47. The perimeter of a square field is 560, find its area.
(A) 560m²   (B) 13120m²
(C) 2980m²   (D) 19600m²

48. What is the co-efficient of ab in $34abxyP$?
(A) $34xyP$ (B) 34
(C) $34xy$ (D) P

49. How much is 5% of 5% of Rs 500000 ?
(A) ₹ 0.0125 lacs   (B) ₹ 0.125 lacs
(C) ₹ 1.25 lacs   (D) ₹ 12.5 lacs

50. A and B had the same number of pen. If A gives six pens to B and B gives three pens to A, how many pens have B more than A ?
(A) 6   (B) 1
(C) 9   (D) 3

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SPACE FOR ROUGH WORK

24ᵗʰMVI
(MATHEMATICS)

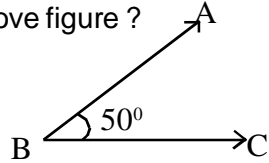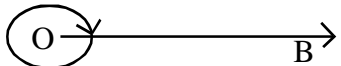Time Allowed 1 hour   Maximum Marks : 100

Read the following instructions carefully before you begin to answer the questions.

1. This booklet contains 50 questions in all.

2. All questions are compulsory and each question carries 2 marks.

3. Before you start to answer the questions you must check up this booklet and ensure that it contains all the pages 7 (Seven) and see that no page is missing or repeated. If you find any defect in this Booklet, you must replace it immediately.

4. There will **NOT** be any negative marking for wrong answers.

5. You are required to fill the information on the answer sheet which you will get in the examination hall by **H.B. pencil or BALL point pen.**

6. **Answer Sheet** and **Question Paper** will be supplied in examination hall. After the test is over, you should hand over the answer sheet to the invigilator before leaving the room.

7. You should write your **Name, Roll No.,** carefully on the space provided in the answer sheet. Otherwise you will be awarded **ZERO** mark.

8. If you wish to change your answer, **ERASE** completely the darkened circle by using an **ERASER** and then blacken the new circle. If not erased completely, smudges will be left on the erased circle and the question will be read as having two answer and will be ignored for giving any credit.

9. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.

10. You are not allowed to leave the examination hall until you are advised to do so by the invigilator.

1. $8^{16} \div 8^{21} = ?$
   (A) 8^5
   (B) 4096
   (C) $\dfrac{1}{8^5}$
   (D) $\dfrac{1}{36864}$

2. The difference between the sum of face values of 8 and 6 and the sum of the place values of 4 and 6 in 84.639 is :
   (A) 9.4
   (B) 9.94
   (C) 4
   (D) 4.02

3. Which of the following is prime as well as an even number ?
   (A) 4
   (B) 3
   (C) 1
   (D) 2

4. By how much is fifty thousand greater than one thousand eight hundred ?
   (A) 48000
   (B) 49000
   (C) 48200
   (D) 4820

5. How many lakhs make one million ?
   (A) 10
   (B) 1
   (C) 1000
   (D) 100

6. Six bells toll together and toll at interval of 2, 4, 6, 8, 10, 12 seconds respectively. The time after which they will together is
   (A) 1min
   (B) 2 mins
   (C) 103 seconds
   (D) 103 mins

7. The cost of 18 chairs is ₹ 10080. The number of such chairs that can be purchased for ₹31360 is
   (A) 67
   (B) 74
   (C) 38
   (D) 56

8. The greatest number that can divide 260 and 352 leaving ramainder 8 and 4 respectively is :
   (A) 16
   (B) 14
   (C) 12
   (D) 18

9. What is the average of first 10 starting from 25 ?
   (A) 38
   (B) 29.5
   (C) 27
   (D) 30.5

10. Sanajaoba borrowed ₹ 15000 from a marup under an agreement to pay the interest every month at the rate of 6% per mensem. He paid every interest for 35 months. How much did he pay at the end of 3 years ?
    (A) ₹15900
    (B) ₹45,000
    (C) ₹60,000
    (D) ₹900

39. Which of the following property satisfied by whole numbers under multiplication?
    (A) Closure
    (B) Commutative
    (C) Associative
    (D) All the above

40. $a \times (b + c) = a \times b + a \times c.$
    Which property is shown in the above equation ?
    (A) Associative property
    (B) Commutative property
    (C) Distributive property Multiplication
    (D) Closure property

41. $13y + \dfrac{25}{10} = \dfrac{17}{20} + 16y$. Find y
    (A) 0.56
    (B) $\dfrac{13}{21}$
    (C) 0.65
    (D) $\dfrac{11}{20}$

42. In an isosceles triangle, each two angles measure 65^0. What is the measure of third angle ?
    (A) 50^0
    (B) 115^0
    (C) 130^0
    (D) 40^0

43. Solve the problem and write the result in its reciprocal form
    $$\dfrac{5}{3} + \dfrac{12}{6} \div \dfrac{4}{2} \times 12 - \dfrac{1}{3}$$
    (A) $\dfrac{539}{39}$
    (B) $\dfrac{3}{40}$
    (C) $\dfrac{3}{40}$
    (D) $\dfrac{39}{530}$

44. Convert 25^0 into seconds.
    (A) $250000''$
    (B) $90000''$
    (C) $1500''$
    (D) $3600''$

45. Where do 50^0 lie in the protractor when we measure it from the point B as given in above figure ?

    (A) Outer scale
    (B) Inner scale
    (C) Base line
    (D) Centre

46. The angle of the given figure is :

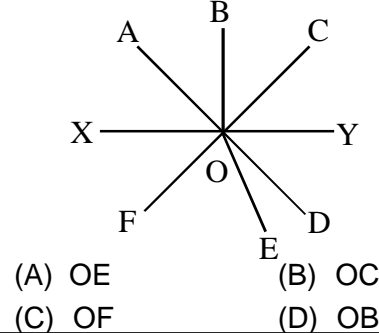   (A) zero
    (B) straight
    (C) reflex
    (D) complete

32. If 8 boys share 14 cakes, how much of the cake does each boy get ?

(A) $\dfrac{3}{7}$ (B) $\dfrac{4}{7}$

(C) $1\dfrac{3}{4}$ (D) $2\dfrac{1}{3}$

33. In the word "MORAL EDUCATION CENTRE", the ratio of number of consonant to the number of vowels is
(A) 5 : 9   (B) 13 : 11
(C) 11 : 3   (D) 11 : 9

34. A number is always divisible by 30 if
(A) it is divisible by both 2 and 15.
(B) it is divisible by both 3 and 10.
(C) it is divisible by both 5 and 6.
(D) all the above.

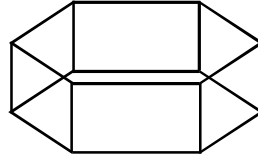35. Which of the following lines is perpendicular to line XY ?

(A) OE   (B) OC
(C) OF   (D) OB

36. Medha is M years old. In 7 years time, her father's age will be twice her age. How old will her father be in terms of K in 7 years time ?

(A) $\dfrac{K+7}{2}$ years   (B) $\dfrac{2K+7}{2}$ years

(C) $(2K+7)$ years   (D) $2(K+7)$ years

37. How many faces does the given solid have ?

(A) 6   (B) 7
(C) 8   (D) 9

38. Ram did $\dfrac{1}{2}$ of work yesterday and one-third of work today. How much work will he have to do tomorrow to complete the work ?

(A) $\dfrac{5}{6}$ (B) $\dfrac{6}{5}$

(C) $\dfrac{2}{3}$ (D) $\dfrac{1}{6}$

11. Mr. A bought a brand new car that cost ₹. 2,50,000 with his friend's financial help. Mr. A contributed ₹ 1,70,000 and the balance is to be cleared in 15 months with the interest at the rate of 3% per mensem. Find the interest of a month.
(A) ₹ 36000   (B) ₹ 116000
(C) ₹ 2400   (D) ₹ 17000

12. In a division sum, the divisor is 25, the remainder is 10 and the Quotient is the multiple of 25 lies between 60 and 90. Find the dividend.
(A) 1885   (B) 2135
(C) 2250   (D) 1832

13. A man sold an article at a gain of 25%. Had he sold the same for ₹ 500 more he would have got a profit of 50%. Find the cost price of the article.
(A) ₹ 400   (B) ₹ 600
(C) ₹ 1200   (D) ₹ 2000

14. In a forest, there are 2000 tigers and 2300 lions. After one year the increase in the former is 20% and the decrease in the latter is 15%. Find the increase or decrease of the total population after one year.
(A) increase = 4355
(B) decrease = 1955
(C) decrease = 45
(D) increase = 55

15. Convert 0.336 into percentage.
(A) 3.36%   (B) 336%
(C) 0.336%   (D) 33.6%

16. Which is the biggest ?
(A) 25% of 80   (B) 40% of 90
(C) 60% of 120   (D) 75% of 75

17. The number which have its place and face values always the same is :
(A) 0   (B) 1
(C) 2   (D) 3

18. Tombisana got 48 out of 60 in the English subject. Express as a percentage :
(A) 60%   (B) 70%
(C) 80%   (D) 90%

19. Find the average of 5 tens, 5 tenths and 5 hundreths.

(A) 16.85   (B) 168.5

(C) 275   (D) 185

20. What is the ratio of 60mm to 8dm ?

(A) 60 : 8   (B) 15 : 2

(C) 4 : 30   (D) 3 : 40

21. Which of the following are co-prime ?

(A) 35 and 98   (B) 13 and 117

(C) 23 and 115   (D) 17 and 112

22. $(x \times y) \times z = x \times (y \times z)$ is

(A) Closure property

(B) Commutative property

(C) Associative property

(D) Distributive property

23. The greatest number of 3-digits which is exactly divisible by 20 and 48 is :

(A) 999   (B) 960

(C) 900   (D) 924

24. When $x = \dfrac{-2}{4}$, $y = \dfrac{1}{12}$ and $z = \dfrac{20}{3}$, find $\dfrac{zy}{x}$.

(A) $-1\dfrac{1}{9}$ (B) $-\dfrac{1}{9}$

(C) $-10\dfrac{1}{4}$ (D) $-\dfrac{9}{10}$

25. If the speed of the bus is 220m/min, then how many distance will it cover in 2 hours ?
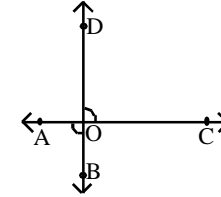
(A) 2640m   (B) 264Hm

(C) 26400Dm   (D) 26.4Km

26. Two angles are adjacent if :

(A) They have a common vertex and no common arm.

(B) They have common vertex and common angles.

(C) They do not overlap, have a common vertex and a common arm.

(D) Both (A) and (B)
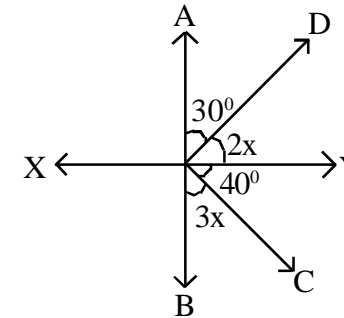
27. By what property will prove $\angle AOB = \angle DOC$ of the given figure ?

(A) Supplementary angles

(B) Angles of linear pair

(C) Vertically opposite angles

(D) Adjacent angles

28.

Find $\angle COB$ and $\angle DOY$

(A) $\angle COB = 22^0$ & $\angle DOY = 44^0$

(B) $\angle COB = 70^0$ & $\angle DOY = 140^0$

(C) $\angle COB = 40^0$ & $\angle DOY = 60^0$

(D) $\angle COB = 66^0$ & $\angle DOY = 44^0$

29. Pick out the correct one.

(A) A plane has sense of length, breadth and thickness.

(B) Two lines in a plane which intersect are called paralled lines.

(C) Three or more lines in a plane are said to be concurrent if all of them pass through the same point.

(D) Three or more points in a plane are said to be collinear if they don't lie on the same line.

30. 25% of 900 less than 30% of 1500 is :

(A) 215   (B) 225

(C) 450   (D) 465

31. The pair of corresponding angles are equal :

(A) if two non-parallel lines are intersected by a transversal.

(B) if two parallel lines are intersected by a transversal

(C) a pair of co- interior angles are equal.

(D) both (A) and (B).