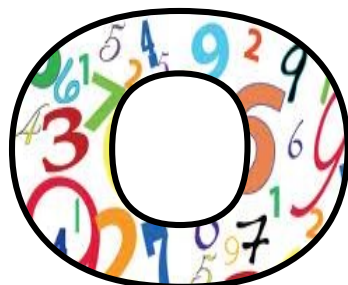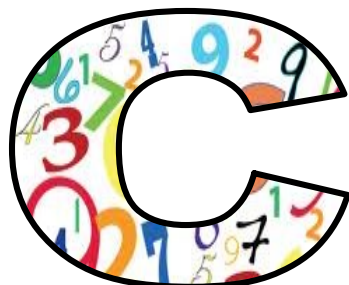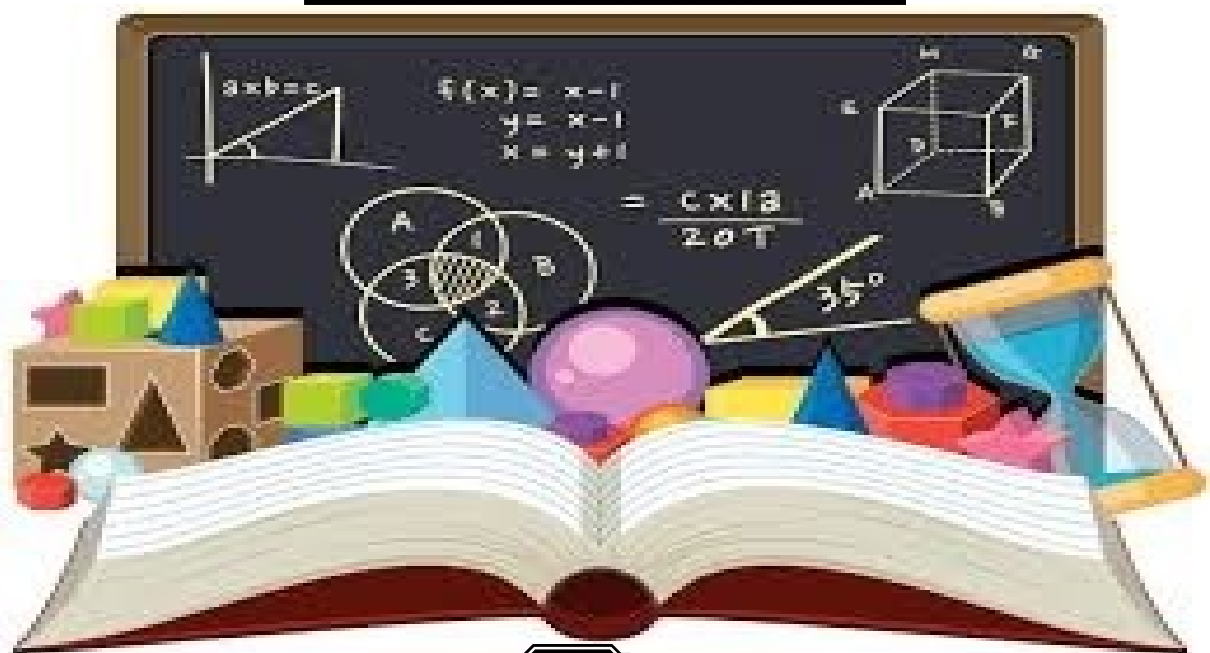# C M O

CHINMAYA   MATHEMATICS   OLYMPIAD

SAMPLE PAPER

⑦

Please fill the following details immediately

Name: _____

Hall Ticket No.:_____

❖ **50 Questions** ❖

❖ **Time Allowed : 120 Minutes** ❖

❖ **Do not open this question paper until the signal is given.**

❖ **Please check the CLASS printed on the cover page and the inside is same when you open the booklet.**

General Instructions:

1) All questions are compulsory and carry equal marks.

2) There is no negative marking.

3) There is only one correct answer hence write one choice only.

4) Please avoid cutting/ overwriting etc.

5) Return the paper to the invigilator at the end of the examination.

6) Write the correct option in the given box.

1) Find the sum of all integers from (-100) to (+100).
   a] 200   b] 100   c] 2   d] 0

2) The place value of digit 2 in the number 6.802 is
   a] 2   b] 0.02   c] 0.002   d] 100

3) Out of four numbers, average of the first three is 16 and the last three is 15. If the last number is 18, first number is _____ .
   a] 21   b] 23   c] 20   d] 25

4) The sum of the digits of a two digit number is 8 and the product of the digits is 12. What is the difference between the digits of that number?
   a] 4   b] 6   c] 8   d] 1

5) If 168x54 =9072, then 0.168x540= _____
   a] 9.72   b] 90.72   c] 9.072   d] 907.2

6) 0.5 = _____
   a] 50%   b] 25%   c] 5%   d] 0.5%

7) $(45)^3 = 5^3 \times 3^x$. Find the number in the place of x
   a] 3   b] 6   c] 9   d] 5

8) In Δ ABC, m∠ B =60° and m∠A = m∠C. State the name of that triangle
   a] equilateral triangle   b] Scalene triangle
   c] Isosceles triangle   d] right angled triangle

ROUGH WORK

9) In which of the following numbers the place value of 8 is equal to $\dfrac{1}{125}$.

a]5.08   b]8.05   c]1.258   d]1.285

10) The ratio of A: B= 3:4, and that of B:C=5:6, then what is the ratio of A:C.

a] 5:8   b] 1:2   c] 3:8   d] 5:9

11) Find the greatest 3 digit number which when divided by 6, 9, 12 leaves a remainder of 3 in each case.

a]996   b] 939   c]975   d] 903

12) Find the ratio of 750g and 3.5kg.

a]14:3   b] 7:15   c] 3:14   d] 2:1

13) Which of the following fractions from the alternatives should be added to $\dfrac{9}{10}$ to get $\dfrac{10}{9}$?

a] $\dfrac{1}{10}$ b] $\dfrac{1}{21}$ c] $\dfrac{19}{90}$ d] $\dfrac{9}{90}$

14) The length of a rectangle is twice its breadth and the area is 98 sq. m. What is the perimeter of the rectangle?

a] 28m   b] 49m   c] 42m   d] 21m

ROUGH WORK

15) The average of two numbers is M . If one of the numbers is N, then the other number is _____

a] 2N   b] 2N$-$m   c] 2M+N   d] 2M- N   □

16) If six trays contain 132 eggs, how many does four trays contain?

a] 85   b] 86   c] 87   d] 88   □

17) If m is a prime number , then the L.C.M of m and m+1 will be:

a] m^2 b] m (m+1)   c] $(m+1)^2$ d] 2 m(m+1)   □

18) Which of the following is an irreducible fraction?

a] $\dfrac{105}{112}$ b] $\dfrac{66}{77}$ c] $\dfrac{46}{63}$ d] $\dfrac{51}{85}$ □

19) Archana plays cricket every 7th day and plays football every 5th day. She played both cricket and football on 17th May. What is the next date when she will play both games?

a] 29th May b] 21st June c] 12th June d] 20th June   □

20)

○ + ○ + ○ + ○ = 64

○ + Δ   = 34

○ + ○ + Δ + Δ + Δ = _____

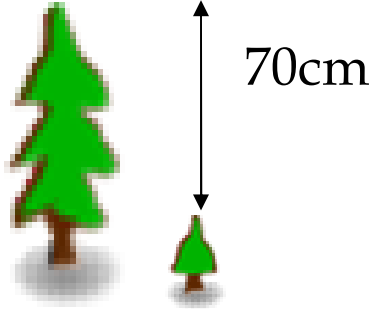a] 98   b] 120   c] 86   d] 102   □

_____

ROUGH WORK

21)Today a train travelling at the speed of 30 km/h leaves the station at 2 PM. Another train leaves the station at 4 PM. If the second train travels at a speed of 50 km/h, then at what time will it catch up to the first train?

a] 8 P.M   b] 5 P.M   c] 7 P.M   d] 6:30P.M   ☐

22)Usha's parents planted a tree on her birth. If tree grows 5cm per year, what is Usha's age today

70cm

Today   Birth

a] 7 years   b] 10 years   c] 14 years   d]16 years   ☐

23)If perimeter of following semi-circular shape is 72 c. its diameter = _____cm (assume π = 22/7).

a] 20 cm   b]28 cm   c] 14 cm   d] 10 cm   ☐

ROUGH WORK

24) The sides of a square is ($3a - 5b$)cm. What will be its perimeter?

   a] 60 ab cm   b] 12a-20b cm

   c] 6a-10 b cm   d] 12a+ 20b cm

25) If $\dfrac{1}{4}$ of the pencil is red, $\dfrac{1}{2}$ the remaining black and the rest is green. How much part of the whole

is green?

  a] $\dfrac{5}{8}$ b] $\dfrac{3}{8}$ c] $\dfrac{1}{2}$ d] $\dfrac{1}{4}$

26) A cycle wheel has 45 spokes. What is the angle between a pair of adjacent spokes?

  a] 3°   b] 8°   c]13°   d]10°

27) The temperature in Shimla was 4°C in the afternoon but at midnight the temperature fell by 10°c. What is the temperature recorded at mid night?

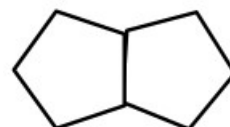 a] 14°C   b] 6°C   c] - 6°C   d] -2°C

28) If the perimeter of a figure formed by joining two regular pentagons of same size is 56 cm. Find the length of each side.

  a] 5.6 cm   b] 6 cm

  c] 4 cm   d] 7 cm

ROUGH WORK

29) The sum of the place values of all the digits in the number 43.81 is _____.

    a] 43.81   b] 1843   c] 438.1   d] 4.381

30) Diagonals of a rectangle are :

    a]equal to each other   b]not equal

    c] one is double of the other   d] none of these

31) By selling 100 pencils a shopkeeper gains the selling price of 20 pencils. Find the gain percentage.

    a]25%   b] 20%   c] 15%   d] 10%

32) 3+33+333+3333+……+333333333333. In this addition which digit is there at the hundred's place?

    a] 0   b] 3   c] 6   d] 9

33) Maximum number of right angles in a right angled triangle are_____

    a] 2   b] 1   c] 3   d] 0

34) The square of 1.2 is

    a] 144   b] 1.44   c] 14.4   d] 2.4

ROUGH WORK

35) A quadrilateral which has 2 pairs of equal adjacent sides but unequal opposite sides is called
a]parallelogram   b]rhombus
c]kite   d]square

☐

36) What is the length of the diagonal of a rectangle having dimensions 3 cm and 4 cm?
a] 5   b] 7   c] 1   d] 4

☐

37) The simple interest on a sum for 5 years is $\frac{2}{5}$ of the sum. The rate percent per annum is _____

a]10%   b] 8%   c]6%   d]12%

☐

38) The angle which is equal to its supplement is
a] 90°   b]45°   c] 180°   d] 60°

☐

39) A farmer built a fence around his square plot. He used 27 fence poles on each side of the square. How many poles did he need altogether ?
a] 100   b] 104   c]108   d] 112

☐

ROUGH WORK

40) Shilpa introduces Vinayak as the son of the brother of her mother. How is Shilpa related to Vinayak ?

a] Daughter   b] Nephew

c] Cousin   d] Aunt

41) The product of two digit number is 2688. If the product of their units digit is 48 and their tens digits is 20, then the numbers are

a] 44, 56   b] 58, 46   c] 68, 54   d] 56, 48

42) The ratio of speed of two bikes is 3:4. If first bike covers a distance of 160 km in 4 hours, then how much distance will second bike cover in 3 hours ?

a] 140 km   b] 160 km

c] 170 km   d] 150 km

43) The smallest possible decimal number up to 4 decimal places is

a] 0.1111   b] 0.0999   c] 0.0019   d] 0.0001
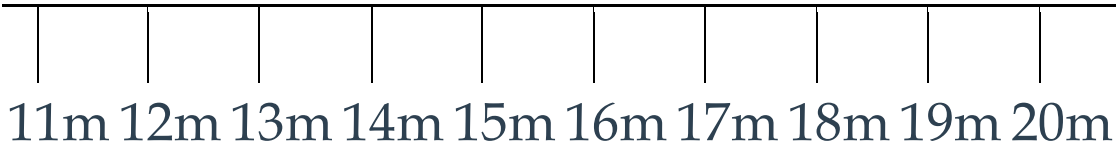
44) What should be added to 2.06 to get 3.1?

a] 1.4   b] 1.24   c] 1.04   d] 1.08

ROUGH WORK

45) A bear is chasing a mouse.

11m 12m 13m 14m 15m 16m 17m 18m 19m 20m

The bear starts at 11 m and jumps 3 m every time. The mouse starts at 14 m and jumps 2 m every time. If they both start at the same time, after how many jumps would the bear would reach the mouse?

a] After 5 jumps   b]After 2 jumps

c] After 4 jumps   d] After 3 jumps   □

46) The area of a square is 50 cm². The length of its diagonal is _____

a] $5\sqrt{2}$ b] 10 cm   c] $10\sqrt{2cm}$ d] 8 cm   □

47) The radius of a circular wheel is 1.75 m. How many revolutions will it make in travelling 11 km?

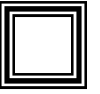a]10   b]100   c]1000   d]10000   □

ROUGH WORK

48) The algebraic expression of the statement "Four-fifth of x multiplied by the difference of y and a" (Assume that y is less than a)

   a] $\dfrac{4}{5} x\ (a-y)$ b] $\dfrac{4}{5}\ (a - xy)$ ☐

   c] $\dfrac{4}{5(xa - y)}$ d] $\dfrac{4}{5} x\ (y-a)$

49) If $(9 ♣ 1)^2 = 100$ and $(4 ♣ 7)^2 = 121$, find the value of $(3 ♣ 8)^2$.

   a] 33   b] 121   c] 24   d] 88   ☐
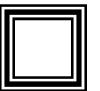
50) Vinita can type 28 words per minute. At this rate, how many words can Vinita type in 5.5 minutes?

   a] 154   b] 157   c] 159   d] 162   ☐

ROUGH WORK