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| **AITSE 0612** |

**NATIONAL TEACHERS COUNCIL**

**ALL INDIA TALENT SEARCH EXAMINATION: 2012**

**CLASS VI**

**Duration: 90 Minutes Maximum Marks: 100**

***General Instructions to Candidates***

*1. This question paper contains 100 multiple choice questions each of one mark.*

*2 The question paper is divided into two sections,* ***A*** *and* ***B***

*3. Section* ***A*** *is* ***S****cholastic* ***A****ptitude Test**(****SAT)****, contains 60 questions. This section covers Physics, Chemistry, Biology and Mathematics.*

*4. Section* ***B*** *is* ***M****ental* ***A****bility* ***T****est* ***(MAT),******C****omputer* ***A****wareness**and* ***G****eneral* ***K****nowledge****,*** *contains 40 questions.*

*5. There will be no negative marks for wrong answer.*

*6. A separate answer sheet is provided for answering the questions. Each question should be answered by* ***darkening*** *the appropriate circle (A, B, C, or D) with a* ***blue or black ball pen****.*

*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.*

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**SECTION A**

1. Chloro Fluro Carbons (CFCs) is a great treat to our environment. Which one of the following is an effect of CFCs?

 A) Acid rain B) Eutrophication

 C) Ozone depletion D) Biomagnifications

2. The sun appears to rise in the east and set in the west. This is due to

 A) Rotation of the earth from west to east B) Rotation of the earth from east to west

 C) Revolution of the earth around the sun D) Motion of sun from east to west

3. The temperature of a body is **X** in Kelvin scale and **Y** in Celsius scale. The difference between **X** and **Y** is

 A) 0 B) 100 C) 273 D) 373

4. The S. I. unit of time is second. The biggest unit of time among the following is

 A) Light Year B) Year C) Day D) Hour

5. A car moves from A to B and then back to A in 4 minutes. If the distance between A and B is 600m, the average speed of the car is

 A) 5Km/hr. B) 18m/s C) 150m/min D) 0.3m/s

6. An instrument to measure the purity of milk

 A) Lactometer B) Hygrometer C) Barometer D) Hydrometer

7. Melting, Freezing, Boiling, Condensations and Evaporation are usually

 A) Permanent Change B) Physical Change

 C) Irreversible Change D) Chemical Change

8. If you have 1Kg each of cotton, iron chunks and rice, you need bags of different sizes to pack them separately. Which physical property explains this?

 A) Temperature B) Pressure

 C) Mass D) Density

9. Study the following table:-

|  |  |  |
| --- | --- | --- |
| Weight of a body | Height of a boy | Volume of a stone |
| Weighing balance | Measuring tap |  **?** |

 Which of the following can replace question mark in the table?

 A) Stop watch B) Standard scale C) Measuring jar D) Thread & Scale

10. A bar magnet is placed on a piece of thermocol floating on the surface of water. The ends of the bar magnet point

 A) North-South B) North-West C) South-East D) East-West

11. Mercuric thermometers are not generally used to measure very low temperatures. This is because

 A) Glass cracks at low temperature B) Heat stop flowing from the object

 C) Mercury becomes transparent D) Mercury freezes at low temperature

12. The image formed by a pinhole camera is always upside down. This is because of

 A) Light rays get reflected B) Light ray get refracted

 C) Light ray gets laterally inverted D) Light rays always travel in straight line

13. The main function of an electric switch is to

 A) Make the bulb to glow easily B) Allow charges to flow

 C) Complete or break a circuit D) Prevent electric shock

14. A boy moves 20m due east, then 40m due south, then 40m towards west and then 20m due north. The distance between initial point and final point is

 A) 0 B) 20m C) 100m D) 120m

15. A boy standing in front of a plane mirror moves 10m towards the mirror. The distance between the boy and its image is

 A) Decreased by 20m B) Increased by 20m

 C) Decreased by 10m D) Increased by 10m

16. The component of air that trap solar heat

 A) Oxygen B) Nitrogen C) Carbon-dioxide D) All of these

17. Which of the following statement is NOT true?

 A) Fabric is made of Yarn. B) Jute is the outer covering of coconut

 C) Polyester is synthetic fibre D) Silk fibre is obtained from silk worm

18. Three substances **P, Q** and **R** are heated and following changes are observed:-

* **P** directly changes into gas
* **Q** started melting
* **R** started burning

Which one of the following statement is true regarding the above experiment?

 A) P & Q undergoes chemical changes B) P & R undergoes physical changes

 C) Q alone undergoes chemical change D) R alone undergoes chemical change

19. The most important characteristic of a pure liquid is its

 A) Fixed boiling point B) Fixed mass

 C) Non-uniform composition D) Fixed colour

20. Carbon powder and iron fillings are both black in colour. Which is the best method to separate them from a mixture of the two?

 A) Filtration B) Magnetic separation C) Distillation D) Condensation

21. Read the following statements and mark the correct option:-

 **P Synthetic clothes easily absorb sweat.**

 **Q Silk is prepared from the cocoon of the silk worm.**

 A) Both the statements P & Q are true B) Both the statements P & Q are false

 C) Statement P is false & Q is true D) Statement P is true & Q is false

22. A student conducted following activity. 5gram of camphor is taken in a china dish and covers it with inverted funnel. He plugged the stem of the funnel with cotton and heated the china dish.

 Identify the process in the activity.

 A) Crystallization B) Sublimation

C) Evaporation D) Sedimentation

23. Carefully read the following statements and identify the correct option:-

 **X A saturated solution can dissolve no more solute in it.**

 **Y A saturated solution becomes unsaturated on cooling.**

 A) Statement X is true & Y is false B) Statement X is false & Y is true

 C) Statements X & Y are false D) Statements X & Y are true

24. Which is NOT a chemical change?

 A) Ripening of a mango B) Curdling of milk

 C) Rusting of iron D) Moulding of silver into chain

25. Identify the gas responsible for acid rain

 A) Oxides of nitrogen B) Oxides of Sulphur

 C) Hydrogen D) Both (A) & (B)

26. The plants developing in desert condition are known as

 A) Lithophytes B) Xerophytes C) Hydrophytes D) Mesophytes

27. The hydra pushes food into its mouth by using

 A) Cilia B) Pseudopodia C) Tentacle D) Proboscis

28. Nutrient which are neither body building nor energy giving, but still important for proper functioning of our body is

 A) Protein B) Carbohydrate C) Vitamin D) Fat

29. Step farming prevents

 A) Soil erosion B) Afforestation C) Deforestation D) All of these

30. Rain water harvesting is an important method for

 A) Treating sewage B) Recycling water from factories

 C) Rising ground water level D) Industrial purpose

31. Ginger and potato are similar because

 A) Both are modified tap root B) Both are modified stem

 C) Both are modified fibrous root. D) Both are fruits

32. Identify the odd one:-

 A) Shoulder B) Finger C) Elbow D) Knee

33. Which one of the following is made up of cardiac muscles?

 A) Kidney B) Lungs C) Stomach D) Heart

34. It is advised that while in kitchen, we should not wear clothes made up of

 A) Nylon B) Terry cot C) Wool D) Cotton

35. A child suffers from bleeding gum and identified that it is due to deficiency of a vitamin. Name the vitamin.

 A) Vitamin A B) Vitamin B C) Vitamin C D) Vitamin K

36. If 2 : 7 : : x : 98,then x is

 A) 2 B) 14 C) 28 D) 49

37. Three or more lines are concurrent, if they pass through

 A) Same point B) Same line C) Same plane D) None of these

38. The largest negative integer is

 A) 0 B) -1 C) 1 D) Not Defined

39. In the multiplication given below, P, Q, and R are all different digits so that

 What is the value of **P + Q + R ?**

**P P Q X Q**

**R Q 5 Q**

 A) 20 B) 13

 C) 15 D) 17

40. Two positive integers have a sum of**11**. The largest possible product of these two positive integers is

 A) 18 B) 28 C) 30 D) 35

41. In the diagram, the area of the rectangle ABCD is 50cm2. What is the value of X in the diagram?

 A) 10 A x cm B

 B) 20 5 cm

 C) 5

 D) 15 D C

42. The place value of 5 in **1.562** is

 A) 5 B) 50 C) $ \frac{5}{1000} $ D) $\frac{5 }{10 }$

43. Which one of the following number is NOT a factor of 2007?

 A) 223 B) 27 C) 3 D) 9

44. Ratio of 250 ml to 2litre is

 A) 250 : 2 B) 250 : 200 C) 1 : 8 D) 125 : 1

45. Identify the correct statement from the following.

 A) A line has definite length B) A ray has definite length

 C) A line segment has definite length D) All of these

46. Difference of 500 and 200 is

 A) CCC B) C C) MMM D) D

47. Expanded form of **37034** is

 A) 3000 +700 + 0 + 30 + 4 B) 30000 + 700 + 0 + 10 + 4

 C) 30000 + 1000 + 0 + 70 + 4 D) 30000 + 7000 + 0 + 30 + 4

48. If **a** and **b** are two whole numbers, then commutative law is applicable to subtraction if and only i

 A) a ≠ b B) a = b C) a > b D) a < b

49. Which one of the following is correct?

 A) -99 < 0 < 2 < -37 B) -37 < 0 < 2 < -99

C) -37 < -99 < 0 < 2 D) -99 < -37 < 0 < 2

50. The two consecutive prime numbers with difference 2 are called

 A) Coprimes B) Composite C) Twin Primes D) Even

51. The prime factorisation of **13915** is

 A) 5 x 11 x 11 x 23 B) 5 x 11 x 7 x 23

 C) 11 x 7 x 23 x 3 D) 5 x 11 x 11 x 3

52. Simplest of all geometrical figures which has no size but has position is

 A) Space B) Line C) Line segment D) Point

53. If the radius of a circle is increased by 3 times, then the diameter increases by ............. times

 A) 6 B) 3 C) 2 D) 4

54. Measure of $<B $in the figure is

 A) 550

 B) 650 40

 C) 750 115

 D) 850

55. The picture below is shaded to represent a fractional number. How many of the stars in the adjoining figure should be shaded to represent a fraction with same value?

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 A) 10 B) 5 C) 8 D) 6

56. The ratio of copper and zinc in an alloy is 9:5. If the weight of zinc in the alloy is 9.5 gram, then weight of copper in it is

 A) 17.1 g B) 17.2 g C) 17.5 g D) 17.4 g

57. A circle is inscribed in a square as shown below. If the radius of the circle is 4cm then the perimeter of the square is

 A) 28 cm

 B) 32cm 4cm

 C) 24 cm

 D) 36 cm

58. The value of **x** for which the equation 16 (x + 7) = 144 is

 A) 0 B) 1 C) 2 D) 3

59. The algebraic expression for the statement **x** multiplied by itself is

 A) x2 B) 2x C) x3  D) x

60. A rhombus is symmetrical about

 A) Perpendicular bisector of each of its sides

 B) Each of its diagonals

 C) The line joining the mid-points of its opposite sides

 D) None of these

**SECTION B**

61. Which one of the following is an input device?

   

 A) B) C) D)

62. What procedure will you follow if you want to change the name of a folder “My ducuments”?

 A) Double click on my document Right click on desired folder Click on rename

 Type new name Press enter

B) My Documents Type new name Press enter

C) My computer My documents Double click on my document Rename

D) All of the above

63. Sudeep is writing a story using a word processing programme. He would like to begin a second paragraph. What should he do next?

 A) Use the shift key B) Press the enter key

 C) Open a new document D) Use Backspace key

64. Which type of software is used to make a slide show?

 A) Spreadsheet software B) Word Processing software

 C) Presentation software D) System software

65. The \_\_\_\_\_\_\_\_\_ tells the rest of the computer how to carry out a program’s instruction.

 A) ALU B) Control Unit C) System Unit D) None of these

66. Which one of the following is called the first page of the website?

 A) Data page B) Insert page C) Home page D) Web page

67. While entering the numerical data using the number pad which one of the following indicators of keyboard must be on?

 A) Caps Lock B) Num Lock

 C) Scroll Lock D) none of these

68. The two statements are given below. Which one of the following is/are correct?

 1. **You can scan pictures with the help of pictures**

 **2. Computer processing of data based on binary system**

A) Statement 1 is correct B) statement 2 is correct

 C) Both 1 and 2 are correct D) Both 1 and 2 are wrong

69.

![K:\ntc\img2a[1].jpg]()

The adjacent picture shows:

 A) Preamble of the Indian constitution

 B) Indian Constitution

 C) Last page of the Indian constitution

 D) Fundamental Rights in Indian constitution

70. Who is the ex – officio Chairman of Rajya Sabha?

 A) President of India B) Vice President of India

 C) Leader of Opposition D) Prime Minister

71 The Vijayanagar empire was founded by

 A) Krishna Devaraya B) Harhara and Bukka

 C) Balaji Wiswanath D) Chandra Gupta Maurya

72. The time difference between I.S.T and G.M.T is:

 A) 51/2 hrs B) 8 1/2 hrs C) 5 hrs D) 91/2 hrs

73. Lord Buddha delivered his first sermon at:

 A) Bodh Gaya B) Sanchi C) Sarnath D) Kushninagar

74. Doldrum is an area of

 A) Low Temperature B) Low Rainfall

 C) Low Humidity D) Low Pressure

75. Which of the following line passes through India?

 A) Tropic of cancer B) Tropic of Capricon

 C) Equator D) International time line

76. Teak and Sal are the principal trees in the forest known as

 A) Tropical Evergreen B) Tropical Deciduous

 C) Dry Evergreen D) TundraVegetation.

77. World Environment Day is celebrated every year on:

 A) January 15 B) July 10

 C) June 5 D) April 7

78. When a ship crosses the International Date Line from West to east,

 A) it loses one day B) no change in day

 C) It gain one day D) it loses half day

79. The Chairman of the drafting committee for the constitution of India was

 A) Dr. S Rajendra Prasad B) Jawaharlal Nehru

 C) Dr. s Radhakrishnan D) Dr. B R Ambedkar

80. The fourth Buddhist Council was held during the reign of

 A) Ashoka B) Kanishka

 C) Chandragupta Maurya D) Samudra Gupta

81. Which one of the following is the longest National highway in India?

 A) NH 1 B) NH 2 C) NH 45 D) NH 7

82. Who was the first president of India?

 A) Dr. Rajendra Prasad B) Dr. S Radhakrishnan

 C) V V Giri D) Zakkir Hussain

83. Which one of the following is the longest river in India?

 A) Ganga B) Brahmaputra C) Narmada D) Indus

84. Kaziranga National Park situated in which one of the following state?

 A) Kerala B) Karnataka C) Assam D) Madhya Pradesh

***Direction for question No 85 to 87:- In each of the following questions four words or letters have been given of which three are alike in some way and one is different. Choose out the odd one.***

85. A) Inscriptions B) Monuments C) Chronicles D) Timeline

86. A) AJKL B) IBCD C) ORQP D) UFGH

87. A) Plateau B) Star C) mountain D) Ocean

88. Arrange the following word as per order in the dictionary

**1**. Preposition 2. Preparatively 3.Preposterous

 4. Preponderate 5. Prepossess

 A) 2, 4,1,5,3 B) 1, 5, 2, 4, 3 C) 5, 4, 2, 3, 1 D) 4, 2, 5, 1, 3

89.

How many triangles are there in the following figure?

 A) 29 B) 27 C) 23 D) 30

90. Replace the question mark

A) 29

B) 25

C) 15

D) 21

14

4

25

4

6

12

8

 ?

12

4

24

18

7

8

12

9

91. Replace the question mark?

A) J

B) K

C) L

D) M

B

J

C

?

G

A

B

I

E

 C

A

F

C

B

A

O

92. Replace the question mark.





?

1

3

B

3

A

C



D)

93. Arrange the following in a meaningful logical order.

 **1. Exhaust 2. Night 3. Day 4. Sleep 5. Work**

 A) 1, 3,5,2,4 B) 3, 5,1,4,2

 C) 3, 5, 1, 2, 4 D) 3, 5, 2, 4, 1

94. Only one meaningful word can be formed by rearranging the letters of the given jumbled word. Find out that word

 Word**: MUSPOPAPOTIH**

 A) METAMORPHIC B) PHILANTHROPIST

 C) HIPPOCAMPUS D) HIPPOPOTAMUS

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

 Word: **IMPASSIONABLE**

 A) IMPASSABLE B) IMPASSIVE

 C) IMPOSSIBLE D) IMPASSION

***Direction for question No 96 to 99:- Please refer the data in the following table and answer questions given below***

|  |  |
| --- | --- |
| **Name of the school** | **Number of students in citywide**  |
| **Bangalore** | **Mumbai** | **Kolkata** | **Chennai** | **Ahmadabad** | **Cochin** |
| BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS |
| A | 330 | 240 | 360 | 270 | 540 | 330 | 310 | 220 | 200 | 230 | 480 | 330 |
| B | 450 | 210 | 260 | 300 | 210 | 270 | 320 | 290 | 330 | 270 | 160 | 310 |
| C | 200 | 290 | 230 | 260 | 540 | 310 | 360 | 270 | 360 | 260 | 290 | 330 |
| D | 360 | 270 | 170 | 390 | 610 | 220 | 330 | 220 | 270 | 290 | 220 | 360 |
| E | 340 | 270 | 320 | 480 | 520 | 220 | 220 | 240 | 440 | 220 | 270 | 220 |
| F | 220 | 310 | 390 | 160 | 290 | 170 | 290 | 210 | 230 | 270 | 260 | 300 |
| G | 560 | 630 | 320 | 290 | 330 | 320 | 330 | 290 | 530 | 260 | 230 | 260 |

96. What is the difference between the number of boys and the number of girls in **School C in Mumbai?**

 A) 30 B) 20 C) 200 D) 3

97. What is the total number of girls students are there in **School E?**

A) 1650 B) 1850 C) 2850 D) 650

98. Which school is having highest number of boys in **Cochin**?

 A) E B) A C) D D) C

99. What are the total number schools in Kolkata crossing 500 boys?

 A) 4 B) 3 C) 5 D) 2

100. Identify the name of the state in Indian union.

A) Gujarat B) Maharashtra

C) Madhya Pradesh D) Uttar Pradesh



**Space for Rough Works**