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| **AITSE 0812** |

**NATIONAL TEACHERS COUNCIL**

**ALL INDIA TALENT SEARCH EXAMINATION: 2012**

**CLASS VIII**

**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. Which one of the following is transferred during the propagation of a wave?

 A) Matter B) Mass C) Energy D) Particles

2. A rubber sucker, when pressured on a surface stick to it, because

 A) Atmospheric pressure acts on it B) Gravitational force acts on

 C) Rubber sucker has some gluing on it D) None of these

3. Read the following statements carefully and mark the correct option

 **P A force which opposes the motion of a body is called friction.**

 **Q Frictional force acts perpendicular to the applied force.**

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

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

4. Two vibrating objects produce two notes of same pitch and loudness. Which one of the following helps us to distinguish the notes?

 A) Time period B) Quality C) Frequency D) Amplitude

5. Electric current is used to coat a metal over another. The important applications of this process is

 A) Make objects appear shiny B) Prevent corrosion

 C) Make objects resistant to scratches D) All of these

6. A boy looks at a green leaf through a blue coloured glass. In what colour does the leaf appear to him?

 A) Green B) Blue C) Black D) Yellow

7. When comet approaches the sun, the tail of the comet points

 A) Towards the sun B) Away from the sun

 C) In arbitrary direction D) Away from the earth

8. A magnet loses its magnetic property when

 A) Heated strongly B) Exposed to sunlight

 C) Dropped in water D) Kept in an electric field

9. An object is placed 4cm in front of a biconvex lens of radius of curvature16cm. The image formed will be

 A) Enlarged & Real B) Virtual & Diminished

 C) Virtual D) Enlarged and inverted

10. Which of the following is the safest way to protect you from lightning?

 A) Run to an open place B) Open a black umbrella for cover

 C) Take shelter under a tree D) Squat low on ground

11. The S. I. unit of force

 A) Metre B) Newton C) Pascal D) Pressure

12. A pendulum oscillates 40 times in 4 seconds. Its time period is

 A) 0.1sec. B) 0.01sec. C) 0.4sec. D) 10sec.

13. The number of electrons in an element with atomic number X and atomic mass Y will be

 A) X – Y B) Y – X C) X D) Y

14. A microscope is used to magnify objects. The final image formed by a microscope is

 A) Virtual and erect B) Virtual and inverted

 C) Real and erect D) Real and inverted

15. The strength of a bar magnet is

 A) Equal everywhere on the magnet B) Maximum at the centre of the magnet

 C) Minimum at the poles of the magnet D) Maximum at the poles of the magnet

16. An element **X** burns in air and the oxide formed dissolves in water. The solution turns the colour of red litmus blue. The element **X** is

 A) Metal B) Non-metal C) Metalloid D) Either metal or nonmetal

17. The gas whose presence in the atmosphere leads to the green house effect

 A) CO2 B) CFCs C) CH4 D) All these

18. A metal which develops a protective layer over its surface by the reaction with air

 A) Iron B) Aluminium C) Zinc D) Silver

19. Biogas is produced from biomass by

 A) Anaerobic fermentation B) Fractional distillation

 C) Destructive distillation D) Mixing petrol in biomass

20. The region (zone) of a candle flame where complete combustion occurs

 A) Inner B) Middle C) Outer D) All of these zones

21. CNG is preferred over petrol as a fuel for transport vehicle. This is because

 A) It undergoes complete combustion B) It can be compressed under high pressure

 C) It is renewable source of energy D) It is less polluting

22. Which is NOT an allotrope of carbon?

 A) Carborundum B) Fullerence C) Diamond D) Graphite

23. Read the below given statements and mark the correct option.

 **P** **PVC and Melamine are thermosetting plastics**

 **Q** **Polythene and Bakelite are thermoplastics.**

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

 C) Statement **P** is false and **Q** is true D) Statement **P** is true and **Q** is false

24. Identify the odd one:-

 A) Sodium B) Carbon C) Phosphorous D) Sulphur

25. A good fuel has

 A) Low ignition temperature & high calorific value

 B) High ignition temperature & high calorific value

 C) Moderate ignition temperature & high calorific value

 D) Moderate ignition temperature & low calorific value

26. Destruction of human immune system is the symptom of

 A) Encephalitis B) Rabies C) Polio D) AIDS

27. The stage when the reproductive organs reach sexual maturity is called

 A) Gestation B) Puberty C) Fertilization D) Menstruation

28. The message of image formation is conveyed to the brain by

 A) Optical nerve B) Ciliary muscles C) Blind spot D) Retina

29. Which one of the following is NOT present in animal cells?

 A) Mitochondria B) Lysosomes C) Plastids D) None of these

30. Which one of the following determines the sex of a child?

 A) Chromosome of sperm B) Chromosome of ovum

 C) Time between ovulation & fertilization D) Time between fertilization & implantation

31. The function of t**hyroxin** hormone in frog

 A) Controls the development of reproductive organ

 B) Controls the functions of other endocrine glands

 C) Controls metamorphosis in frog

 D) Controls metabolic rate in frog

32. Which one of the following statement regarding **SATPURA NATIONAL PARK** is true?

 A) Rock shelters are found in this park B) It is the first Reserve forest of India

 C) The finest Indian Teak is found here D) All of these

33. The species of plant or animal which is found exclusively in particular area and is not found naturally anywhere else is known as

 A) Epidemic species B) Endemic species

 C) Endomorphic species D) Entomorphic species

34. Read the following statements and mark the correct option.

 **P A zygote is formed as a result of fertilization.**

 **Q An embryo is made up of a single cell.**

 A) Statements **P** & **Q** are correct B)Statements **P** & **Q** are wrong

 C) Statement **P** is correct & **Q** is wrong D) Statement **P** is wrong & **Q** is correct

35. **Azotobacter** is a

 A) Nitrogen fixing bacteria B) Curd producing bacteria

 C) Immunizing bacteria D) Bacteria used for making alcohol

36. The sides of cube of volume 0.064$cm^{3 }$is

 A) 0.008cm B) 0.004cm C) 0.8 D) 0.4cm

37. Two numbers are in the ratio 1:3 and sum of their cubes in 1729. The numbers are

 A) 1 & 3 B) 4 & 12 C) 44 & 1344 D) 1000 & 792

38. The sum of the squares of the lengths of all the sides of a rectangle is 100. What is the length of a diagonal of the rectangle?

 A) 10 B) 5 C) 5 $\sqrt{2}$ D) None of these

39. In the figure it is given that, DA$ ⊥$ AB, CB$ ⊥$ AB and BD intersect **”O”** and OM$ ⊥$ AB meets AB in M. If AO = 2.4cm, OC =3.6cm, then the length of DO is

 A) 2cm

 B) 2.4cm

 C) 3cm

 D) 1.cm

40. Which of the following is the square of a binomial?

 A) $x^{2 }+x+9 $B) $x^{2 }+4x+9$ C) $x^{2 }+9x+9$ D) $x^{2 }+6x+9$

41. Sumita is making profit of 25% on her selling price. What is her actual profit percentage?

 A) 20% B) $\frac{100}{3}$% C) 25% D) 30%

42. Which of the following are perfect cubes?

 A) 612, 512, 730 B) 343, 612, 869 C) 512, 343, 1331 D) 512, 730, 1331

43. If **ABCD** is a parallelogram, then $<A- <C $ is

 A) 0 B) 180 C) Between 10 & 180 D) None of these

44. If $ 1+\frac{1}{x} = \frac{x + 1}{x}$, what does ‘x’ equal to?

 A) 1 or 2 only B) Any number except 0 C) 1 and 0 only D) +1 or-1 only

45. The perimeter of a rhombus is 40m and its height is 5m. Its area is

 A) 60sq.m B) 45sq.m C) 55sq.m D) 50sq.m

46. The value of $\frac{7}{12}$ + $\frac{19}{10} $ is

 A) $\frac{133}{12}$ B)$ \frac{371}{12}$ C)$ \frac{149}{60}$ D) $\frac{5411 }{990 }$

47. There were only two candidates in an election. One got 62% votes and was elected by a margin of 144 votes. The total number of votes was

 A) 600 B) 700 C) 800 D) 900

48. A number 351 is divided into two parts in the ratio 2:7. The product of the numbers is

 A) 31294 B) 30294 C) 25295 D) 21294

49. If$\sqrt{(1+\frac{27}{169 }}$) = $ 1+\frac{x}{13} $then **x** is

 A) 0 B) 1 C) 3 D) 7

50. The given quadrilateral EFGH is

 A) A parallelogram

 B) A concave quadrilateral

 C) A convex quadrilateral

 D) A trapezium

51. The cube root of $27^{2 }$is

 A) 27 B) 81 C) 3 D) 9

52. The simple interest on a certain sum for 3 years at 14% per annum is Rs. 235.20. The sum is

 A) Rs. 560 B) Rs. 680 C) Rs.640 D) Rs.720

53. If **3x – 7y = 10 and xy = -1,** then the value of$ 9x^{2}+49y^{2} $ is

 A) -104 B) 104 C) 58 D) 142

54. The volume of a cube is 512cm3. Its area in sq.cm is

 A) 384 B) 512 C) 64 D) 144

55. The standard form of 15240000 is

 A) 15.24 X 107  B) 1.524 X 106  C) 1.524 X 107 D) 1.524 X 108

56. A man completes 5/8 of a job in 10days. At this rate, how many more days will it takes him to finish the job?

 A) 4 B) 5 C) 6 D) 7

57. $ \frac{58^{2}- 42^{2}}{16} $ is equal to

 A) 100 B) 90 C) 0 D) 1

58. When a certain number is multiplied by 13, the product consists of entirely of fives. The smallest such number is

 A) 41625 B) 42515 C) 42135 D) 42735

59. A 20m pole casts a 5m shadow. If at the same time of the day, a building casts a shadow of 20m, how high is the building?

 A) 8 m B) 80m C) 4m D) 400m

60. The sum of two numbers is 12 and their product is 35. What is the sum of the reciprocals of these numbers?

 A) $\frac{12}{35}$ B) $\frac{1}{35}$ C)$ \frac{35}{8}$ D) $\frac{7}{35}$

**SECTION B**

61. The part of CPU which capable of performing addition, subtraction, multiplication, comparison, etc.

 A) CU B) UPS C) ALU D) MU

62. Find the odd term out

 A) Mouse B) MICR C) OCR D) Curser

63. Which one of the following icon used for applying the same formatting to multiple places

. 

A) B) C) D)

64. The following picture shows

 

A) Hardware companies

B) Social networking

C) E commerce

D) None of these

65. Keyboard shortcut for pasting:

 A) Ctrl + V B) Ctrl + D C) Ctrl + P D) Ctrl + C

66. Excel worksheets are given by extension:

 A) XLX B) EXL C) LSL D) EXE

67. When a group of computer is connected together in a small area it is called:

 A) Remote communication network B) Local area network

 C) Internet D) Wide area network

68. In MS Word 2010 alignment buttons are available on which one of the following tab

 A) File B) Insert C) Home D) Page Layout

69. Find the odd one out:

 A) Windows XP B) Mac OS C) Word 2010 D) Unix

70. Messages from one computer terminal can be sent to another by using data networks. The messages to be sent is converted to an electronic digital signal, transmitted via cable, telephone or satellite and then converted back again at the receiving end. What sis the system of sending message called?

 A) Global network B) Electronic mail

 C) E newspaper D) Networking

71. Who amongst the following was conferred with Pakistani highest civilian award ***Nishan -e- Pakistani*?**

A) Khan Abdul Gaffar Khan B) Jawaharlal Nehru

 C) Morarji Desai D) Indira Gandhi

72. The supreme commander of Indian armed force.

 A) Prime Minister B) Field Marshall

 C) Admiral D) President

73. Which one of the following place associated with copper mining?

 A) Khetri B) Kolar

 C) Bellari D) Bastar

74. ***This is pure soul force, ………… the soul is informed with knowledge. It burns the flame of love……….. non violence is supreme dharma. It is not physical force……..***

 **The above statement is related to which one of the following?**

 A) Dandi march B) Ahimsa C) Satyagraha D) Revolution

75. Which one of the following is not correctly matched?

 A) City of Palaces - Kolkata

 B) Gift of Nile - Egypt

 C) Blue Mountain - Nilgiri

 D) City of Seven Hills - New York

76. The ‘Red Data book’ containing information on all wild plants and animals in danger of extinction has been published by which one of the following?

 A) World Wild Fund

 B) International Union for Conservation of nature and Natural Environment

 C) World Conservation Union

 D) United Nations Environment Programme

77. In India how many states share the costal line.

 A) 7 B) 10 C) 9 D) 8

78. The first woman to climb Mount Everest.

 A) Bachendri Pal B) Sunita Williams

 C) Chary Latha D) Meenam Letha

79. How many minutes are required for the sunlight to reach to Earth?

 A) 8.15 minutes B) 8 minutes

 C) 9 Minutes D) 2 Minutes

80. Which of the following state has the largest concentration of scheduled Tribes population?

 A) Andhra Pradesh B) Bihar

 C) Madhya Pradesh D) West Bengal

81. Which one of the following is not associated with London Olympics?

    

 A) B) C) D)

82. The following picture is related to one of the important movement in India’s freedom struggle. Identify the movement?



 A) Quit India Movement B) Dandi March

 C) Non Cooperation Movment D) Champaran Satyagrha

83. Which one of the following term is not mentioned in the preamble of Indian constitution?

1. Liberty B) Justice C) Sovereign D) Independence

84. Which is the largest country in the world?

 A) Russia B) USA
 C) Canada D) Australia

85. Which one of the following is not correctly matched?

 A) Konrk - Puri

 B) Victoria Memorial - Kolkata

 C) Sun Temple - Delhi

 D) Lal Bagh Garden - Bangalore

86. In certain code ‘MILLION’ is written as ‘IMLLOIN’. How is ‘HILTON’ written in that code?

 A) IHTLON B) IHLOTN

 C) IHTLNO D) HILTNO

87. In certain code, ‘PROSE’ is written as ‘PPOQE’. How would ‘LIGHT’ be written in that code?

 A) LIGFT B) LLGFE

 C) JIEHR D) LGGFT

***Direction for question No 88 to 90:- 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.***

88) A) Kathakali B) Bharatanatyam C) Katahk D) Bihu

89) A) Ear B) Nose C) Throat D) Tongue

90) A) Kheda B) Champaran C) Jallianwalabagh D) Dandi

***Direction for question No 91 to 95:- In these questions, select the related letter / word / number / figure from the given alternatives***

91. 6 : 35 :: 7 : ?

 A) 48 B) 42 C) 50 D) 13

92. Clock : Time :: Thermometer : ?

 A) Heat B) Temperature C) Energy D) Radiation

93. TEACHER : ETCAEHR :: STUDENT: ?

 A) TSDUNET B) TSDUETN C) TSUDNET D) STDUNET

94. ABZY : CDXW :: EFVU : ?

 A) IJRQ B) KLPO C) MNST D) GHTS

95. Social Science : History :: Physical Science : ?

 A) Biology B) Psychology C) Physics D) Phylosophy

***Direction for question No 96 to 98:- Select the word which can be formed using the letters of the given word.***

96. **Word: EXAMINATION**

 A) MINOR B) NAME C) GAME D) MAXIMUM

97. **Word: PROBABILITY**

 A) POULTRY B) ITALY C) ABLE D) BABUR

98. **Word: ALPHABETICAL**

 A) CLINIC B) BEAUTIFUL C) CABLE D) OPTICAL

99. Raju went to movies nine days ago he goes to the movies only on Thursday. What day of the week today?

 A) Wednesday B) Thursday C) Saturday D) Sunday

100. Select the alternative which is related to the given set.

 **Given set: (6, 12, 18)**

A) (5, 7, 10) B) (10, 16, 18) C) (8, 12, 16) D) (5, 10, 20)

***Space for Rough Works***

***Space for Rough Works***