CENTRE FOR PEDAGOGICAL STUDIES IN MATHEMATICS (CPSM)
**ACHIEVEMENT-CUM-DIAGNOSTIC TEST IN MATHEMATICS-2023**

INSTRUCTION: Write your Name, Class Roll No. etc. in the answersheet. Select the correct answer out of (a), (b), (c) and (d) of particular item and fill the specific rectangle ■ with blue/black ball pen denoting the correct answer. For example, if (c) is the correct answer to Q. No. X: blacken like this: Q. No. X: ☐ ☐ ■ ☐. Rough work is to be done on separate paper. Marks will be deducted for wrong answer. Don't waste time for answering a question which appears difficult to you, better try the next question.

1. How many straight lines can be drawn through two distinct points.

   (a) 1

   (b) 2

   (c) 0

   (d) infinite number of straight lines

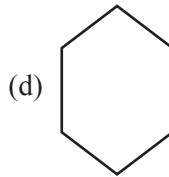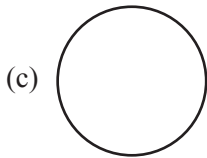2. Which of the following figures have exactly five corners.

   (a) (b) (c) (d)
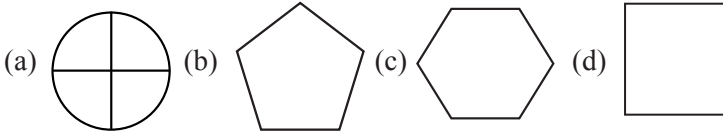
3. Number of straight lines needed to make the adjoining figure.
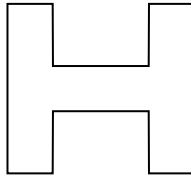
   (a) 10   (b) 13   (c) 14   (d) 12

4. Which one of the following figure has no pointed corner.

(a)

(b)

(c)

(d)
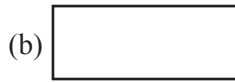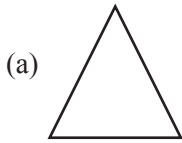
5. How many cubes are needed to make the adjoining figure.
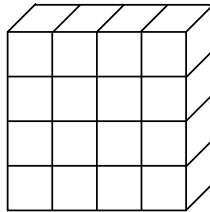
(a) 16   (b) 24   (c) 18   (d) 12

6. Which could be one of the faces of a cylinder?

(a)

(b)
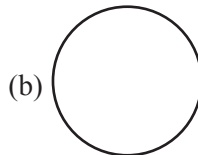
(c) None of these   (d) Both (a) and (b)

7. What shape are the faces of a cube?

(a) square   (b) rectangle

(c) rhombus   (d) equilateral triangle

8. The geometrical shape of a ludo dice is

(a) square   (b) cube   (c) cuboid   (d) rectangle

9. How many line segments are required to make the following alphabet?
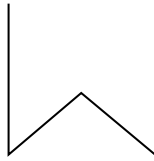
(a) 2   (b) 3   (c) 4   (d) none of these

10. The number of triangles in the adjoining figure is
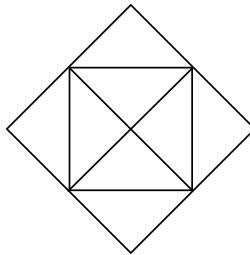
(a) 12   (b) 13   (c) 15   (d) 8

11. Write the largest four digit number using any one digit twice formed from the digits 4, 8, 1 and 7.

(a) 8874   (b) 8741   (c) 8877   (d) 8784

12. One kilogram =

(a) 1000 milligram   (b) 100000 milligram

(c) 1000000 milligram   (d) 100000000 milligram

13. The smallest six digit number having four different digits is

(a) 100023   (b) 123000   (c) 111123   (d) none of these

14. If we write the numbers from 1 to 100 the number of times the digit 5 has been written is

(a) 15   (b) 21   (c) 20   (d) 19

15. To stich a shirt 2m 15 cm cloth is needed. Out of 40 m of cloth how many shirts can be stiched.

    (a) 19   (b) 20   (c) 17   (d) 18

16. The value of *A* and *B* in the given addition respectively are

$$\begin{array}{r} 5\ 3\ A \\ +\ 3\ 4\ 6 \\ \hline 8\ B\ 0 \end{array}$$

    (a) *A* = 4, *B* = 8   (b) *A* = 8, *B* = 4

    (c) *A* = 5, *B* = 4   (d) *A* = 3, *B* = 4

17. In the year 2022 there were 197 school days. How many days were holidays?

    (a) 167   (b) 158   (c) 169   (d) 168

18. 49 pepple are standing in a queue for tickets to see a movie. One-seventh of the people buy the tickets and leave, 12 more people join the queue, How many people are in the queue now?

    (a) 61   (b) 55   (c) 42   (d) 54

19. What fraction of the adjoining figure is shaded?
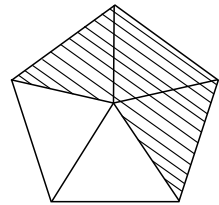
    (a) $\frac{1}{2}$ (b) $\frac{2}{5}$

    (c) $\frac{3}{5}$ (d) $\frac{3}{4}$

20. Choose a number. Add the next number to the chosen number, then add 9 to the sum. Divide the result by 2, then subtract the original number from the quotient. The answer is

    (a) 5   (b) 15   (c) 50   (d) none of these

21. Dina's mother used $\frac{1}{10}$ kg of butter. How many grams of butter did she used?

   (a) $\frac{1}{100}$ gm   (b) 10 gm   (c) 100 gm   (d) 1000 gm

22. The place value of 3 in the number 1307 is multiplied by the face value of 5 in the number 5819. The product is

   (a) 1500000   (b) 15   (c) 150   (d) 1500

23. How many times can you take away 37 from 1370?

   (a) 39   (b) 38   (c) 37   (d) 36

24. Which of the following is a meaningless operation?

   (a) $0 \div 17$ (b) $21 \div (7 - 7)$

   (c) $(9 - 9) \div 32$ (d) 8×0

25. Using all the digits 2, 3, 0, 7 and 5 only once write the smallest number.

   (a) 02357   (b) 20357   (c) 23570   (d) 23507

26. If 638 marbles are shared among 53 boys so that each boy receives the same number of marbles, how many will be left over?

   (a) 20   (b) 12   (c) 6   (d) 2

27. How many days are there from 20th February to 20th December in the year 2023, if only one of these days is included.

   (a) 302   (b) 305   (c) 304   (d) 303

28. A table and 8 chairs cost Rs. 4200; if each chair costs Rs. 485, how much does the table cost?

    (a) Rs. 320   (b) Rs. 880   (c) Rs. 1320   (d) Rs. 420

29. Sefali bought seven shirts for Rs. 829 each and she gave three two thousand rupee notes to the sopkeeper. How much money did the shopkeeper return to Sefali.

    (a) Rs. 97   (b) Rs. 803   (c) Rs. 287   (d) Rs. 197

30. In Tutun's house there are 17 trees growing in a straight line at intervals of 13 metres. The distance between the two trees on either end is

    (a) 208 m   (b) 221 m   (c) 204 m   (d) 192 m

31. In the problem below a question mark is put in place of the signs $+$, $-$, $\times$ and $\div$. Put the correct sign in place of the question mark.

$$(4 \ ? \ 4) \times 16 = 0$$

    (a) $+$ (b) $-$ (c) $\times$ (d) $\div$

32. If $\bigcirc + \triangle = 4882$ and $\bigcirc + \triangle + \triangle = 6871$, then $2\triangle =$

    (a) 3979   (b) 1989   (c) 3878   (d) 3978

33. Some plants are planted in a garden. If the number of plants in each row be equal to the number of rows then which of the following can be the total number of plants.

    (a) 17×17 (b) 9×19 (c) 13×4 (d) 9×18

34. I am the smallest odd number that comes just after 4386. Add 632 to me. What number am I now?

    (a) 5110   (b) 5019   (c) 5190   (d) 5219

35. The remainder when $(780 + 9)$ is divided by 9 is

    (a) 4   (b) 5   (c) 6   (d) 7

36. Arrange the numbers 7717, 7771 and 7177 from the smallest to greatest.

    (a) 7771, 7717, 7177   (b) 7177, 7771, 7717

    (c) 7177, 7717, 7771   (d) 7771, 7177, 7717

37. Mimi and Rimi will paint the circle shown in the adjoining figure. First Mini will paint $\frac{2}{8}$ th of the circle and then Rimi will paint another $\frac{3}{8}$ part of the circle. What part of the circle will they paint altogether?
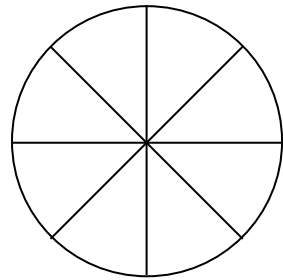
    (a) $\frac{5}{16}$ part   (b) $\frac{3}{8}$ part

    (c) $\frac{8}{3}$ part   (d) $\frac{5}{8}$ part

38. What number should be added to 9999 to give the smallest six digit whole number?

    (a) 1   (b) 9991

    (c) 9001   (d) 90001

39. How many times 19 should be subtracted from 190 to give zero?

    (a) 100   (b) 10   (c) 1   (d) none of these

40. The sum of largest four digit number and the smallest three digit number is

(a) 10009   (b) 99990   (c) 10099   (d) 100099

41. The value of

(a) 12   (b) 1300

(c) 20   (d) 100

42. Select the odd one out

(a) L   (b) O

(c) V   (d) E

43. The remainder when 7801 is divided by 79 is

(a) 49   (b) 9

(c) 69   (d) 59

44. Find the sum of all the three-digit numbers that can be formed by the digits 0, 3 and 7 using each digit only once.

(a) 110   (b) 2110

(c) 211   (d) 1110

45. Keeping the place value of the digit 8 in the number 3680591 same, rearrange the digits of the number to get the greatest number.

(a) 9685310   (b) 9865310

(c) 9085361   (d) 9086531

46. A machine manufatures 23875 screws per day. how many screws will it produce in the year 2024 if the machine work on all the days of the year.

(a) 8714375   (b) 8595000

(c) 8638250   (d) 8738250

47. The total number of four digit numbers is

(a) 9000   (b) 9999

(c) 10000   (d) 999

48. Write the smallest 7-digit number using all the even digits.

(a) 0002468   (b) 2046800

(c) 2000468   (d) 2468000

49. On dividing a number by 29 we get 47 as quotient and 19 as remainder. The number is

(a) 1382   (b) 1363

(c) 1392   (d) 1401

50. In the number 3791*5, replace * by a digit so that the number formed is divisible by 9.

(a) 0   (b) 1

(c) 2   (d) 9

51. Bandana bought a book worth Rs. 143.00 and a geometry box worth Rs. 37.00. She gave the shopkeeper a Rs. 500 note, how much balance did she get back?

(a) Rs. 180   (b) Rs. 320

(c) Rs. 380   (d) Rs. 220

52. There are 24 bags of red marbles and 38 bags of green marbles, if each bag had 36 marbles then the total number of marbles in all the bags is

(a) 1232   (b) 2222

(c) 2112   (d) 2232

53. $32 \times 4 \div 8 \div 2 \times 4 \div 2 =$

(a) 16   (b) 4

(c) 1   (d) 2

54. The product of two numbers is 4530582, if one of the numbers be 287, find their difference.

(a) 16073   (b) 15786

(c) 15600   (d) 15499

55. Rs. 335 was divided among *A*, *B* and *C* so that *B* may get Rs. 10 more than *A* and *C* gets Rs. 15 more than *B*. Find *A*'s share.

(a) Rs. 90   (b) Rs. 100

(c) Rs. 110   (d) Rs. 115

56. A clock takes 4 seconds to strike, the hour of 4 O'clock. How many seconds will it take to strike 6 O'clock?

(a) 6 sec   (b) 10 sec

(c) 12 sec   (d) 9 sec

57. The sum of the ages of a father, his son and his daughter is 100 years. Find the sum of their ages 5 years back?

(a) 85 yrs   (b) 95 yrs

(c) 115 yrs   (d) 70 yrs

58. What will be the price of 1 kg wheat if 15 kg of it is available in exchange of 10 kg of rice at the rate of Rs. 36 per kg.

(a) Rs. 12   (b) Rs. 21

(c) Rs. 36   (d) Rs. 24

59. Minto bought one quintal of rice for Rs. 3615 and sold it at the rate of Rs. 40 per kg. The total profit of Minto is

(a) Rs. 400   (b) Rs. 315

(c) Rs. 385   (d) Rs. 365

60. The circumference of the fore-wheel of a carriage is 10 ft and that of the hind.-wheel is 15 ft. In going over 100 miles how many more revolutions will the fore wheel make than the hind wheel.

(a) 176

(b) 176000

(c) 17600

(d) 1760