Test Booklet Code

| M | 0 | 3 | 1 | 9 |

NATIONAL TEACHERS COUNCIL

NATIONAL LEVEL

MATHEMATICS OLYMPIAD

Class
3

Time Allowed: 90 Minutes

Maximum Mark: 50

This Test Booklet contains 10 pages. Do not open the Test Booklet until you are asked to do so.

Important instructions

1. ***The Answer Sheet is inside this Test Booklet.*** *When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with **blue/black ball point pen OR Pencil.***

2. *The question paper is divided into two sections.* ***Mathematical Reasoning*** *(40 Questions) and* ***Logical Reasoning*** *(10 Questions)*

3. *All the two Sections contain Multiple Choice Questions (MCQs). Each of these questions has four options out of which only one option is correct.*

4. *Each question should be answered by **darkening** the appropriate circle (A, B, C, or D) with a **blue or black ball pen OR Pencil***

5. *All questions are compulsory. There is no negative marks for wrong answer.*

6. *Answer recorded once in the answer sheet cannot be altered.*

7. *All rough works should be done only in the space provided for **rough work** in this question paper.*

8. *Calculator is not permitted in the examination hall.*

9. *Candidate should write his / her name in the space provided for the purpose.*

Candidate's Name:

Roll Number   :

....
Candidate's Signature

....
Invigilator's Signature

MATHEMATICAL REASONING

1 Which month of the year has least number of days?

   [A] January   [B] July

   [C] May   [D] February
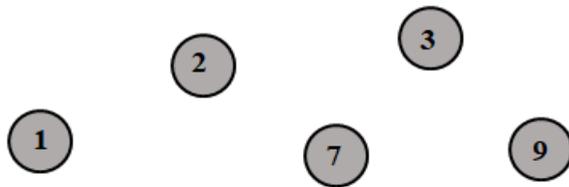
2 Which number sentence is true?

   [A] 5 + 0 = 5 x 1   [B] 5 + 1 = 5 x 1

   [C] 5 + 0 = 5 x 0   [D] 5 + 1 = 5 x 0

3 The greatest number formed by the following digits without any repetition is

   [A] 21379   [B] 79132

   [C] 97321   [D] 91237

4 As Reena wrote a problem on the board, she forgot one digit.

   23 + 31 + 2 + 12 = 94

   This digit is

   [A] 3   [B] 4

   [C] 6   [D] 8

5 Which of the following expression is true?

   [A] 5032 > 5302   [B] 5249 > 5429

   [C] 5014 > 5104   [D] 5841 > 5148

6 4236 cards are distributed equally among 12 people. Each one will get

   [A] 353   [B] 354

   [C] 413   [D] 435

7 What is the difference between 2479 and the number formed by interchanging the digits in ones and hundreds place of 2479?

   [A] 495   [B] 549

   [C] 396   [D] 500

8   On Sunday Sachin took exactly 90 minutes to finish his homework. How many hours did it take him to complete the homework?

[A] 1   [B] $1\frac{1}{2}$

[C] 2   [D] $2\frac{1}{2}$

9   Tanvi weighs 38 kg 485 g. Her brother Sachin is heavier than her by 5 kg 755 g. How much does Sachin weigh?

[A] 32 kg 730 g   [B] 44 kg 730 g

[C] 43 kg 240 g   [D] 44 kg 240 g

10   If the weight of one mango is 250 grams. How many mangoes would weigh 2 kilograms?

[A] 8   [B] 6

[C] 4   [D] 2

11   Which point best represents 40 on the number line given below?
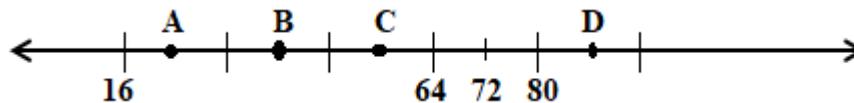
[A] A   [B] B

[C] C   [D] D

12   What fraction of the whole figure does the unshaded portion represent?
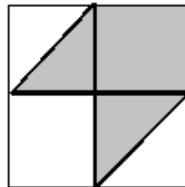
[A] $\frac{1}{2}$ [B] $\frac{4}{7}$

[C] $\frac{3}{8}$ [D] $\frac{2}{8}$

13   The smallest three digit number which is even and is a multiple of 3

[A] 100   [B] 102

[C] 103   [D] 105

14   An oil can has 52 l 700 ml of oil in it. If 13 l 900 ml of oil is taken out of it, how much oil is left in the can?

[A] 38 l 200 ml   [B] 38 l 800 ml

[C] 39 l 800 ml   [D] 39 l 200 ml

15 12321 chairs in an auditorium are arranged in 111 rows. What is the number of chairs in each row?

       [A] 101   [B] 110

       [C] 111   [D] 121

16 A ribbon was cut into 4 equal pieces, each of length 1 m 65 cm. What was the original length of the ribbon?

       [A] 6 m 60 cm   [B] 5 m 60 cm

       [C] 4 m 65 cm   [D] 4 m 26 cm

17 Read the following statements and select the correct option

STATEMENT I: $366 \div 366 = 1$

STATEMENT II: When zero is divided by any number the answer is zero

       [A] Statement A is correct B is wrong [B] Statement B is correct A is wrong

       [C] Both statements are correct   [D] Both statements are wrong

18 Select the odd one among the following fractions

$$\frac{1}{2}, \ \frac{1}{3}, \ \frac{2}{10}, \ \frac{4}{3}$$

       [A] $\frac{1}{2}$ [B] $\frac{1}{3}$

       [C] $\frac{2}{10}$ [D] $\frac{4}{3}$

19 Which number makes the following equation true?

99 – 22 = 88 - ?

       [A] 13   [B] 10

       [C] 12   [D] 11

20 A tube of Colgate toothpaste weighed 180 grams. Amit's mother brought seven tubes. How many kilograms did the tubes of Colgate toothpaste weighed in total?

       [A] 1 kg 240 gm   [B] 1 kg 250 gm

       [C] 1 kg 260 gm   [D] 1 kg 270 gm

21 Aruna begins her jogging at 7:20 am. She jogs for 40 minutes. By what time does Aruna finish her jogging?

       [A] 7:50 am   [B] 8:00 am

       [C] 7:45 am   [D] 7:35 am

22 What is the missing improper fraction in the following?
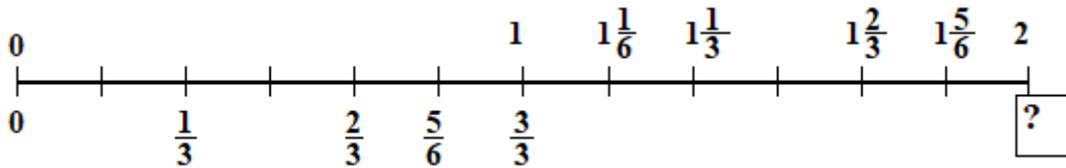
[A] $\dfrac{12}{6}$ [B] $\dfrac{4}{6}$

[C] $\dfrac{8}{6}$ [D] $\dfrac{14}{6}$

Q No: 23 to 25: Study the prices of the following items and answer questions 23 to 25

₹ 4.50 per banana
₹ 170 for one clock
₹ 2.75 per pencil
₹ 7.50per chocolate

---

23 The cost of one dozen banana is

[A] ₹ 45   [B] ₹ 48

[C] ₹ 54   [D] ₹ 52

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24 If Arun wants to buy one pencil and two chocolates, how much does he need to pay?

[A] ₹ 15   [B] ₹ 16.50

[C] ₹ 17   [D] ₹ 17.75

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25 Which number sentence is in the same fact family as 10 X 5 = 50?

[A] 50 ÷ 10 = 5   [B] 5 X 5 = 25

[C] 2 X 5 = 10   [D] 10 ÷ 10 = 2

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26 The greatest four digit number that can be formed using 0, 9, 3 and 8 without repeating the digits is

[A] 8039   [B] 9803

[C] 9830   [D] 9380

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27 Sachin bought 230 books from store and sold 157 books to Sameer and 55 books to Tanvi. How many books are left with Sachin?

[A] 18   [B] 20

[C] 73   [D] 75

28   (245 X 3) is equal to

     [A] (24 X 3) + (5 X 3)   [B] (240 X 3) + (5 X 3)

     [C] (240 X 5) + (5 X 3)   [D] (140 X 3) + (5 X 3)

29   Manju writes all the numbers from 100 to 120. How many times does she write 1?

     [A] 20   [B] 25

     [C] 32   [D] 33

30   The capacity of the petrol tank in a car is 26 l 200 ml. It contains 17 l 525 ml of petrol. How much more petrol is needed to fill the tank?

     [A] 8 l 575 ml   [B] 8 l 675 ml

     [C] 8 l 725 ml   [D] 43 l 725 ml

31   Manju and Anju wrote the first letter of their name in some of the squares on a grid as shown below. Which number sentence shows the fraction of squares on the grid that have Manju's name and Anju's name in them?

[A] $\dfrac{4}{12} + \dfrac{5}{12} = \dfrac{9}{24}$

[B] $\dfrac{4}{12} + \dfrac{5}{12} = \dfrac{9}{12}$

[C] $\dfrac{4}{9} + \dfrac{5}{9} = \dfrac{9}{18}$

[D] $\dfrac{4}{3} + \dfrac{5}{3} = \dfrac{9}{3}$

M	M	A	M
M	A		M
	A	A	

32   Manju and Anju went to the seaside and collected shells. Manju collected 1245 shells and Anju collected 1015 shells. How many shells did they collect in all?

     [A] 2060   [B] 2160

     [C] 2265   [D] 2260

33   In the word **EXHIBITION**, what fraction of alphabet is represented by the letter **I**?

     [A] $\dfrac{1}{10}$ [B] $\dfrac{3}{9}$

     [C] $\dfrac{3}{10}$ [D] $\dfrac{2}{10}$

34   Simran bought 6 chocolates. All the chocolates were of the same price. The total cost was ₹ 88.50. How much money did each chocolate cost?
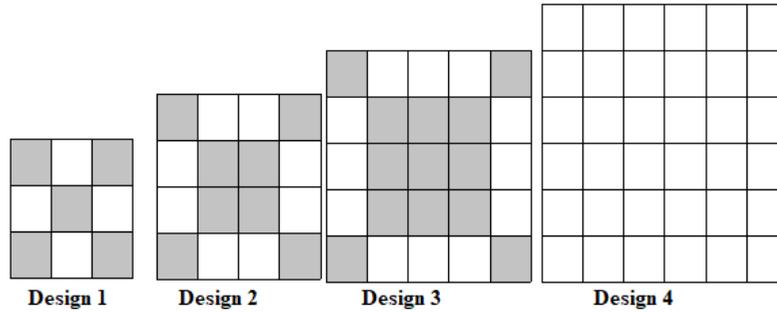
     [A] ₹ 14.00   [B] ₹ 14.05

     [C] ₹ 14.50   [D] ₹ 14.75

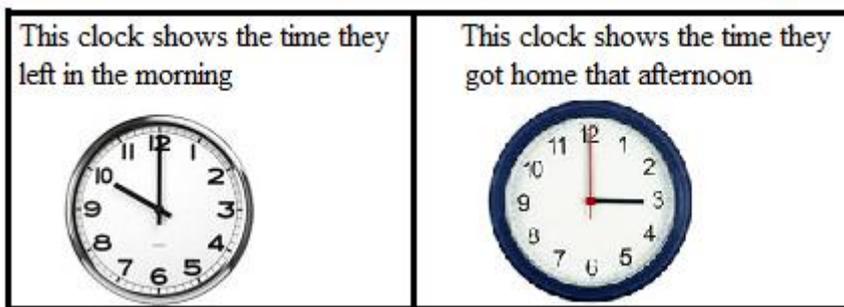35 Bobby made a pattern by shading some of the squares in the designs below

Design 1   Design 2   Design 3   Design 4

To continue the pattern, how many squares should Bobby shade in Design 4?

[A] 36   [B] 25

[C] 20   [D] 13

Q No: 36 – 38: In a family, there are 6 members- grandfather, grandmother, father, mother, a boy and a girl. The age of the boy is 2 years. The girl is 3 years older than boy. Father's age is seven times the age of girl. Mother is three years younger than father. Grandfather's age is thirty times the age of boy and grandmother is eleven times the age of girl.

36 The age of grandfather is

[A] 50years   [B] 55 years

[C] 60 years   [D] 65 years

37 The difference between the age of grandfather and grandmother is

[A] 05 years   [B] 10 years

[C] 15 years   [D] None of these

38 Which of the following statement is true?

[A] Age of mother is 40years

[B] Age of father is 48 years

[C] Grandfather is 18 years older than mother

[D] Age of father is 35 years

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39 Lalitha went on a picnic with her family

This clock shows the time they left in the morning

This clock shows the time they got home that afternoon

How long were they on their picnic?

[A] 3 hours   [B] 5 hours

[C] 7 hours   [D] 10 hours

40   Which one of the following shaded region represents the greatest fraction?

[A]   [B]   [C]   [D]
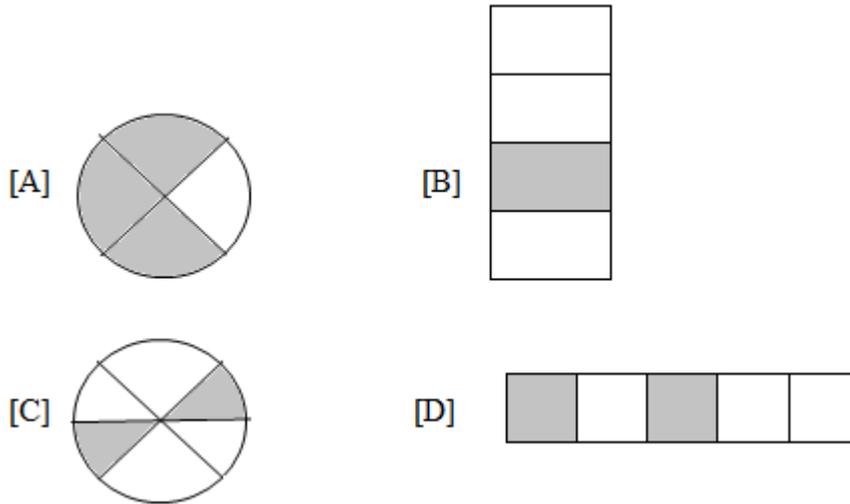
LOGICAL REASONING

41   Arrange the following in a logical order

   1. Shoulder   2. Wrist   3. Elbow   4. Palm   5. Finger

   [A] 2, 4, 5, 3, 1   [B] 3, 1, 4, 2, 5

   [C] 3, 4, 5, 2, 1   [D] 5, 4, 2, 3, 1

42   '**BF**' is related to '**HL**' in the same way as '**EI**' is related to _____

   [A] KO   [B] KN

   [C] JN   [D] JO

43   Find the odd one out

   [A] Flower : Petal   [B] Circle : Arc

   [C] Cover : Page   [D] Chair : Leg

44   Replace the question mark:

   Z   Y   W   T   P   ?

   [A] O   [B] K

   [C] J   [D] M

45 **34** is related to **12** in the same way as **59** is related to

[A] 14   [B] 38

[C] 45   [D] 26

46 From the given alternative of words, select the word which cannot be formed using the letters of word given below:

INFORMATIONS

[A] Nation   [B] Format

[C] Start   [D] Finite

47 Replace the question mark

3	12	36
5	20	?
7	28	84

[A] 40   [B] 45

[C] 60   [D] 72

48 Find the minimum number of straight lines required to make the given figure.

[A] 9

[B] 11

[C] 15

[D] 16

49 Replace the question mark (?)

Exhibit : display :: send : **?**

[A] Stamp   [B] Receive
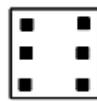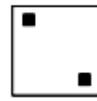
[C] Show   [D] Emit
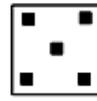
50 Replace question mark.
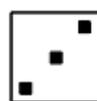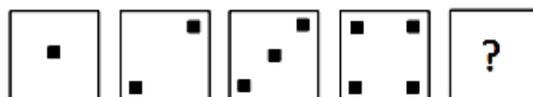
[A]   [B]   [C]   [D]

SPACE FOR ROUGH WORK