) Annulus (D) Pith

46. The S.I. unit of specific heat capacity is :

(A) Joule (B) Joule/Kg^{0}C

(C) ^{0}C (D) Calorie

47. Some materials transmit light completely. Such materials are known as :

(A) Transparent (B) Translucent

(C) Opaque (D) None

48. The frequency of sound is measured in :

(A) Hertz (B) Watt

(C) Second (D) metre/second

49. If a negatively charged cloud base passes over a tree, the tree has a _____ induced in it.

(A) Positive charge (B) Negative charge

(C) Neutral (D) None

50. Cicadas (Harinongnang) produce sound by :

(A) Wing vibration (B) Rubbing their legs

(C) Vibration at their abdomen (D) Vocal sacs

****

2012

1. Which of these is a non renewable resource ?

(A) Forest (B) Petroleum

(C) Air (D) Water

2. Where can the 'Pinus' forest found in Manipur ?

(A) Tamenglong (B) Chandel

(C) Ukhrul (D) Imphal West

3. Out of the total amount of water, how much amount of fresh water is available for use by human beings and other living organisms ?

(A) 2.6 % (B) 71 %

(C) 0.01 % (D) 98 %

4. What is known as the Universal solvent ?

(A) Water (B) Kerosene

(C) Benzene (D) Milk

5. What is the solubility of sodium chloride at room temperature (25^0 C) ?

(A) 23 g (B) 39 g

(C) 36 g (D) 204 g

6. Water which are fit for drinking and food preparation are called :

(A) Raw water (B) Pure water

(C) Distilled water (D) Potable water

7. The process of direct change of a substance from solid to gaseous state is known as :

(A) Melting (B) Vapourisation

(C) Condensation (D) Sublimation

8. Which state of matter has the least space between the particles ?

(A) Solid (B) Liquid

(C) Gas (D) All the same

9. An element X, have shining surface, malleability, ductility and conductivity towards heat and electricity. What type of element is the element 'X' ?

(A) Metal (B) Non-metal

(C) Metalloid (D) Noble gas

10. Identify the heterogeneous mixture from the following :

(A) Sugar solution (B) Alloys

(C) Alcohol in water (D) Smoke

11. Which of these is a weak acid ?

(A) Oxalic acid (B) Sulphuric acid

(C) Nitric acid (D) Hydrochloric acid

12. What is the name of the reaction in which an acid is reacted with a base to form salt and water ?

(A) Oxidation reaction (B) Neutralisation reaction

(C) Reduction reaction (D) Combination reaction

13. The area of a rectangular surface is 15 cm^2. If we increase the length of all its sides 5 times, the area of its new surface become :

(A) 120 cm^2 (B) 180 cm^2

(C) 240 cm^2 (D) 315 cm^2

14. An ice-cream cone has a volume of 66 cc and the radius of the base is 3 cm. What is its height ?

(A) 198 cm (B) 9 cm

(C) 3 cm (D) 1 cm

15. A body has the shape of a cube of length 4 m and its mass is 256 kg. Find the density.

(A) 4 kg/m^3 (B) 4 g/cm^3

(C) 256 kg/m^3 (D) 256 g/cm^3

16. If we want to calculate the mass of a substance, we should use the expression :

(A) Density×Volume (B) $\frac{Density}{Volume}$

(C) $\frac{Volume}{Density}$ (D) $\frac{Density}{Area}$

17. DNA is an example of :

(A) molecular level of organisation (B) cellular level of organisation

(C) tissue level of organisation (D) organ level of organisation

18. Which level of organisation occupy the lowest position in the higher level of organisation of the living ?

(A) Organ system level (B) Individual level

(C) Population level (D) Biosphere level

19. How is a group of population of all species in an area and their interaction with one another ?

(A) Family (B) Population density

(C) Population (D) Biotic community

20. Identify the component which is not present in animal cells :

(A) Nucleus (B) Golgi body

(C) Plasma membrane (D) Cell wall

21. When an organism obtains its food from body of other living organisms such mode of nutrition is called :

(A) Parasitic (B) Autotrophic

(C) Saprophytic (D) Symbiotic

22. What type of respiration is carried out by human beings ?

(A) Anaerobic respiration (B) Aerobic respiration

(C) Both (A) & (B) (Di) None of these

23. What is the excretory organ of flatworms ?

(A) Flame cells (B) Green glands

(C) Contractile vacuoles (D) Nephridia

24. What is the medium of transportation of digested food, water, oxygen, waste materials etc. from one part to another in human body ?

(A) Blood (B) Lymph

(C) Blood & Lymph (D) Water

25. What causes enlargement of cells, delay ageing of leaves, help in translocation of foods in the plant body and break dormancy of seed ?

(A) Auxins (B) Gibberellins

(C) Cytokinins (D) Ethylene

26. CNS stands for Central Nervous System, then what does ANS stands for ?

(A) Automatic Nervous system (B) Actual Nervous system

(C) Autonomic Nervous system (D) Apparent Nervous system

27. What do we call a nerve cell ?

(A) Nerve cord (B) Nerve net

(C) Spinal cord (D) Neuron

28. A response by which an organism learns is called :

(A) modified response

(B) responses to internal stimuli

(C) conditional response

(D) None of the above

29. Identify the male reproductive part of the flower :

(A) Pistil (B) Sepal

(C) Petal (D) Stamen

30. How does amoeba reproduce ?

(A) Budding (B) Regeneration

(C) Sexual reproduction (D) Fission

31. Which female reproduction organ produce the egg or ovum ?

(A) Ovary (B) Oviducts

(C) Uterus (D) Vagina

32. Which type of cloning is known as embryo cloning ?

(A) Therapeutic cloning (B) Reproductive cloning

(C) Natural cloning (D) All the above

33. What is the body temperature of a normal healthy person ?

(A) 25^0 C (B) 36^0 C

(C) 37^0 C (D) 50^0 C

34. What is the SI unit of specific heat capacity ?

(A) J/Kg^0 C (B) K cal/Kg^0 C

(C) J/g^0 C (D) K cal/g^0 C

35. Heat required to vapourise 1 g of water at 100^0 C is :

(A) 1 cal (B) 80 cal

(C) 540 cal (D) 1000 cal

36. What is the mode of transfer of heat which involves actual movements of the molecules ?

(A) Conduction (B) Connection

(C) Radiation (D) None of these

37. If the angle of incidence of a light ray on a plane mirror is 35^0, the angle between the incident and the reflected ray is :

(A) 25^0 C (B) 35^0 C

(C) 50^0 C (D) 70^0 C

38. A concave mirror produces :

(A) real image only (B) virtual image only

(C) both real and virtual image (D) neither real nor virtual image.

39. Which one of these is a non luminous body ?

(A) Sun (B) Star

(C) Lighted candle (D) Moon

40. Sound travels through material substances. Through which substances does sound travel fastest ?

(A) Water (B) Air

(C) Steel (D) Milk

41. The speed of sound at room temperature is 340 m/sec. The minimum distance of a reflecting surface for getting echo should be :

(A) 10 m (B) 17 m

(C) 170 m (D) 340 m

42. Ultrasonic sounds are the sounds whose frequency is :

(A) below 20 Hz (B) below 20,000 Hz

(C) between 20 Hz - 20,000 Hz (D) above 20,000 Hz

43. What determines the loudness of a sound ?

(A) Amplitude (B) Time period

(C) Frequency (D) Wavelength

44. When a plastic scale is rubbed with wool, :

(A) both the scale and the wool acquire positive charge.

(B) both the scale and the wool acquire negative charge.

(C) the scale acquire positive charge and the wool acquires negative charge.

(D) the scale acquire negative charge and the wool acquires positive charge.

45. What is known as dextrose ?

(A) Glucose (B) Fructose

(C) Galactose (D) Sucrose

46. What is the structural unit of proteins ?

(A) Glucose (B) Starch

(C) Amino acids (D) Cellulose

47. What is the chemical name of Vitamin - E ?

(A) Ascorbic acid (B) Calcipherol

(C) Phyloquinone (D) Tocopherol

48. The deficiency of iodine in our body causes :

(A) Beri - beri (B) Scurvy

(C) Goitre (D) Rickets

49. Which of these is a disease caused by overeating ?

(A) Obesity (B) Kwashiorkar

(C) Marasmus (D) Rickets

50. Identify the air - borne disease from the following :

(A) Typhoid (B) Pneumonia

(C) Cholera (D) Jaundice

****

2013

1. Who coined the term Photosynthesis ?

(A) Robert Hooke (B) Charles Reid Barne

(C) Aristotle (D) James Watt

2. Which of the following nutrient can be absorbed without breaking down ?

(A) Carbohydrates (B) Proteins

(C) Fats (D) Vitamins

3. Where does the development of pupa into moth takes place ?

(A) Cacoon (B) Mulberry leave

(C) Clean bamboo tray (D) None of the above.

4. Identify the mineral acid from the following :

(A) Maleic acid (B) Lactic acid

(C) Tartaric acid (D) Nitric acid

5. Which of these is a chemical change ?

(A) Vapourisation (B) Condensation

(C) Freezing (D) Neutralisation

6. Which of these animals have hygroscopic skin ?

(A) Scorpion (B) Molach

(C) Snake (D) Penguin

7. How much oxygen is present in exhaled air ?

(A) 21 % (B) 16.4 %

(C) 4.4 % (D) 0.04 %

8. What is the structural and functional unit of kidney ?

(A) Urinary bladder (B) Cell membrane

(C) Nephron (D) Cell

9. A car moves with a speed of 72 km/hr for 20 minutes. What is the distance covered by the car during this time ?

(A) 1440 Km (B) 24000 m

(C) 74 Km (D) 24 m

10. What will be the distance between the object and the image formed by a plane mirror if the object is placed at a distance of 15 cm in front of the mirror ?

(A) 15 cm (B) 30 cm

(C) 17 cm (D) 75 cm

11. Grana are formed by :

(A) Stroma (B) Guard cells

(C) Thyllakoids (D) Stomata

12. What do we call the partly digested food which is ready to swallow ?
(A) Enzymes (B) Bolus
(C) Gastric juice (D) Abomasum

13. Name the process of taking out threads from the cacoons for use as silk.
(A) Reeling (B) Weaving
(C) Shearing (D) Grading

14. When few drops of Phenolphthalein are added into a basic solution, it becomes :
(A) Blue (B) Pink
(C) Yellow (D) Colourless

15. Which layer of soil contains humus ?
(A) A - horizon (B) B - horizon
(C) C - horizon (D) D - horizon

16. Which of the following statement is not correct ?
(A) Wind is caused by the difference of atmospheric pressure at two different regions.
(B) The difference of atmospheric pressure is caused by the difference of temperature.
(C) The temperature difference is mainly due even heating of the earth's surface by the sun.
(D) Warm air is lighter than cool air.

17. During the process of respiration, plants take in :
(A) Carbondioxide (B) Oxygen
(C) Water (D) Starch

18. The excretory organ of cockroach are :
(A) Kidney (B) Nephridia
(C) Gills (D) Malpighian tubes

19. What does a slope of a distance-time graph represent ?
(A) Distance (B) Time
(C) Speed (D) Acceleration

20. What does temporary hard water contain ?
(A) Calcium chloride (B) Calcium sulphate
(C) Magnesium sulphate (D) Magnesium bicarbonate

21. Rafflesia is a _____.
(A) Saprophytic plant (B) Parasitic plant
(C) Xerophytic plant (D) Symbiotic plant

22. Name the milk coagulating enzyme produced in infants' stomach that can coagulate milk protein and help in digestion.
(A) Rennin (B) Duodenum
(C) Lipase (D) Pepsinogen

23. Which of the following mode of transfer of heat does not require material medium ?
(A) Conduction (B) Convection
(C) Radiation (D) All the above

24. Which of the following substance should be added during the treatment of too basic soil ?
(A) Calcium oxide (B) Calcium hydroxide
(C) Organic matter (D) Slaked lime

25. What is the size (in diameter) of clay particles ?
(A) 20.00 - 15.00 mm (B) 2.00 - 5.00 mm
(C) 0.02 - 0.05 mm (D) less than 0.002 mm

26. When the sun sets, the most possible direction of the wind is :
(A) land to sea. (B) sea to land.
(C) Both (A) and (B) (D) Neither (A) nor (B)

27. Which of these does not constitute the human circulatory system ?
(A) Blood (B) Blood vessels
(C) Heart (D) Kidney

28. A complete flower will be a :
(A) unisexual flower (B) bisexual flower
(C) cross pollinated plant (D) None of the above

29. Name a safety device that is used in electric circuit.
(A) Electric heater (B) A cell or battery
(C) Electric fuse (D) Electromagnet

30. The dissolved and the suspended impurities present in sewage are called :
(A) Domestic sewage (B) Agricultural waste
(C) Waste water (D) Contaminants

31. Which of these is a saprophytic plant ?
(A) Neottia (B) Rafflesia
(C) Nepenthes (D) Lichen

32. The fibre obtained from which animal is called Mohair ?
(A) Merino sheep (B) Bactrian camel
(C) Kashmiri goat (D) Angora goat

33. What do we call the fatal condition that arise when our body temperature goes down below 30° C ?
(A) Hyperthermia (B) Hyporthermia
(C) Heterothermia (D) Normalthermia

34. What is the chemical formula of baking soda ?
(A) $NaHCO_3$ (B) Na_2CO_3
(C) $Ca(OH)_2$ (D) $C_6H_{12}O_6$

35. Which of the following is more suitable for growing paddy ?
(A) Sandy soil (B) Clayed soil
(C) Loamy soil (D) All the above

36. Typhoon is a name of several storms in :
(A) Eastern Asia (B) India
(C) North America (D) Japan

37. What carries oxygenated blood from the lungs to the heart ?
(A) Pulmonary arteries (B) Pulmonary veins
(C) Pulmonary trunk (D) Aorta

38. The female part of a flower is called :
(A) Stamen (B) Anther
(C) Pistil (D) Corolla

39. Out of the following materials, which one conduct electricity easily ?
(A) Rubber (B) Air
(C) Plastics (D) Nichrome

40. A food web consist of interconnected :
(A) Food chains (B) Food
(C) Forests (D) Plants

41. What constitute the digestive system in human beings ?
(A) Digestive glands (B) Alimentary canal
(C) Both (A) and (B) (D) Neither (A) nor (B)

42. Which of these is not a member country of International Wool Secretariat(IWS) ?
(A) Australia (B) South Africa
(C) China (D) Uruguay

43. Which one contains more heat - a pot containing warm water or a cup of hot tea ?
(A) A pot containing warm water
(B) A cup of hot tea
(C) Both will always have the same amount of heat.
(D) None of the above

44. What type of change is digestion of food ?
(A) Physical change
(B) Chemical change
(C) Neither physical nor chemical change
(D) Reversible change

45. What help camels to adapt to the desert ?
(A) Special water storage cell in stomach
(B) Thick eyebrows
(C) Thick lips
(D) All the above

46. What is the product formed during the anaerobic respiration in our muscles ?
(A) Carbondioxide and water (B) Alcohol and carbondioxide
(C) Lactic acid (D) Alcohol

47. What transport the photosynthetic nutrients from leaves to the other parts of a plant ?
(A) Xylem (B) Phloem
(C) Tracheid (D) Haemoglobin

48. Vallisneria is dispersed by :
(A) Wind (B) Water
(C) Animals (D) Birds

49. Which of these can explain the formation of shadow of an object ?
(A) Rectilinear propagation of light (B) Reflection of light
(C) Refraction of light (D) Dispersion of light

50. What is the approximate area of world's land surface covered with forests ?
(A) 1 % (B) 33 %
(C) 55 % (D) 100 %

****

2014

1. Lichen is an association of :
   (A) Fungi and Virus
   (B) Algae and Fungi
   (C) Algae and Bacteria
   (D) Leguminous plants and Rhizobium
2. Which of the following animals is not a ruminant ?
   (A) Cow
   (B) Goat
   (C) Buffalo
   (D) Dog
3. The largest silk producing country is :
   (A) China
   (B) India
   (C) Myanmar
   (D) Sri Lanka
4. Which organ synthesizes the bile ?
   (A) Stomach
   (B) Liver
   (C) Small intestine
   (D) Pancreas
5. The starch formed during the process of photosynthesis distributes to various parts of the plants by :
   (A) Xylem
   (B) Guard cells
   (C) Phloem
   (D) Both Xylem and Phloem
6. How much time does a silkworm take to prepare the cocoon ?
   (A) 2-3 days
   (B) 3-7 days
   (C) 1 week
   (D) 2 weeks
7. Name the breed of sheep from which the finest wool is obtained.
   (A) Nali
   (B) Marwari
   (C) Merino
   (D) Lodhi
8. How many milk teeth are found in infants and children ?
   (A) 16
   (B) 18
   (C) 20
   (D) 22
9. Haustorium are the special roots of :
   (A) Saprophytic plants
   (B) Parasitic plants
   (C) Insectivorous plants
   (D) Symbiotic plants

10. The chest cavity is separated from the abdominal cavity by :
    (A) Alveoli
    (B) Trachea
    (C) Diaphragm
    (D) Ribs
11. The condition of appearance of glucose in urine is called :
    (A) Glucosuria
    (B) Dialysis
    (C) Dialiser
    (D) Excretion
12. Ovules are present in :
    (A) Stigma
    (B) Stamens
    (C) Anther
    (D) Ovary
13. Daily output of water in the form of sweat from the human body is about :
    (A) 100 ml
    (B) 200 ml
    (C) 250 ml
    (D) 300 ml
14. Where does photosynthesis occur in green plants ?
    (A) Lysosome
    (B) Mitochondria
    (C) Golgi bodies
    (D) Chloroplast
15. Which of the following animals is a nocturnal animal ?
    (A) Lion
    (B) Fennec
    (C) Tiger
    (D) Buffalo
16. Why do African elephants have exceedingly large ears ?
    (A) To keep their bodies cool by the blowing of air.
    (B) To increase their body weight.
    (C) To make their heads look bigger.
    (D) To increase surface area of the body.
17. The respiratory organs of cockroach are called :
    (A) Trachea
    (B) Spiracles
    (C) Tracheae
    (D) Lungs
18. Where does pollen germination occur ?
    (A) Anther
    (B) Ovary
    (C) Ovule
    (D) Stigma
19. Nephridia are the excretory organs of :
    (A) Earthworm
    (B) Cockroach
    (C) Amoeba
    (D) Bird

20. Pollination done by wind is called :
(A) Entomophily (B) Hydrophily
(C) Anemophily (D) Ornithophily

21. The state of inactivity of animals during summer is called :
(A) Hibernation (B) Adaptation
(C) Aestivation (D) Nocturnal

22. Cyclone is called Hurricane in :
(A) India (B) East Asia
(C) Australia (D) North America

23. The melting point of ice is 0°C. What is the freezing point of water ?
(A) 0°C (B) –2°C
(C) 2°C (D) 3°C

24. Heat is transferred through vacuum by :
(A) Conduction (B) Convection
(C) Radiation (D) None of these

25. Which acid is present in the ant's sting ?
(A) Acetic acid (B) Oxalic acid
(C) Formic acid (D) Citric acid

26. What is the common name of sodium hydroxide ?
(A) Slake lime (B) Caustic soda
(C) Baking soda (D) Washing soda

27. What is the chemical formula of blue vitriol ?
(A) $CuSO_4 . 5H_2O$ (B) $FeSO_4 . 7H_2O$
(C) $ZnSO_4 . 7H_2O$ (D) CH_3COOH

28. Direct change of substance from solid to gaseous state is known as :
(A) Solidification (B) Sublimation
(C) Fusion (D) Vaporisation

29. What is the product formed when carbon dioxide is passed through lime water ?
(A) $CaCO_3$ (B) $Mg(OH)_2$
(C) CaO (D) $NaHCO_3$

30. Name the acid which can dissolve glass.
(A) Sulphuric acid (B) Hydrochloric acid
(C) Hydrofluoric acid (D) Nitric acid

31. Choose the incorrect reaction :
(A) Glucose $\xrightarrow{O_2}$ $CO_2 + H_2O$ + Energy
(B) Glucose $\xrightarrow{O_2}$ Alcohol + CO_2 + Energy
(C) Glucose $\xrightarrow{\text{without } O_2}$ Alcohol+CO_2 + Energy
(D) Glucose $\xrightarrow{\text{without } O_2}$ Lactic acid + Energy

32. 1 nanosecond is equal to :
(A) 0.00000001 second (B) 0.000000001 second
(C) 0.00000000001 second (D) 0.000000000001 second

33. is the symbol of :

(A) Resistance (B) Connecting wire
(C) Bulb (D) Variable resistance

34. Who was the scientist who noticed the magnetic effect of current first ?
(A) Albert Einstein (B) Madam Curie
(C) Michael Faraday (D) Hans Christian Oersted

35. The phenomenon of splitting a white light into its constituent colours is called :
(A) Reflection (B) Refraction
(C) Dispersion (D) Diffused reflection

36. The reading of Odometer of a vehicle is 72610 km at 7:30 am. After a non stop driving upto 11:30 am of the same day, the reading of the Odometer is 72771 km. The speed of the vehicle is :
(A) 40.25 km/hr (B) 41.27 km/hr
(C) 38.64 km/hr (D) 37.45 km/hr

37. The amount of heat produced in a wire depends upon its :
(A) Material (B) Length
(C) Thickness (D) All the above

38. A man looks at a plane mirror from a distance of 15 metre from the mirror. Then the distance of his image from him is :
(A) 15 cm (B) 75 m
(C) 15 m (D) 30 m

39. Which of the following statements about simple pendulum is not correct ?
(A) For a given length of the pendulum the time period is constant.

(B) The time taken for a pendulum to complete one oscillation does not depend on the extent to which the bob of the pendulum is displaced.

(C) The time period depends on the mass of the bob.

(D) The time period depends on the length of the bob.

40. The mirror used by a dentist to see the magnified image of small injuries in the teeth is :

(A) Concave mirror (B) Convex mirror

(C) Plane mirror (D) All the above

41. How many colours are visible in sunlight ?

(A) 5 (B) 6

(C) 7 (D) 8

42. The speed of light in vacuum is :

(A) 3×10^8 m/s (B) 3×10^8 cm/s

(C) 3×10^5 m/s (D) 3×10^6 m/s

43. The rate at which water moves through the soil is called its :

(A) Humus rate (B) Erosion rate

(C) Weathering rate (D) Percolation rate

44. The lungs of the earth is :

(A) Lake (B) Forest

(C) River (D) Ocean

45. Solutions in which the solvent is of water is called :

(A) Aqueous solution (B) Acidic solution

(C) Basic solution (D) Neutral solution

46. The solubility of a gas increases with :

(A) Increase in pressure (B) Decrease in pressure

(C) Decrease in temperature (D) Both (A) and (C)

47. Which of the following trees provide quinine ?

(A) Cinchona (B) Neem

(C) Amla (D) Cassava

48. Water which is fit for consumption by human beings is called :

(A) Soft water (B) Hard water

(C) Potable water (D) Drinking water

49. Which of the following water is soft water ?

(A) Rain water (B) Distilled water

(C) water free from minerals (D) All the above

50. The uppermost layer of branches which serves as thick covering or roof over the ground is called :

(A) Crown (B) Canopy

(C) Understorm (D) Branching

****