## NATIONAL TEACHERS COUNCIL

# ALL INDIA TALENT SEARCH EXAMINATION <br> 2019 

## Class

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 only.
2. This question paper contains 50 multiple choice questions each of one mark. The question paper is divided into two sections, Section A and Section B
3. Section $\boldsymbol{A}$ is Scholastic Aptitude Test (SAT), contains 30 questions. This section covers Mathematics \& General Science
4. Section B is Mental Ability Test (MAT), Computer Awareness and General Knowledge, contains 20 questions.
5. Each question should be answered by darkening the appropriate circles (A, B, C or D) with a blue or black ball pen.
6. All questions are compulsory. There will be no negative marks for wrong answer.
7. Answer recorded once in the answer sheet cannot be altered.
8. All rough works should be done only in the space provided for rough work in this question paper.
9. Calculator is not permitted in the examination hall.
10. Candidate should write his / her name in the space provided for the purpose.


Candidate's Signature

## SECTION A

## SCIENCE (Question No 1 to 10)

1 Water vapour is different from water as
[A] Water vapour occupies space
[B] Water vapour has no fixed shape
[C] Water vapour has no mass
[D] Water vapour has no fixed volume
2 Select insectivorous plant

[A]

[B]

[C]

[D]

3 Arun tried to stop a fast moving cricket ball with his hands. The ball neither changed its speed nor its direction. This means Arun
[A] Did not apply any force
[B] Applied a large force
[C] Applied only frictional force
[D] Applied a force that was very small
4 The function of small intestine is to
[A] Remove waste materials
[B] Absorb digested food
[C] Produce bile
[D] Kills harmful germs

5 Carefully look at the following figure.


Liquid A


Liquid B


Liquid A + B

This shows that
[A] Liquid A is completely soluble in liquid $B$
[B] Liquid A is completely insoluble in liquid $B$
[C] Liquid B is partially soluble in liquid A
[D] Liquid B is partially insoluble in liquid A

6 Generally plants produce oxygen. But Mushrooms cannot produce oxygen because
[A] The do not respire .
[B] They do not use energy.
[C] They do not move from place to place.
[D] They do not have chlorophyll
7 The part of earth comprising water is called
[A] Atmosphere
[B] Hydrosphere
[C] Lithosphere
[D] None of the above

8 The orbit of Earth around the sun is shown in the following diagram.


In December, the earth is in postion A, which position will earth be in after 18 months have passed?
[A] At position A
[B] At position B
[C] At position C
[D] At position D

9 A runner participating in a race takes some glucose just before the race begins. This means that glucose
[A] Makes running easier
[B] Build muscles instantly
[C] Gives energy instantly
[D] Stop sweating of the body

10 The given options give names of four birds by cutting every alternate letter starting from first. All of these have similar feet except one. Select this odd one out.
[A] PDJUKCLKO
[B] MSTWVABNS
[C] QPGERNEGPUSIONL
[D] AOESMTSRTIUCUHO

## MATHEMATICS (Question No 11 to 30)

11 The expanded form of 300123 is

$$
\begin{aligned}
& \text { [A] } 300000+100+20+3 \\
& \text { [B] } 300000+00000+0000+20+3 \\
& \text { [C] } 300000+000+100+20+3 \\
& \text { [D] } 300000+00+100+20+3
\end{aligned}
$$

12 Find the dividend if divisor $=21$, quotient $=43$ and remainder $=19$.
[A] 920
[B] 922
[C] 923
[D] 924

13 If $\mathbf{0 0 : 0 1}$ is the first minute of the day, then last minute of the day is
[A] 12:59
[B] 24:59
[C] 23:59
[D] 24:00

14 How many $\mathbf{X}$ symbols are needed to represent 39 in Roman system?
[A] 7
[B] 6
[C] 4
[D] 3

15 What is the smallest possible number of children in a family where each child has at least one brother and at least one sister?
[A] 4
[B] 5
[C] 2
[D] 3

16 Manju is thinking of a number. Twice her number is same as her number plus 5 . What is her number?
[A] 2
[B] 3
[C] 5
[D] 10

17 Fill in the blanks

[A] 54, 0,9
[B] 36, 18, 72
[C] $45,81,72$
[D] 4, 2, 18
18 The number of 25 paise coins in ₹ 100 is
[A] 4
[B] 40
[C] 100
[D] 400

19 The distance between the centre of the circle to any point on the circle is called
[A] Centre
[B] Radius
[C] Chord
[D] Diameter

20 There are 8 chairs at each table in a restaurant. There are 96 chairs in all. Which number sentence can be used to find the number of tables in the restaurant?
[A] $8 \times 96=\square$
[B] $96-\square=8$
$[\mathrm{C}] 8+\square=96$
[D] $96 \div 8=\square$
21 Every day Sindhu and her family have 2 newspapers delivered to their house. When they came back from a trip, there were 14 newspapers waiting for them. Which one of the following number sentences can be used to find the number of days they were gone?
$[\mathrm{A}] 14 \div 2=\square$
$[\mathrm{B}] 14+2=\square$
$[\mathrm{C}] 14-2=\square$
$[\mathrm{D}] 14 \times 2=\square$
22 A car travelled from town A to B and then from town B to town C . The distance between towns A \& B is 4364 km and between towns B \& C is 5473 km . What is the total distance travelled by the car?
[A] 9834
[B] 6453
[C] 9837
[D] 5463

23 Which of the following statements is Correct?
[A] Two parallel lines meet at one point
[B] Two perpendicular lines never meet
[C] Two parallel lines are always at equal distance apart
[D] Two perpendicular lines form an acute angle
24 Read the expressions P and Q and choose the correct option

$$
\begin{gathered}
\mathbf{P}: \mathbf{X I}+\mathbf{X I}=\mathbf{X X I I} \\
\mathbf{Q}: \mathbf{X}+\mathbf{X}=\mathbf{X}
\end{gathered}
$$

[A] P is correct
[B] Q is correct
[C] Both P \& Q are correct
[D] Both P \& Q are incorrect

25 The length of the boundary of a plane figure is called its perimeter. All the following shapes are made with five equal squares of side 1 unit.

(1)

(2)

(3)

(4)

Which of the following statement regarding the perimeter of the above figure is correct?
[A] All the four shapes have same perimeter.
[B] Shapes 1 and 2 has equal perimeter
[C] Shapes 2, 3, and 4 have equal perimeter
[D] Shape 1 has largest perimeter
26 Arun has to represent a number between 2680 and 2545 on the abacus given below. How many beads from hundreds place he needs to remove to represent such a number on the abacus given below?


27 There are four sections in class IV of ABC School and each section has 37 students. If the monthly fee of each student is ₹ 928 , what is the total amount of fees collected from class IV of the school in a month?
[A] ₹ 34336
[B] ₹ 137344
[C] ₹ 173434
[D] ₹ 43363

28 Which number will come in the place of \# in the following?

$$
\frac{1}{9}+\frac{4}{9}+\frac{\#}{9}=1
$$

[A] 1
[B] 3
[C] 4
[D] 5

29 Sameer joined a 3 week computer course which completed on $4^{\text {th }}$ August 2018. When did he join the computer course?
[A] $11^{\text {th }}$ July 2018
[B] $13^{\text {th }}$ July 2018
[C] $14^{\text {th }}$ July 2018
[D] $4^{\text {th }}$ July 2018

30 Manju went to a stationary shop. She purchased 4 note books costs ₹ 20 each and 2 pens costs ₹ 16 each. After paying the bill, ₹ 18 is left with her. How much money did she have before paying the bill?
[A] ₹ 128
[B] ₹ 126
[C] ₹ 132
[D] ₹ 130

## SECTION B

31 Total number of states in India as on today is
[A] 30
[B] 29
[C] 28
[D] 26

32 Who is popularly known as 'Netaji'
[A) Vallabbhai Patel
[B] Bal Gangadhar Tilak
[C] Jawaharlal Nehru
[D] Subhash Chandra Bose

33 Identify the state of India

[A] Karnataka
[B] Tamil Nadu
[C] Odisha
[D] Maharashtra

34 Find the odd one out:
[A] Volcano
[B] Tsunami
[C] Explosion
[D] Earthquake

35 Replace the question mark?
\ II

$\Delta \square$?

[B]
$\square$

[D]

36 Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line


37 How many cubes are there in picture?

[A] 27
[B] 29
[C] 24
[D] 23
38 How many dots lie opposite to the face having three dots, when the given figure is folded to form a cube?

[A] 2
[B] 4
[C] 5
[D] 6

39 Select the alternative in which the specified components of the key figure $(\mathrm{X})$ are found.

[A] 1
[C] 3

[B] 2
[D] 4

40 Replace the question mark.


[B]

[C]

[D]

## 41 Complete the series:

$$
2, \quad 5, \quad 11, \quad 23,47, ?
$$

[A] 113
[B] 63
[C] 79
[D] 95

42 Complete the series
$A, B, D, G, K, \quad$ ?
[A] P
[B] O
[C] Q
[D] N

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

## Word: COMPREHENSIVE

[A] SEVEN
[B] HENCE
[C] HERE
[D] WHENE

44 Find the odd one out
[A] Swimming
[B] Breathing
[C] Walking
[D] Playing

45 Find the odd one out
[A] Mountain
[B] Plateau
[C] Desert
[D] River

46 If EDUCATION is written as $\mathbf{5 4 2 1 3 1 2 0 9 1 5 1 4}$ then how is CAT written?
[A] 13120
[B] 312
[C] 3120
[D] 31209

47 Which is not a type of margin?
[A] Top
[B] Center
[C] Left
[D] Right

48 The Central Processing unit (CPU) consists of
[A] Control unit
[B] Arithmetic and logic unit
[C] Main store
[D] all of above

49 Microsoft word is an example of
[A] An operating system
[B] Processing device
[C] Application software
[D] An input device

50 Blue tooth technology allows:
[A] Landline phone to mobile phone communication
[B] Wireless communication between equipment
[C] Signal transmission on mobile phones only
[D] Satellite television communication

## SPACE FOR ROUGH WORK

