NATIONAL MEANS CUM MERIT SCHOLARSHIP EXAMINATION 2014-15

Part I – 90 minutes	*Maximum Marks –90*
Part II – 90 minutes	*Maximum Marks –90*

Class VIII Code	State Code	Year	Centre Code	Serial No.
1	1 4	1 4		

INSTRUCTION TO CANDIDATES

Read the following instructions carefully before answering the questions.

1. Answers are to be written on supply **ANSWER SHEET**

2. Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.

3. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit is to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and **ANSWER SHEET.** For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.

4. Avoid over writing the numbers/ digits for both Centre Code and Serial No.

5. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consist 90 questions.

6. All Questions carry one mark each.

7. All Questions are Compulsory.

8. Begin with the first question and keep trying one question after another till you finish both the parts.

9. Since the time allotted to the two parts of these questions booklets is very limited, you should make the best of it by not spending time on any one question

10. Record your answer using Ball Point Pen only. You have to indicate your answer on the answer sheet as advice.

11. Separate pages for Rough Work are provided at the last page of your question booklet.

12. The answer sheet has two parts Part I and Part II corresponding to Part I and Part II of the Question Booklet. In part II, answers to a subject are to be given under the column where the name of the subject is given.

13. Answer to each is to be indicated by encircling around alternative **1 or 2 or 3 or 5 OR a or b or c or d or e** from amongst the ones given for the corresponding questions in the question Booklet,
e.g.., if you think that alternative **1or a** is correct then encircle as example given below

(1) **or** (a)

14. Now turn to the next page and start answering the questions.

15. Hand over your Question Booklet and Answer Sheet to the Invigilators before you leave the Examination Hall.

Timing 10:00 Am To 1 : 00 Pm

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

MENTAL ABILITY TEST

Direction (Q No.1-6): In these questions, you are to select the correct answer based on the part of the statement in the given question.

1) If GIVE is coded as 5137 and BAT is coded as 924, how is GATE coded?

     a. 5427
                    b. 2547

     c. 5247
                    d. 2475

2) BACK is coded as 21311, then how is the Word ENGAGE will be coded?

     a. 547175
              b. 5147175

     c. 574157
              d. 4136175

3) If B=2, H=8 and CAB =6, then what is the number value of RACE?

     a. 53
                       b. 30

     c. 28
                       d. 27

     e. 89

4) If E = 5, HEN =27, PEN =?

     a. 53
                       b. 35

     c. 36
                       d. 63

5) If in certain language CARROM is coded as BZQQNL, Which word will be coded as HOUSE?

     a. IPVTF
              b. GNTRD

     c. INVRF
              d. GPTID

6) In a code language SINGER is written as AIBCED. How can GINGER be written in the same code?

     a. CBIECD
            b. CIBCED

     c. CBICED
            d. CIBECD

Direction (Q. No 7 – 20): In the following Questions two words are given. These words/alphabets are related to each other in some way. Another word/alphabet is also given, Find out the relationship between the first two words/alphabet and choose the word/alphabet from the third word/alphabet as the first two bear.

7) Moon: Satellite:: Earth: ?

   a. Sun
   b. Planet
   c. Solar System
   d. Asteriod

8) Man: Machine: : Master: ?

   a. Worker
   b. Manager
   c. House
   d. Slave

9) Fear: Threat : : Anger : ?

   a. Compulsion
   b. Pariec
   c. Provocations
   d. Force

10) Safe: Secure : Protect : : ?

   a. Conserve
   b. Sure
   c. Guard
   d. Lock

11) Thunder: Rain: : Night : ?

   a. Evening
   b. Dark
   c. Day
   d. Dusk

12) THICK is related to THIN in the same way as IDLE is related to

   a. Virtuous
   b. Business
   c. Industrious
   d. Activity

13) PALM is relates to HAND in the same way as SOLE is related to
   a. Leg
   b. Ankle
   c. Knee
   d. Foot

14) PADDY is related to FIELD in the same way as STEEL is related to

    a. Mine   b. Factory

    c. Iron   d. Ore

15) ACCIDENT is related to CAREFULNESS in the same way as DISEASE is related to

    a. Sanitation   b. Treatment

    c. Medicine   d. Doctor

16) DDA : ADD : : RRB : ?

    a. RBR   b. BRB

    c. BRR   d. RBB

17) KMF : LLH : : RMS : ?

    a. SLR   b. SLU

    c. SSU   d. SUS

18) ADE : FGJ : : KNO :?

    a. PQR   b. PRQ

    c. RQP   d. TPR

19) FILM : ADGH : : MILK : ?

    a. ADGF   b. HDGE

    c. HDEG   d. HEGF

20) PALE : LEAP : : POSH: ?

    a. HSOP   b. POHS

    c. SHOP   d. None of these

Direction (Q. No 21-30): In each of the following questions four of the following are alike in a certain way and so from a group. Which is the one that does not belong to that group:-

21
   a. Snake
                      b. Lizard
   c. turtle
                      d. Whale
   e. Crocodile

22
   a. Lake
                      b. Pond
   c. Pool
                      d. Tank
   e. Brook

23
   a. Bean
                      b. Grapes
   c. Carrot
                      d. Banana
   e. Tomato

24
   a. Club
                      b. Brush
   c. Crayon
                      d. Pen
   e. Pencil

25
   a. Panther
                      b. Lion
   c. Whale
                      d. Fox
   e. Crocodile

26
   a. Wheat
                      b. Paddy
   c. Jowar
                      d. Maize
   e. Rice

27
   a. Ear
                      b. Eye
   c. Nose
                      d. Throat
   e. Tongue

28	a. Shop	b. Pencil
	c. Canvas	d. Paint
	e. Brush	

29	a. Engineer	b. Advocate
	c. Doctor	d. Court
	e. Journalist	

30	a. Carbon	b. Copper
	c. Silver	d. Gold
	e. Platinum	

Direction (Q. No.31 -35): In each questions, you are to select the answer based on the information given.

31. A man walks 2km to the east, turns left, and walks 2 km and turns left and walks2 km. Which direction is he falling?

    a. East   b. West

    c. North   d. South

32. A watch reads 4:30. If the minutes hand points east, in what directions will the hour hand point?

    a. North East   b. South West

    c. South West   d. North West

33. One day, Ravi left home and cycled 10 cms south wards turned right and cycled 5 kms and turned right and cycled 10kms and turned left and cycled 10kms. How many Kilometers will he have to cycle to reach his home straight?

    a. 10kms   b. 15kms

    c. 20 kms   d. 25 kms

    e. 30 kms

34. If A is to the south of B and C is to the east of B, in what direction is A with respect to C?

    a. North East   b. North West

    c. South East   d. South West

    e. None of these

35. Ankit, Bansi, Rohan and Sohan are friends. They play cards. Ankit and Bansi become partners. Sohan takes north. If Ankit faced towards West, then who faces towards South.

 a. Bansi
 b. Rohan
 c. Sohan
 d. Data is inadequate
 e. None of these

Direction (Q. No. 36-40): In each of the following questions. Find the wrong number in the series.

36.　　　　**24, 27,31,33,36,39**

 a. 24
 b. 27
 c. 31
 d. 33
 e. 39

37.　　　　**225, 196, 169, 144, 121, 80**

 a. 80
 b. 121
 c. 169
 d. 196
 e. 144

38.　　　　**1, 2, 4, 8, 26, 32, 64, 96**

 a. 4
 b. 32
 c. 64
 d. 16
 e. 96

39.　　　　**1, 3, 7,15, 27,63,127**

 a. 7
 b. 15
 c. 27
 d. 63
 e. 3

40.　　　　**5, 10, 17, 24, 37, 50, 65**

 a. 10
 b. 17
 c. 24
 d. 3
 e. 50

41.   Z, X,V,T,R, ….

a. O, K
b. N, M
c. K, S
d. M, N
e. P, N

42.   ND, IY,DT, YO, TJ, …

a. MP
b. NQ
c. OF
d. OE
e. ME

43.   AZ, CX, FU, …

a. IR
b. IV
c. JQ
d. KP
e. none of these

44.   CE, GI, KM, OQ, …

a. TW
b. TV
c. SU
d. RT
e. UW

45.   BDF, CFI, DHL

a. CJM
b. EIM
c. EJO
d. EMI

Direction (Q. No. 46-50): In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternate.

46. a – bbc – aab – cca– bbcc.

    a. bacb   b. acba

    c. abba   d. caba

47. aab – aa – bbb – aaa – bbb

    a. abba   b. baab

    c. aaab   d. abab

48. bc – b – c– b– ccb

    a. cbcb   b. bbcb

    c. cbbc   d. bcbc

49. abb– baa – a– bab – ab

    a. abba   b. abab

    c. ccac   d. aabb

50. – –aba – – ba– ab

    a. abbba   b. abbab

    c. baabb   d. bbaba

Direction (Q. No. 51-54): Study the following information carefully and choose the correct answer given below:

51. Sony is taller than Yatendra. Amit is taller than Sony. Subash is taller than Amit. Sattu is tallest of all. If they stand according to their height who will be exactly is the middle.

    a. Sonu   b. Subash

    c. Yatendra   d. Amit

52. Among M, J, K, T and R, K, is neither heavier nor lighter than M, J or M is not heavier than T who is lighter than R. Who among them is heaviest?

    a. K   b. M

    c. T   d.Data is adequate

    e. None of the above.

53. Four Friend were playing a game of ends setting is a circle. Shankar was right to Ram and Gopal was left to Arvind. Which one of the following pairs were the partners?

    a. Ram and Arvind   b. Gopal and Shankar

    c. Ram and Shankar   d. Gopal and Ram

54. What is the smallest number of ducks that could swim in the formation- twp ducks in front of a duck, two ducks behind a duck and a duck between two ducks?

    a. 5   b. 7

    c. 4   d. 3

Direction (Q. No. 55-60): In the following questions are based on the following statement. Read them carefully and then answer the related questions.

    Statements:

    i. N is twice as old as M   **ii. O is half the age of M**

    iii. O is twice the age of P   **iv. N is half the age of R**

55. Who is the youngest?

    a. M   b. N

    c. O   d. P

56. Who is the eldest?

    a. N   b. P

    c. Q   d. R

57. If O is 4 years old, then the age of N will be

    a. 8   b. 10

    c. 12   d. 16

58. If M is 14 years old, then what is the age of O?

    a. 7   b. 10

    c. 16   d. 20

59. Which one of the following pairs is of the same age?

    a. O and N   b. M and R

    c. P and N   d. O and M

60. N is younger than

    a. M   b. P

    c. R   d. O

Direction (Q. No. 61-65): Study the following information carefully and answer the questions given below it:

In a group of five persons A, B, C, D, and E

   i.   **B and C are intelligent in Mathematics and Geography**

   ii.   **A and C are intelligent in Mathematics and History**

   iii.   **D and E are intelligent in Political Science and Biology**

   iv.   **B and D are intelligent in Political Science and Geography**

   v.   **E is intelligent in Biology, History and Political Science.**

61. Who is intelligent in Political Science, Geography and Biology

     a. E   b. D

     c. C   d. B

62. Who is intelligent in Mathematics and History but not in Geography?

     a. C   b. E

     c. A   d. B

63. Who is intelligent in Mathematic, Political Science and Geography?

     a. C   b. E

     c. A   d. B

64. Who is intelligent in Mathematics, Geography and History?

     a. E   b. A

     c. D   d. C

65. Who is intelligent in Political Science, History and Biology?

     a. A   b. B

     c. C   d. E

Direction (Q. No. 66-73): In the following questions, select the missing number from the given responses.

66.
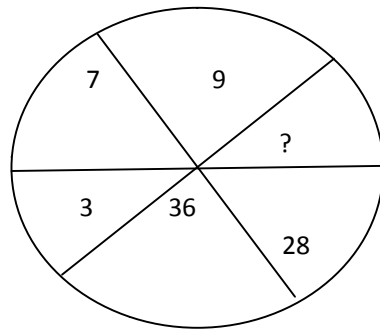
a. 16　　　　　　　　　　　　　b. 12

c. 8　　　　　　　　　　　　　 d. 6

67.
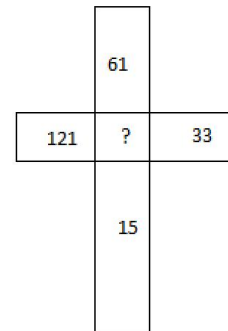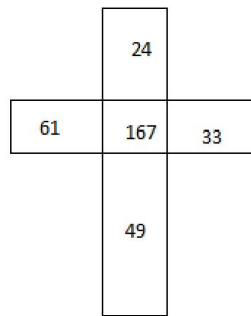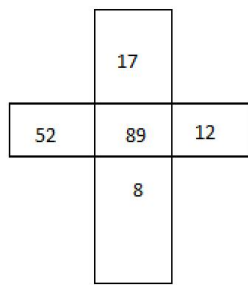
a. 240　　　　　　　　　　　　b. 230

c. 232　　　　　　　　　　　　d. 251

68.

a. 26　　　　　　　　　　　　 b. 60

c. 52　　　　　　　　　　　　 d. 80

69.

4		3
11		9
15		6

144   9801   ?
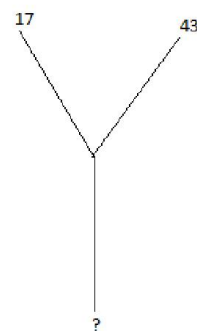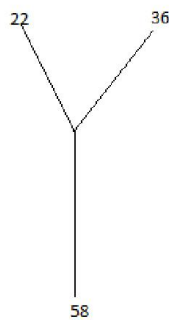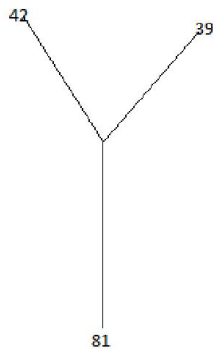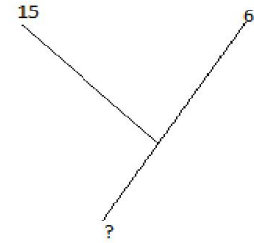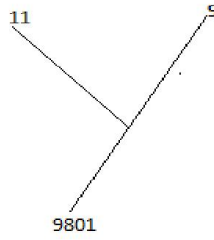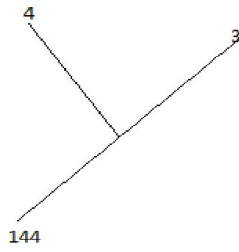
a. 2250   b. 8100

c. 11036   d. 1216

70.

5   9   8

7 —(13)— 4   8 —(5)— 4   9 —(?)— 4

3   3   3
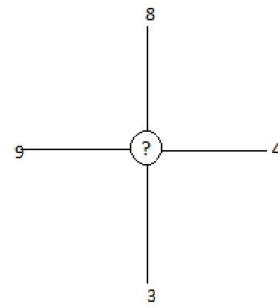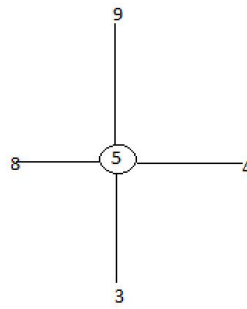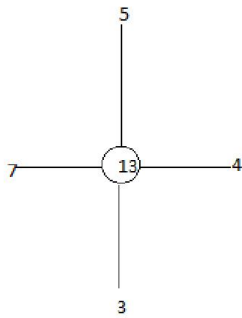
a. 12   b. 15

c. 18   d. 14

71.

a. 3   b. 5

c. 9   d. 10

72

a. 82 b. 83

c. 86 d. 26

73.

e. 9 f. 18
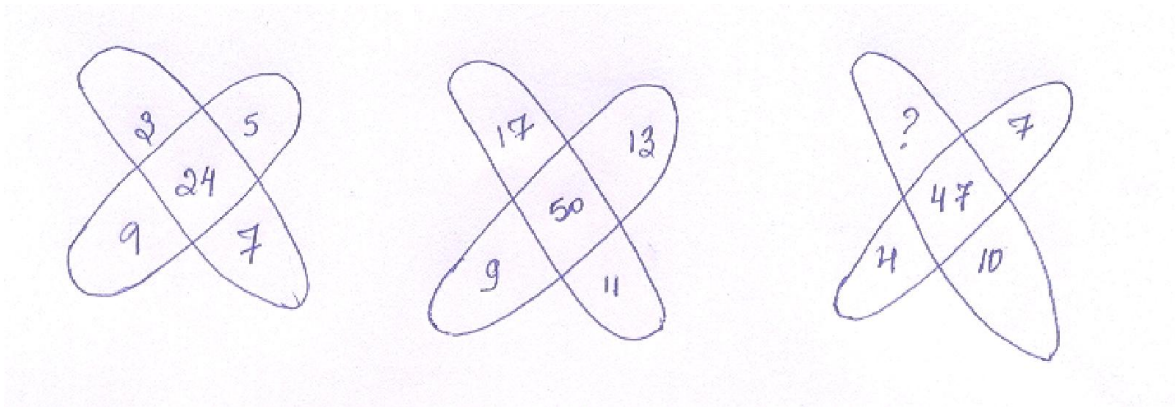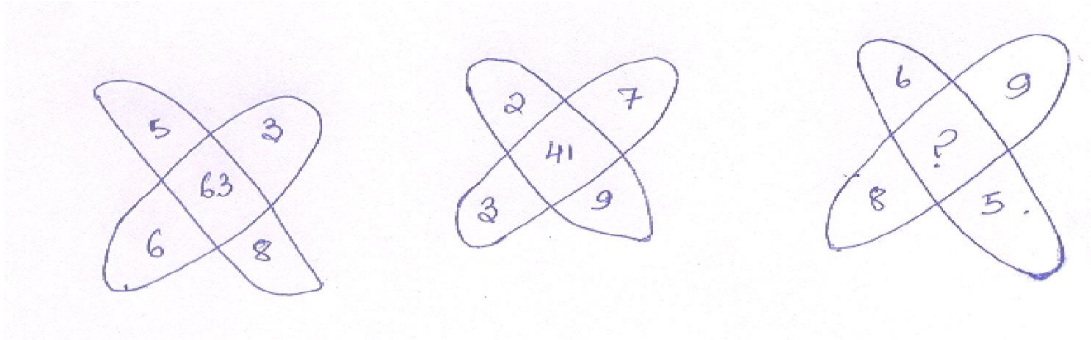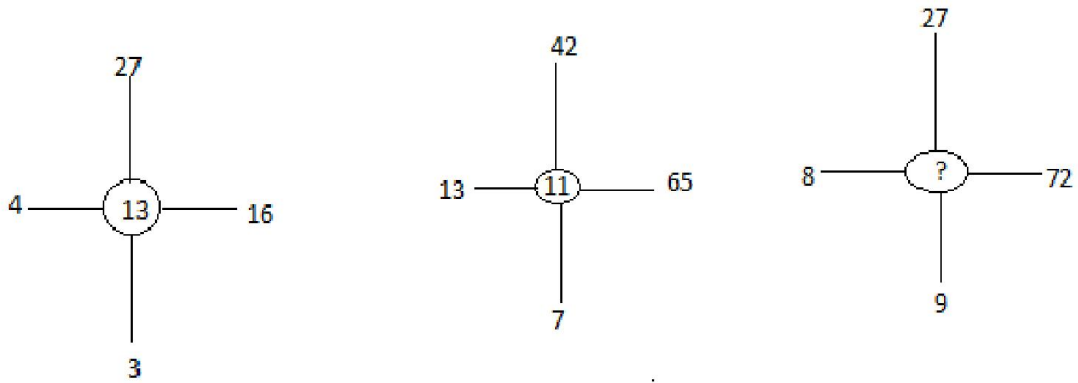
g. 12 h. 6

Direction (Q. No 74-80): In each of the following questions if interchanges are made in signs and numbers. Find the correct alternates.

74. If + means ÷, − means X, ÷ means + and X means −, then the value of 36 X 12 +4 ÷6 +2 −3 when simplified is

    a. 2   b. 18

    c. 42   d. 6 ½

    e. 12 ½

75. If P denotes ÷, Q denotes x, R denotes + and S denotes−, then the value of 18Q12P4R5S6 when simplified gives.

    a. 36   b. 53

    c. 59   d. 65051

76. If – means x, x means +, + means ÷ and ÷ means -, then 40 x12 +3 -6 ÷60 =?

    a. 7.95   b. 16

    c. 4   d. 479.95

77. If + means ÷, x means -, ÷ means x and – means +, then 8+6 x 4 ÷ 3 – 4 =?

    a. −12   b. $\dfrac{-20}{3}$

    c. 12   d. $\dfrac{20}{3}$

78. If x means ÷, − means x, ÷ means + and + means −, then (3-15÷19) x 8 +6 =?

    a. 8   b. 4

    c. 2   d. −1

79. If A means -, B means ÷, C means + as D means x, then 15B3C 24A 12D2=?

    a. 34   b. 2

    c. $\dfrac{5}{9}$ d. 5

80. If x means -, + means ÷, - means x and ÷ means +, then 15-2 ÷900 + 90 x 100=?
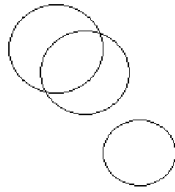
    a. 190   b. 180

    c. 90   d. −60

Direction (Q. No. 81-85): In the following Questions, Select from the given diagrams correcting represent, the relationship among the three classes.
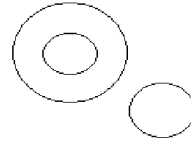
81.   Judge, Thief, Criminal,
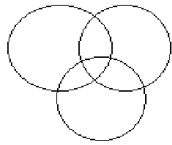
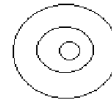(a)   (b)   (c)   (d)

82.   Language, French, German
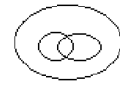

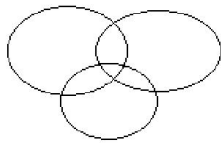(a)   (b)   (c)   (d)
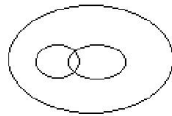
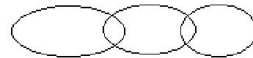83.   Tennis Fans, Cricket Players, Student.

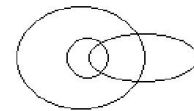(a)   (b)   (c)   (d)
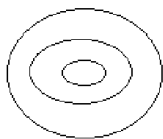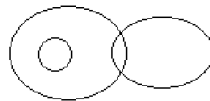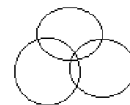
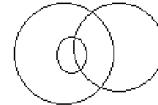84.   Rhombus, Quadrilateral, Polygons.

(a)   (b)   (c)   (d)

85.   **Elephant, Wolves, Animals.**

(a)   (b)   (c)   (d)

Direction (Q. No. 86-90): Study the following information to answer the given questions.

86. Sohan introduces Mohan as the son of the only brother of his father's wife. How is Mohan related to Sohan?

     a.   Cousin   b.   Son
     c.   Uncle   d.   Son- in- Law
     e.   Brother

87. Pointing out to the photograph, a man tells his friend, "She is the daughter of the only son of my father's wife."How is the girls related to the man in the photograph.

     a.   Daughter   b.   Cousin
     c.   Mother   d.   Sister
     e.   Niece

88. If Kunal Says," John's Mother is the only daughter of my Mother". How is Kunal related to John?

     a.   Brother   b.   Father
     c.   Grand Father   d.   Cant' be found
     e.   None of these

89. Ram has a brother Shyam. Ram is the son of Ramesh. Suresh is Ramesh's Father. How is Shyam related to Suresh?

     a.   Son   b.   Grandson
     c.   Brother   d.   Grand Father
     e.   None of these

90. C is A's Father's nephew. D. is A's Cousin but not the brother of C. How is D related to C?

     a.   Father   b.   Sister
     c.   Mother   d.   Aunt
     e.   None of these

SCHOLASTIC APTITUDE TEST
SCIENCE

(1) The life supporting zone of the environment is

    a. Biosphere   b. Lithosphere

    c. Atmosphere   d. Hydrosphere

(2) The endocrine glands are also known as

    a. Exocrine glands   b. Ductless glands

    c. Secretive glands   d. Ductile glands

(3) The soil with the maximum water- holding capacity is

    a. Sandy soil   b. Clayey soil

    c. Loamy soil   d. Humus soil

(4) Separating hair of different textures is called

    a. Shearing   b. Scouring

    c. Sorting   d. Carding

(5) Which is the smallest blood vessel in human body

    a. Arteries   b. Veins

    c. Capillaries   d. Venule

(6) What is the number of alveoli in the lungs ?

    a. 3 million   b. 30 million

    c. 300 million   d. 30,000 million

(7) Related phyla are grouped together to form

    a. Order   b. Genus

    c. Family   d. Kingdom

(8) Nucleolus is rich in

    a. Proteins only   b. Protein and DNA

    c. RNA only   d. Protein and RNA

(9) Yeast reproduces by

    a. Vegetative propagation   b. Budding

    c. Fragmentation   d. Spore formation

(10) The coiled tubes inside the kidneys are called

    a. Nephrons   b. Trachea

    c. Bronchi   d. Alveoli

(11) Penguins are birds that

    a. Can fly   b. Can swim

    c. Can run   d. Cannot swim

(12) Which of the following is an example of Parasitic nutrition

    a. Dodder   b. Venus fly trap

    c. Mistletoe   d. Moulds

(13) Which of the following is the alternate relaxation and contraction of the muscles of the alimentary canal?

    a. Movement   b. Peristalsis

    c. Assimilation   d. Absorption

(14) The Chemical name of water is

    a. Hydrogen oxide   b. Hydrogen monoxide

    c. Hydrogen dioxide   d. Hydrogen Trioxide

(15) Natural gas is mostly

    a. Carbon monoxide   b. Carbon Dioxide

    c. Methane   d. Chloro Flouro carbon

(16) Heat travels through a metal by

    a. Conduction   b. Convection

    c. Radiation   d. Insulation

(17) The temperature scale on a Clinical Thermometer runs from

    a. 32°c to 42°c   b. 34°c to 42°c

    c. 35°c to 42°c   d. 37°c to 42°c

(18) Which of the following is a mixture?

    a. Sugar   b. Water

    c. Glucose   d. Blood

(19) Which of the following is not a Homogeneous mixture?

    a. Smoke   b. Brass

    c. Clean air   d. Solution of Common salt

(20) Which of the following is not a Combustible Material?

    a. Wood   b. Rocks

    c. Coal   d. Sulphur

(21) Stings of ants and bees are painful due to

    a. Butyric acid   b. Formic Acid

    c. Acetic Acid   d. Nitric Acid

(22) Crude oil is produced from

      a. Coal   b. Char coal

      c. Coke   d. Petroleum

(23) The first plastic called Bakelite was made in

      a. 1609   b. 1709

      c. 1809   d. 1909

(24) Carpets and floor coverings is made up of

      a. Poly(ethane)   b. Poly (ethene)

      c. Poly(propane)   d. Poly (propene)

(25) The time period of a Pendulum depends on

      a. Length of the strings   b. Mass of the bob

      c. Weight of the bob   d. Material of the bob

(26) The filament of an electric bulb is made up of

      a. Copper   b. Lead

      c. Tungsten   d. Silver

(27) Dentists use

      a. Convex mirrors   b. Convex lens

      c. Concave mirrors   d. Concave lens

(28) The basic unit of speed is

      a. ms^{-1} b. mm^{-1}

      c. $m\ hour^{-1}$ d. $km\ hour^{-1}$

(29) When a beam of light is passed through your body, the light is

    a. Absorbed   b. Scattered

    c. Reflected   d. Refracted

(30) A shrill sound is said to be

    a. Low pitched   b. High pitched

    c. Medium   d. Very High pitched

(31) Which of the following force you are using when you squeeze-out water from wet clothes?

    a. Muscular   b. Upthrust

    c. Twist   d. Pull

(32) Electrolysis of acidulated water produces hydrogen and oxygen in the volume ration

    a. 1:2   b. 2:1

    c. 2:2   d. 2:0

(33) Viscosity is the friction inside a

    a. Solid   b. Liquid

    c. Gas   d. Molecules

(34) A symbol for a battery of two cells will have how many parallel vertical lines?

    a. 1   b. 2

    c. 3   d. 4

(35) A Person hears the boom of a gun 4.5 seconds after he sees its flash. If he is 1400 meters away from the gun, what is the speed of sound in air?

    a. 330m/sec   b. 330.5 m/sec

    c. 1795.5 m/sec   d. 1800.5 m/sec

SOCIAL SCIENCE

1. The battle of plassey was fought in:

   a. 1557 A.D
   b. 1757 A.D
   c. 1775 A.D.
   d. 1785 A.D

2. The Regulating Act was passed on:

   a. 1737 A.D
   b. 1773 A.D
   c. . 1873 A.D
   d. 1783 A.D.

3. The exploitation of the conquered nation by the conquering country is termed as:

   a. Colonialism
   b. Imperialism
   c. Mercantilism
   d. Capitalism

4. The father of Tipu Sultan was:

   a. Mirkasim
   b. Suraj-ud-daulah
   c. Haider Ali
   d. Muzaffar Tang

5. The French held on to Pondicherry till:

   a. 1854
   b. 1946
   c. 1954
   d. 1964
   e. 1974

6. The Europeans entered India as:

   a. Traders
   b. Industrialist
   c. Rulers
   d. Merchants

7. The first Governor General of India was:

   a. Lord Wellesly   b. Warren Hasting

   c. Lord Dalhousie   d. Dupleix

8. The Permanent Settlement was introduced in:
   a. 1772   b. 1786

   c. 1792   d. 1793

9. The Farazi Movement was led by:

   a. Bhai Ram Singh   b. Syed Ahmed

   c. Dudu Miyar   d. Muhammud Ali

10. The tribes of Garo- hills during the British Resistance Movement was led by:

    a. Jatra Oraon   b. Pa-Togan Sangma

    c. Sona Ram   d. Captain William Sangma

11. The resistance movement against the British in the Jaintia Hills was led by:

    a. Kiang Nongbah   b. Pa Togan Sangma

    c. Tirot Singh   d. Phan Nonglait

12. C. V. Raman was awarded the Nobel Prize in:

    a. Chemistry   b. Medicine

    c. Bio-Science   d. Physics

13. The Plateau regions of India are famous for huge reserves in:

    a. Water Resources   b. Mineral Resources

    c. Soil Resources   d. Forest Resources

14. The Indira Gandhi canal is about:

    a. 647 km long   b. 648 km long

    c. 649 km long   d. 650 km long

15. The important trees of the temperate evergreen forests are:

    a. Chestnut and Citrus   b. Pine and Fir

    c. Cedar and Spruce   d. Eucalyptus and Oak

16. The National Park found in India:

    a. 60   b. 70

    c. 80   d. 90

17. The type of farming which is practiced on the same piece of land on permanent basis is:

    a. Shifting Cultivation   b. Subsistence Agriculture

    c. Sedentary Agriculture   d. Extensive Agriculture.

18. The major producers of jute in the world:

    a. Bangladesh and India   b. Brazil and Turkey

    c. Pakistan and Bangladesh   d. India and Brazil

19. France is a big exporter of :

    a. Textile products   b. Chemical products

    c. Animal products   d. Petroleum products

20. What is known as the silicon valley of India:

    a. Mumbai   b. Chennai

    c. New Delhi   d. Bangalore

21. Literacy rate in our country according to 2001 census is about:

    a. 55%   b. 65%

    c. 75%   d. 85%

22. Most of the floods in India occur during the month of:

    a. April to July   b. July to October

    c. June to September   d. May to August

23. A cyclone or an earthquake is a:

    a. Geological disaster   b. Climatic disaster

    c. Man – made disaster   d. Natural disaster

24. The percentage of the Somalians dependant on international aid for their survival:

    a. 22%   b. 23%

    c. 24%   d. 25%

25. The Constitution of India was prepared by a

    a. Constituent Assembly
    b. General Assembly.
    c. Legislative Assembly
    d. Act of Parliament

26. "Republic" means that the head of the state is a

    a. A King
    b. A Queen
    c. An Elected President
    d. An Elected Prime Minister

27. Who composed the National Anthem?

    a. Bankim Cahndra Chatterjee
    b. Rabindra Nath Tagore
    c. B. R. Ambedkar
    d. Jawahralal Nehru

28. The National Song was composed by

a. Sardar Patel

b. Swami Vivekenanda

c. Bankim Chandra Chatterjee

d. Rabindra Nath Tagore

29. The Union List has

a. 90 subjects

b. 93 subjects

c. 95 subjects

d. 97 subjects

30. The President of India is elected by

a. An Electoral College

b. Member of Parliament

c. MCAs

d. None of the above

31. The United Nation has

a. 5 organs

b. 6 organs

c. 7 organs

d. 8 organs

32. The World Bank Started its operations in the year

a. 1943

b. 1945

c. 1946

d. 1947

33. "Apartheid" means

a. Racial Discrimination

b. Right of Citizens

c. To aims at the settlement

d. To hold fart.

34. MAD stands for

a. Mutually Assertive Destructive.

b. Mutually Assured Destructive

c. Mutually Assigned Destructive

d. None of the Above.

35. The bone of contention between India and Pakistan is

a. Arunachal Pradesh

b. Kashmir

c. Simla

d. All of the above

MATHEMATICS

1. A 116 $\frac{2}{3}$ m long rope is cut into ten equal pieces. The length of each piece of the rope is

   1. $8\frac{1}{2}$ m
   2. $10\frac{2}{3}$ m
   3. $11\frac{2}{3}$ m
   4. $12\frac{1}{3}$ m

2. The value of $\left(\frac{16}{81}\right)^{3/4} \div \left(\frac{16}{81}\right)^{4/5}$ is

   1. $\frac{16}{81}$
   2. $\frac{9}{4}$
   3. $\frac{9}{4}$
   4. $\frac{2}{3}$

3. Which of the following number is not a perfect cube?

   1. 8
   2. 64
   3. 81
   4. 343

4. The value of $(-0.01)^3$ is

   1. -0.000001
   2. 0.000001
   3. -0.03
   4. -0.01

5. The product of $(x-3)(x+7)$ is

   1. $x^2-4x-21$
   2. $x^2-10x-21$
   3. $x^2+4x+21$
   4. $x^2+4x-21$

6. If $(3x+4y)= -1$ and $xy =1$, then the value of $37x^3+64y^3$ is

   1. -37
   2. -35
   3. 35
   4. 37

7. When resolved into factors, the expression $x^2 -6x-10$ becomes

   1. $(x+10)(x-4)$
   2. $(x-10)(x+4)$
   3. $(x-5)(x+8)$
   4. $(x-10)(x-4)$

8. If $\dfrac{3x}{4} + 3 = 18$, then the value of x is

    1. 60   2. 25

    3. 23   4. 5

9. If x=1, y=2, and z= −3, then the value of the expression $x^3+y^3+z^3+3xyz$ is

    1. 0   2. −18

    3. −36   4. 54

10. A fruit seller bought 240 oranges at the rate of ₹ 4.50 each. He found that 25% of the oranges were spoilt. He sold the remaining oranges at the rate of ₹ 6.00 each. He made

    1. neither loss nor profit   2. 10% loss

    3. 10% gain   4. 12.5% profit

11. Mr. Lyngdoh deposit ₹ 9,000.00 at the Bank at the rate of 5% and received ₹ 225.00 as interest. He kept the money at the Bank for

    1. 2 years   2. $1\dfrac{1}{2}$ years

    3. 1 year   4. $\dfrac{1}{2}$ year

12. If x varies directly as y^2 and x=5 when y=2, then the value of x when y=4 is

    1. 5   2. 10

    3. 20   4. 40

13. Which of the following variables is not a direct proportion?

    1. Distance travelled by a car and its speed   2. Number of people working and the time to complete a given work.

    3. Number of people and consumption of food   4. Money invested and interest on the money.

14. Which of the following is not true for a rhombus?

1. Opposite sides are parallel
2. All sides are equal

3. The diagonals are equal
4. The diagonals bisects each other at right angles.

15. The number of edges of a cube is

1. 6
2. 8

3. 10
4. 12

16. The area of a right angled triangle whose base is 5 cm and hypotenuse 13cm, is

1. 18 sq. cm
2. 30 sq.cm

3. 60 sq.cm
4. 65 sq.cm

17. The area of a triangle of altitude 15cm is 225 sq.cm. The length of the base of the triangle is:

1. 45 cm
2. 30 cm

3. 15 cm
4. 7.5 cm

18. The length of the parallel sides of a trapezium are 36 cm and 64 cm, and the distance between them is 20 cm. The area of the trapezium is

1. 1000 sq.cm
2. 1280 sq. cm

3. 2000 sq. cm
4. 2304 sq. cm

19. The total surface area of a right circular cylinder whose base has radius 7 cm and height 8 cm, is:

1. 330 sq.cm
2. 352 sq. cm

3. 506 sq. cm
4. 660 sq. cm

20. Given below are the marks obtained by 50 students:

Marks	Number of students (frequencies)
0−10	4
10−20	6
20−30	16
30−40	18
40−50	6
	50

The average marks is

1. 26.4

2. 28.2

3. 30.2

4. 31.4

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL MEANS CUM- MERIT SCHOLARSHIP 2014-15
MENTAL ABILITY TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	36	C	71	C
2	B	37	E	72	A
3	C	38	A	73	C
4	B	39	C	74	C
5	A	40	A	75	B
6	B	41	E	76	C
7	B	42	D	77	B
8	D	43	C	78	C
9	C	44	C	79	D
10	C	45	C	80	D
11	A	46	B	81	A
12	C	47	B	82	C
13	D	48	A	83	A
14	B	49	A	84	C
15	A	50	B	85	D
16	C	51	D	86	A
17	B	52	A	87	A
18	B	53	D	88	E
19	C	54	D	89	B
20	C	55	D	90	B
21	D	56	D		
22	E	57	D		
23	A	58	A		
24	A	59	C		
25	C	60	C		
26	E	61	B		
27	D	62	C		
28	A	63	B		
29	D	64	D		
30	A	65	D		
31	C	66	B		
32	A	67	B		
33	B	68	B		
34	D	69	B		
35	B	70	A		

Signature of Invigilator with date ……………………………….

SCHOLASTIC APTITUDE TEST
KEY ANSWER

Science		Social Science		Mathematics	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	A	1	B	1	3
2	B	2	B	2	2
3	B	3	B	3	3
4	C	4	C	4	1
5	C	5	C	5	4
6	C	6	A	6	3
7	D	7	B	7	2
8	D	8	D	8	1
9	B	9	C	9	3
10	A	10	B	10	1
11	B	11	C	11	4
12	A	12	D	12	3
13	B	13	B	13	2
14	B	14	C	14	3
15	C	15	D	15	4
16	A	16	C	16	2
17	C	17	C	17	2
18	D	18	A	18	1
19	A	19	B	19	4
20	B	20	D	20	2
21	B	21	B		
22	D	22	C		
23	D	23	D		
24	D	24	D		
25	A	25	A		
26	C	26	D		
27	C	27	B		
28	A	28	C		
29	B	29	D		
30	B	30	A		
31	C	31	B		
32	B	32	C		
33	B	33	A		
34	B	34	B		
35	A	35	B		

Signature of Invigilator with date ……………………………….

NATIONAL MEANS CUM MERIT SCHOLARSHIP EXAMINATION
2015-16

Part I – 90 minutes   *Maximum Marks –90*

Part II – 90 minutes   *Maximum Marks –90*

Class VIII Code	State Code	Year	Centre Code	Serial No.
1	1 4	1 5		

INSTRUCTION TO CANDIDATES

Read the following instructions carefully before answering the questions.

1. Answers are to be written on supply **ANSWER SHEET**

2. Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.

3. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit is to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and **ANSWER SHEET.** For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.

4. Avoid over writing the numbers/ digits for both Centre Code and Serial No.

5. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consist 90 questions.

6. All Questions carry one mark each.

7. All Questions are Compulsory.

8. Begin with the first question and keep trying one question after another till you finish both the parts.

9. Since the time allotted to the two parts of these questions booklets is very limited, you should make the best of it by not spending time on any one question

10. Record your answer using Ball Point Pen only. You have to indicate your answer on the answer sheet as advice.

11. Separate pages for Rough Work are provided at the last page of your question booklet.

12. The answer sheet has two parts Part I and Part II corresponding to Part I and Part II of the Question Booklet. In part II, answers to a subject are to be given under the column where the name of the subject is given.

13. Answer to each is to be indicated by encircling around alternative **1 or 2 or 3 or 5 OR a or b or c or d or e** from amongst the ones given for the corresponding questions in the question Booklet,
e.g.., if you think that alternative **1or a** is correct then encircle as example given below

$$\left(1\right) \quad \textbf{or} \quad \left(a\right)$$

14. Now turn to the next page and start answering the questions.

15. Hand over your Question Booklet and Answer Sheet to the Invigilators before you leave the Examination Hall.

Timing 10:00 Am To 1 : 00 Pm

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

MENTAL ABILITY TEST

Directions (Q. nos. 1-6): In these questions, you are to select the correct answer based on the part of the statement in the given questions.

1) If WORK is coded as 4-12-9-16 then how will you code WOMAN?

   a. 4-12-14-26-13
   b. 4-26-14-13-12
   c. 23-12-26-14-13
   d. 23-15-13-1-14

2) If RAJU is coded as 11-12-13-14 and JUNK is coded as 13-14-10-9 then how will you code RANK?

   a. 9-10-11-12
   b. 10-11-12-9
   c. 11-12-10-9
   d. 12-11-10-9

3) If C=3, F=6 and HEN=27, then what is the value of DICE?

   a. 20
   b. 35
   c. 21
   d. 18

4) If H=8, DOG=26, CAT=?

   a. 15
   b. 26
   c. 30
   d. 21

5) In a certain language STARK is written as LBFMG and MOBILE is written as TNRSPJ, then how will BLAME be written in that same code?

   a. TSFRL
   b. TSFGH
   c. RPFTJ
   d. NJFTP

6) If HAPPY is written as IBQQZ in a certain code, then how would SORROW be written in that code?

   a. TPSSXX
   b. TTPSSPX
   c. TPSSSX
   d. None of the above

Directions (Q. nos. 7-20): in the following questions two words are given. These words/alphabets are related to each other in some way. Find out the relationship between the two words /alphabets and choose the word/alphabet from the third word/alphabet as per the first two bear.

7) Malaria : Disease : : Spear : ?
   a. Wound
   b. Sword
   c. Weapon
   d. Death

8) Food : Stomach : : Fuel : ?
   a. Plane
   b. Truck
   c. Engine
   d. Automobile

9) Sweden : Stockholm : : Australia : ?
   a. Paris
   b. Sydney
   c. London
   d. Canberra

10) Whale : Mammal : : Snake : ?
    a. Bird
    b. Insect
    c. Mammal
    d. Reptile

11) Day : Night : : Moon : ?
    a. Star
    b. Sun
    c. Light
    d. Earth

12) PITCH is related to CRICKET, in the same way ARENA is related to....
    a. Wrestling
    b. Gymnastic
    c. Tennis
    d. Badminton

13) DOCTOR is related PATIENT, in the same way LAWYER is related to...

    a. Customer

    b. Client

    c. Magistrate

    d. Criminal

14) SMELL is related to FLOWER, in the same way as TASTE is related to...

    a. Tongue

    b. Water

    c. Sweet

    d. Taste

15) FLOWER is related to PETAL, in the same way as BOOK is related to...

    a. Author

    b. Content

    c. Library

    d. Pages

16) BDG : CFJ : : EGJ :?

    a. FIL

    b. FIN

    c. FJM

    d. FIM

17) EGIK : LLHF : : SUWY : ?

    a. ZXVT

    b. TVXZ

    c. MOQS

    d. LNPR

18) AFHO : GBDJ : : CHFM : ?

    a. GBIM

    b. GBLD

    c. GPLD

    d. IDBH

19) LO : PK : : IR : ?

    a. GT

    b. SH

    c. MN

    d. FU

20) ACEG : ZXVT : : HJLM : ?
  a. SQON
  b. SRPO
  c. QOMK
  d. RPNL

Directions (Q.Nos. 21-30). In each of the following questions four of the following are alike in a certain way and so form a group. Find the odd one that does not belong to the group.

21) a. Unicorn   b. Rhino
    c. Fox   d. Antelope
    e. Jackal

22) a. Blackmail   b. Smuggling
    c. Snobbery   d. Forgery
    d. Sabotage

23) a. Moon   b. Football
    c. Earth   d. Bangle
    e. Water-melon

24) a. Ring   b. Tyre
    c. Plate   d. Bangle
    e. Rubber tube

25) a. Huge   b. Tiny
    c. Heavy   d. Small
    e. Big

26) a. Rickshaw   b. Taxi
    c. Tanga   d. Cart
    e. Phaeton

27) a. Mountain   b. Valley
    c. Glacier   d. Sea-coast
    e. Ridge

28) a. Triangle   b. Tangent
    c. Square   d. Rhombus
    e. Pentagon

29) a. Cholera   b. AIDS

    b. Cancer   d. Health

    e. Jaundice

30) a. Leaf   b. Stem

    c. Branches   d. Garden

    e. Root

Directions (Q. Nos. 31-35): In each question you are to select the answer based on the information given.

31) A policeman left his police post and proceeded 4km South on hearing a loud sound from point A. On reaching the place, he heard another sound and proceeded 4km to his left to point B. From B, he proceeded left to reach to another place C, 4 km away. In which direction he has to go to reach his police post?
    a. North
    b. South
    c. East
    d. West

32) A man drives his car 50km towards Eastward direction. He turned right went for 30 km, then he turned West and drive for 10 km. how far is he from the starting point?
    a. 60km
    b. 50km
    c. 20km
    d. 100km

33) Raj starts from his office facing West and walks 100m straight, then takes a right turn and walks 100m. Further, he takes a left turn and walks 50m. In which direction is Raj now from the starting point?
    a. North-east
    b. South-east
    c. North-west
    d. North

34) It is 3 O' clock in a watch. If the minute hand points towards the North-east, then the hour hand will point towards the
   a. South
   b. South-west
   c. North-west
   d. South-east

35) From point P, Akshay starts walking towards East. After walking 30m, he turns to his right and walks 10m. He then turns to his right and walks 30m. He again turns to his right and walks 30m. How far is he from point P and in which direction?
   a. Point P itself
   b. 20m, West
   c. 10m, North
   d. 20m, North

Directions (Q. Nos. 36-40): In each of the following questions, find the missing number as well as the wrong number in the series.

36) 2, 6, 8, 16, 30, 54, ?
   a. 74
   b. 88
   c. 100
   d. 110

37) 3, 10, ?, 30, 43
   a. 12
   b. 19
   c. 21
   d. 25

38) 10, 14, 28, 32, 64, 68, 132
   a. 28
   b. 32
   c. 64
   d. 132

39) 3, 6, 10, 16, 21, 28
   a. 16
   b. 10
   c. 15
   d. 28

40) 17, 23, 31, 41, 53, 69

    a. 23

    b. 31

    c. 41

    d. 69

Directions (Q. Nos. 41-45): In each of the following questions, find the missing term out of the given alternatives.

41) H, I, K, N, ?

    a. O

    b. Q

    c. R

    d. S

42) A, Z, D, Y, G, X, ?, ?

    a. W, J

    b. J, W

    c. W, K

    d. K, W

43) AZ, BY, CX, D?

    a. E

    b. W

    c. R

    d. F

44) BD, FH, JL, MP, ?

    a. SV

    b. SU

    c. QS

    d. RT

45) DHL, PTX, BFJ, ?

    a. CGK

    b. KOS

    c. NRV

    d. RVZ

Directions (Q. Nos. 46-50): In each of the following letter series, some of the letters are missing which are given in order as one of the alternatives below it. Choose the correct alternatives.

46) a_ba_bb_ab_a
   a. baab
   b. aaba
   c. abab
   d. baaa

47) a_c_ba_ca_cb
   a. abcc
   b. acba
   c. bcaa
   d. bcba

48) _aa_ba_bb_ab_aab
   a. babab
   b. aaabb
   c. bbaab
   d. bbbaa

49) ac_bacc_a_cba_cb
   a. cbcc
   b. cbbc
   c. caac
   d. bbcb

50) aa_aabb_b_aa_aabb_bb
   a. bbbaa
   b. bbbba
   c. aabbb
   d. babba

Directions (Q. Nos. 51-54): Read the following information carefully and answer the questions which follow.

P,Q,R, S, T and V live on different floors in the same building having six floors numbered one to six(the ground floor is numbered 1, the floor above it, number 2 and so on and the topmost floor is numbered 6).

Q lives on an even numbered floor. Only two people live between the floors on which Q and V live. S live on the floor immediately above the floor on which R lives. S does not live on an odd numbered floor. P does not live on a floor which is immediately above or immediately below the floor on which T lives. P does not live on the lowermost floor i.e., floor number 1.

51) Who amongst the following live on the floors exactly between the floors on which Q and V live?
   a. R,S
   b. P,R
   c. S,T
   d. P,T
   e. Cannot be determined

52) Who amongst the following lives on floor number 5?
   a. P
   b. Q
   c. T
   d. V
   e. None of these

53) On which floor does T live?
   a. 3rd
   b. 5th
   c. 1st
   d. 4th
   e. 2nd

54) How many people live on the floors above the floor on which P lives?
   a. One
   b. Two
   c. Three
   d. Four
   e. None

Directions (Q. Nos. 55-60): Read the following information carefully and answer the questions

55) The age of the father 4 year ago was 8 times the age of his son. At present, the father's age is 4 times that of his son. What is the present age of son?
   a. 9 yr
   b. 7 yr
   c. 18 yr
   d. 14 yr

56) The age of father is thrice of his son. If the sum of their ages is 48 yr, what is the age of father?
   a. 30 yr
   b. 32 yr
   c. 36 yr
   d. 40 yr

57) At present, the ratio between the ages of Aaron and Deepak is 4:3. After 6 yr, Aaron's age will be 26yr. what is Deepak's present age?
   a. 12 yr
   b. 15 yr
   c. 25 yr
   d. 19 yr

58) A father is twice as old as his son. 20 yr ago, the age of the father was 12 times the age of the son. The present age of the son is
   a. 20yr
   b. 21yr
   c. 22yr
   d. 23yr

59) The average age of 19 boys in a class is 21 yr. if the teacher's age is included, the average increases to 22 yr. what is the teacher's age?
   a. 39yr
   b. 41yr
   c. 40yr
   d. 44yr

60) The ratio of A's and B's ages is 3:2. The product of their ages is 216 yr. Then the sum of their present ages is
   a. 18 yr
   b. 30 yr
   c. 36 yr
   d. 32 yr

Directions (Q. Nos. 61-65) Study the following information carefully and answer the questions given below.

P, Q, R, S, T, U, V, W are seven friends. Each of them likes a particular fruit, viz Apple, Banana, Pear, Guava, Orange, Mango and Watermelon and each of them has a favorite city, viz Mumbai, Pune, Delhi, Kolkata, Chennai, Hyderabad and Cochin.

The choices of fruit and favorite city of the seven friends are necessarily in the same order. Q likes Mango and his favorite city is Chennai. The one whose favorite city is Pune likes Watermelon. T's favorite city is Kolkata. R likes Guava and his favorite city is not Mumbai. W's favorite city is Cochin and he does not like either Banana or Pear. The favorite city of the one who likes Orange is Hyderabad. T does not like Pear. P's favorite city is neither Pune nor Hyderabad. S does not like Watermelon.

61) Who likes Apple?
   a. W
   b. T
   c. V
   d. P

62) Which fruit does p like?
   a. Apple
   b. Orange
   c. Pear
   d. Watermelon

63) Which is R's favorite city?
   a. Mumbai
   b. Pune
   c. Hyderabad
   d. Delhi

64) Which of the following combinations of Person-Fruit-City is incorrect?

   a. R- Guava- Kolkata

   b. Y-Watermelon-Hyderabad

   c. T-Banana-Cochin

   d. S-Guava-Delhi

   e. All are incorrect

65) Which is V's favorite city?

   a. Hyderabad

   b. Mumbai

   c. Pune

   d. None of the above

Directions (Q. Nos. 66-73) : In the following questions, select the missing number from the given responses.

66)
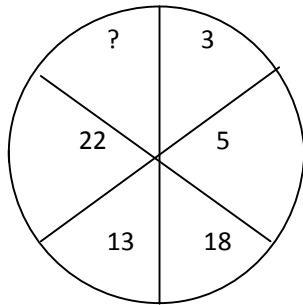
   a. 1

   b. 26

   c. 39

   d. 45

67)
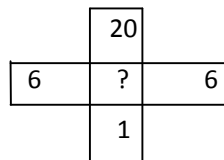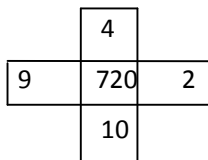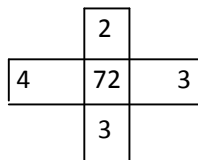
   a. 72

   b. 720

   c. 7200

   d. 38

68)
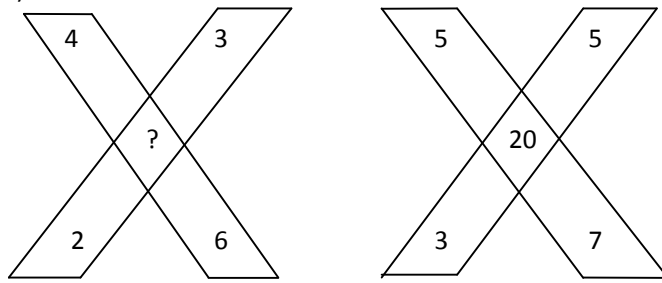
a. 15
b. 18
c. 20
d. 24

69)

1	2	3
11	7	5
120	45	?

a. 15
b. 16
c. 17
d. 18

70)

a. 35
b. 37
c. 45
d. 47

71)

4   8   12   6   24   30   2   4   8

        4   6   ?

a. 2

b. 7

c. 18

d. None of these

72)

12   8   16   7   25   21

    80   207   ?
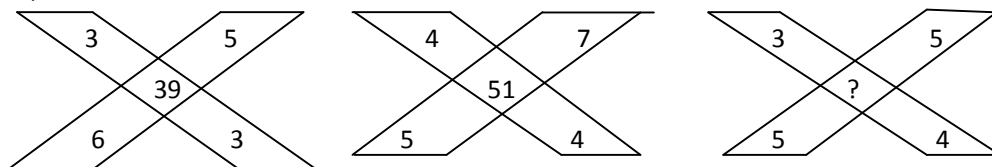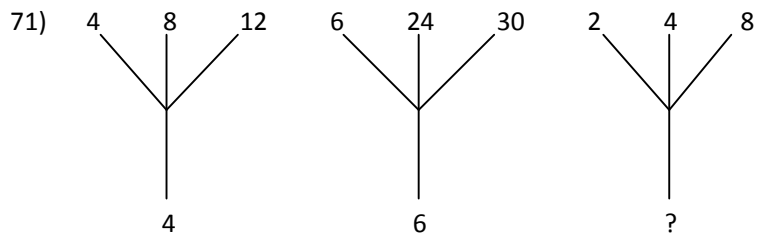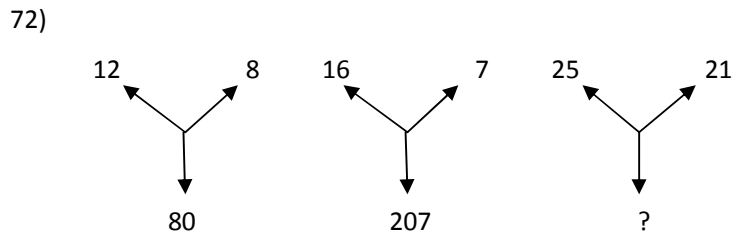
a. 184

b. 210

c. 241

d. 419

73)

        4   6   9

3 — | 3 | — 5   8 — | 10 | — 4   6 — | ? | — 4

        3   7   3
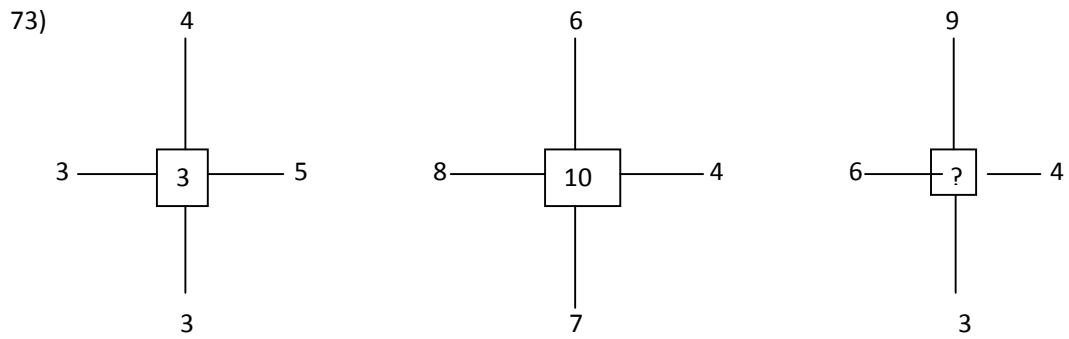
a. 5

b. 7

c. 20

d. 3

Directions (Q. Nos. 74-80): In each of the following questions if interchanges are made in signs and numbers. Find the correct alternatives.

74) If '-' stands for '÷', '+' stands for '-', '÷' stands for '×', '×' stands for '+', then which one of the following equation is correct?
   a. 70-2+4÷5×6=44
   b. 70-2+4÷5×6=21
   c. 70-2+4÷5×6=341
   d. 70-2+4÷5×6=96

75) If '÷' means '×', '×' means '+', '+' means '-' and '-'means '÷', find the value of 3×4+5-6÷7
   a. 1⅚
   b. 1⅓
   c. 1⅕
   d. None of these

76) If '+' means '-', '×' means '÷', '÷' means '+' and '-' means '×', then which of the following will be the value of the expression 252×9-5+32÷92?
   a. 95
   b. 168
   c. 192
   d. 200

77) If P denotes '×', T denotes '-', M denotes '+' and B denotes '÷', then
   2 8 B 7 P 8 T 6 M 4 = ?
   a. 31
   b. 32
   c. 30
   d. 34

78) If Q means '+', J means '×', T means '-' and K means '÷', then
   3 0 K 2 Q 3 J 6 T 5 = ?
   a. 18
   b. 28
   c. 31
   d. 103

79) If $ means '+' , # means '-',@ means '×' and ¥ means '÷', then

1 6 $ 4 @ 5 # 7 2 ¥ 8

   a. 25

   b. 37

   c. 27

   d. 29

80) Which of the following is correct?

96 $ 6 $ 8 $ 2

   a. ÷,=,×

   b. ×,=,÷

   c. =,÷,×

   d. =,×,÷

Directions (Q. Nos. 81-85): In the following questions select from the given diagrams correcting represent the relationship among the three classes

81) House, Bedroom, Bathroom
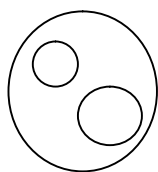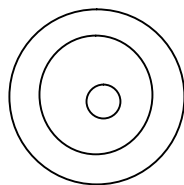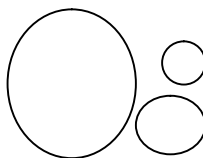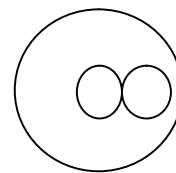
    a.   b.   c.   d.

82) Metal, Iron, Chloride
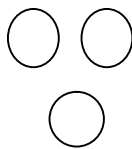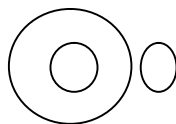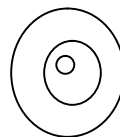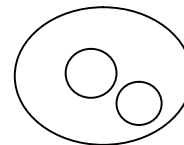
    a.   b.   c.   d.

83) Cabinet, Minister, Home Minister
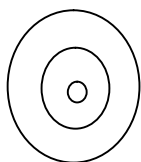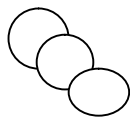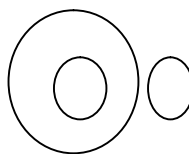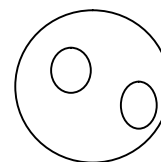
    a.   B.   c.   d.

84) Women, Married persons, Wives who work

a.   B.   c.   d.
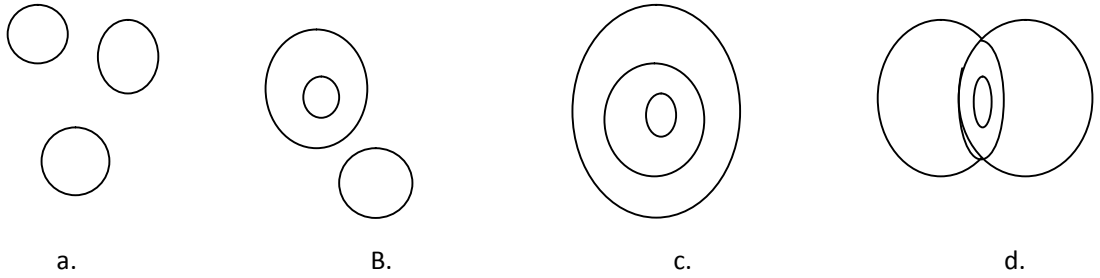
85) Honest, Poor, Intelligent

a.   b.   c.   d.
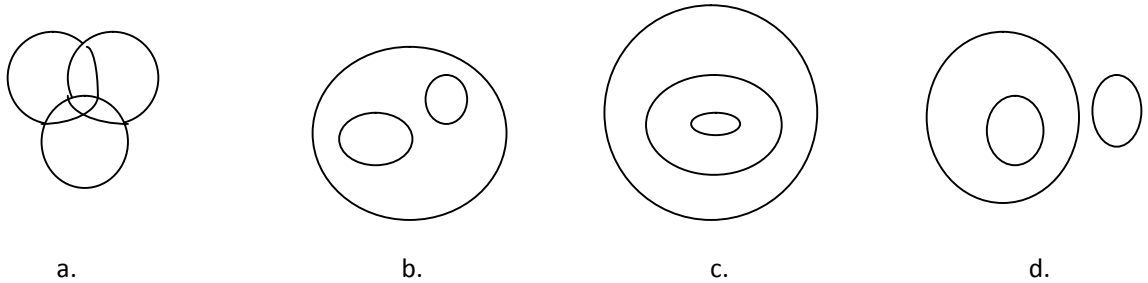
Directions (Q. Nos. 86-90) : Study the following information to answer the given questions.

86) Ramesh is the brother of Amit. Sushma is the sister of Satish. Amit is the son of Sushma. How is Ramesh related to Sushma?
     a. Father
     b. Brother
     c. Son
     d. Nephew

87) Pointing to a gentleman, Deepak said, "his only brother is the father of my daughter's father". How is the gentleman related to Deepak?
     a. Grandfather
     b. Father
     c. Uncle
     d. Brother-in-law

88) A boy introduced a girl as the daughter of the son of the father of his uncle. The girl is the boy's
    a. Nephew
    b. Cousin
    c. Sister
    d. Aunt

89) A is the brother of B. C is the father of D. E is the mother of B. A and D are brothers. Then, what is the relationship between E and C?
    a. Sister
    b. Sister-in-law
    c. Niece
    d. Wife

90) A man said to a lady, "Your mother's husband's sister is my aunt". How is the lady related to the man?
    a. Daughter
    b. Mother
    c. Granddaughter
    d. Sister

SCHOLASTIC APTITUDE TEST

1. Another name for battery acid is
   (a) Hydrochloric acid
   (b) Sulphuric Acid
   (c) Carbonic Acid
   (d) Acetic Acid

2. Which of the following is not an air pollutant?
   (a) Sulphur dioxide
   (b) nitrogen oxide
   (c) Carbon monoxide
   (d) Hydrogen dioxide

3. A good fuel must have
   (a) Low calorific valve
   (b) Moderate calorific valve
   (c) High calorific valve
   (d) No calorific valve

4. Which of the substance when rubbed with silk becomes charges and attracts bits of paper?
   (a) Wood
   (b) Rubber
   (c) Glass rod
   (d) Satin

5. Which of the following is a fuel?
   (a) Butter
   (b) Sugar
   (c) Walnuts
   (d) Coke

6. The quality of being moulded or shaped is
   (a) Elasticity
   (b) Plasticity
   (c) Ductility
   (d) Malleability

7. Man-made gaseous fuel contain
   (a) Hydrogen
   (b) Oxygen
   (c) Nitrogen
   (d) Sulphur

8. Raw materials for making plastics are compounds obtaines from
   (a) Sodium hydroxide
   (b) Sodium Chloride
   (c) Crude Oil
   (d) Calcium Chloride

9. Sulphur a non-metal is
   (a) Brittle
   (b) Ductile
   (c) Soluble
   (d) Combustible

10. Which of the following ins not a natural polymer?
    (a) proteins
    (b) Rubber
    (c) Cellulose
    (d) Plastics

11. Incomplete combustion tales place when the amount of air is
    (a) Sufficient
    (b) In sufficient
    (c) Excessively sufficient
    (d) Just sufficient

12. Which of the following factors is not necessary for photosynthesis?
    (a) Oxygen
    (b) Carbon dioxide
    (c) Chlorophyll
    (d) Sunlight

13. Bile is secreted by
    (a) pancreas
    (b) Duodenum
    (c) Liver
    (d) Gall bladder

14. The walls of the large intestine absorb:
    (a) Water
    (b) Cellulose
    (c) Digested food
    (d) Digestive juice

15. Mushrooms are

    (a) Parasites

    (b) Saprophytic

    (c) Symbiotic

    (d) Partial Parasites

16. Regeneration is the development of a new organism from

    (a) A Spore

    (b) A bud

    (c) A Stem

    (d) A Piece of parent organism

17. The tube that connects the stigma and ovary of a carpel is called

    (a) Pollen tube

    (b) Filament

    (c) Stalk

    (d) Style

18. The end products of aerobic respiration are

    (a) $Co_2 + H_2O$

    (b) $Co_2 + H_2O + energy$

    (c) $Co_2 + C_2H_5OH$

    (d) $Co_2 + C_2H_5OH + energy$

19. Which of the following is used by an earth warm to grip the ground when it moves?

    (a) Setae

    (b) Segments

    (c) Belly plates

    (d) Trunk

20. The white part of an egg is rich in

    (a) Vitamins

    (b) Minerals

    (c) Fats

    (d) Proteins

21. The largest bone of the body is

    (a) Carpals

    (b) Femur

    (c) Patella

    (d) Tarsals

22. Sunken Stomata are found in
    (a) Hydrophytes
    (b) Mesophytes
    (c) Terrestrial
    (d) Xerophytes

23. Which of the following does not apply to Mollusca?
    (a) Muscular Foot
    (b) Jointed legs
    (c) Soft body
    (d) Unsegmented

24. Which of the following is made up of amino acids?
    (a) Carbohydrates
    (b) Fats
    (c) Proteins
    (d) Vitamins

25. Of the following radiations, all are dangerous except
    (a) X-rays
    (b) Short Radio Waves
    (c) Ultra Violet Rays
    (d) Cosmic Rays

26. The reverse of ductility is
    (a) Malleability
    (b) Hardness
    (c) Brittleness
    (d) Stiffness

27. A. C. current cannot be used in
    (a) Lighting
    (b) Refrigeration
    (c) Heating
    (d) Electroplating

28. The surface tension is the releasing energy due to
    (a) Ether
    (b) Water
    (c) Alcohol
    (d) Mercury

29. Which of the following colours is best deviated by a prism
    (a) Violet
    (b) Red
    (c) Blue
    (d) Indigo
30. A man cannot see objects distinctly at a distance of less than 1 meter. He is suffering from
    (a) Old-age sight
    (b) Short – sightedness
    (c) Opaqueness of lens
    (d) Long-sightedness.
31. Richter scale is used to measure
    (a) Temperature of bodies
    (b) Intensity of wind
    (c) Magnitude of earthquake
    (d) Intensity of earthquake
32. Light year is the unit of
    (a) Speed
    (b) Time
    (c) Distance
    (d) Weight
33. If a horse starts suddenly, rider may fall due to
    (a) Moment of inertia
    (b) Law of conversation of Mass
    (c) Inertia of rest
    (d) Third Law of Newton
34. The heater element is made of
    (a) Tungsten
    (b) Copper
    (c) Nichrome
    (d) None of these
35. Which of the following is the lightest particle?
    (a) Proton
    (b) Neutron
    (c) Electron
    (d) Atom

SOCIAL STUDIES

1. Vasco da Gama was given a warm welcome when he reached calicut by King
   (a) Zamomin
   (b) Zamorin
   (c) Zamonin
   (d) Zamosin

2. The Carnatic wars were fought between the
   (a) English and French
   (b) English and Spanish
   (c) French and Portuguese
   (d) English and Portuguese

3. Who introduced the subsidiary alliance system in India
   (a) Lord Bentinck
   (b) Lord Dalhousie
   (c) Lord Cornwallis
   (d) Lord Wellesley

4. The Doctrine of Lapse was the annexation policy of
   (a) Lord Bentinck
   (b) Lord Dalhousie
   (c) Lord Cornwallis
   (d) Lord Wellesley

5. In 1765 Ad the British got the grant of Diwani of
   (a) Bengal, Bihar & Orissa
   (b) Bombay, Bihar & Orissa
   (c) Bihar, Bengal & Delhi
   (d) Delhi, Bombay & Orissa

6. The Kuka Movement was founded by
   (a) Mal Kuka Bhai
   (b) Mahatma Gandhi
   (c) Bhai Ram Sigh
   (d) Dudu Miyam

7. The Santheles first rose in rebellion under the leadership of
   (a) The four santhal brothers
   (b) Baba Bhairan
   (c) Baba Tilkha Majhi
   (d) Baba Kanhu Hul

8. Who was the founder of the Pagal Panthi Sect
   (a) Karim Shah
   (b) Musa Shah
   (c) Fakir Manju Shah
   (d) Belu Shah

9. Which Act forced the East India Company to recognize the education of the Indians as one of its foremost duties.
   (a) The Regulating Act of 1773
   (b) The Pitt's Indian Act of 1784
   (c) The Right to Education Act of 1813
   (d) The Charter to Education Act of 1813

10. What was the name of the new programme of Education started to promote mother tongue and Indian culture and nationalism
    (a) Sarna Shiksha Abiyan
    (b) Nai Talim
    (c) Gandhi Talim
    (d) Shiksha Vidyalaya

11. The most famous poet of Akbar's court was
    (a) Faizi
    (b) Ghizali
    (c) Muhammad Hussain Naziri of Nishapur
    (d) Sayyid Jamaluddin Uriti of Shiraj

12. For which one of the following movements did Mahatma Gandhi give the slogan 'Do or Die'?
    (a) Kheda Satyagraha
    (b) Non-Cooperation movement
    (c) Dandi March
    (d) Quit India Movement

13. Resources on the basis of utility are:
    (a) Potential Resources and Actual resources
    (b) Exhaustible Resources and Inexhaustible Resources
    (c) Directly used resources and Indirectly used resources
    (d) None of the above.

14. Sustainable development can be achieved through
    (a) Proper Planning with consideration of the current population and projecting the needs of future generation.
    (b) Trained persons to run administration, participation in government, etc
    (c) Both (a) and (b)
    (d) Only (a)

15. The land –use pattern of India with regards to forest is:
    (a) 21%
    (b) 22%
    (c) 23%
    (d) 24%

16. _____ is formed by the process of teaching of the fertile top soil to the lower areas.
    (a) Black soil
    (b) Res Soil
    (c) Laterite Soil
    (d) Mountain Soil

17. To prevent soil erosion in the hilly regions which one of the following measures will be successful:
    (a) Contour Cultivation
    (b) Strip Cultivation
    (c) Terrace Cultivation
    (d) Flood Control

18. The white Revolution is 1970 enhances
    (a) Rice Production
    (b) Wheat production
    (c) Bajra Production
    (d) Milk Production.

19. World population Distribution may be divided into
    (a) Densely populated region
    (b) Moderately populated region
    (c) Sparsely populated regions
    (d) All of the above.

20. The leading producer of sugar in the world is
    (a) Japan
    (b) Cuba
    (c) Russia
    (d) Australia

21. Baba Budan Sahib a Muslim Fakir was the first person to bring _____
    seeds to India
    (a) Cotton
    (b) Tea
    (c) Coffee
    (d) Sugar cane

22. Jamshedpur a well-known industrial town of India is located in
    (a) Haryana
    (b) Punjab
    (c) Rajasthan
    (d) Jharkhand

23. Of the four rivers mentioned below, the one that does not make a delta is
    (a) Ganga
    (b) Tapti
    (c) Godavari
    (d) Mahanadi

24. The river Ganga has two major sources
    (a) Bhagirathi and Alaknanda
    (b) Bhagirathi and Yamuna
    (c) Bhagirathi and Saraswati
    (d) Alaknanda and Gandak

25. Which one of the following pair of cities is connected by National Highway?
    (a) Kolkotta and Mumbai
    (b) Kolkatta and Chennai
    (c) Kolkatta and Delhi
    (d) Kolkatta and Guwahati

26. Which of the following countries whose constitution is written in form?

   (a) India, France, Nigeria

   (b) Egypt, USA, South Africa

   (c) Pakistan, Japan, Russia

   (d) All of the above.

27. Who said " Man when perfected, is the best of animals, but when separated from the law and justice , he is the worst of all"

   (a) Aristotle

   (b) Plato

   (c) John Locke

   (d) None of the above

28. The prevention of Terrorism Act, 2002 was passed to curb:

   (a) Communalism

   (b) Regionalism

   (c) Terrorism

   (d) Terrorism and Communalism

29. The Constitution of India has abolished untouchability under

   (a) Article 14

   (b) Article 15

   (c) Article 16

   (d) Article 17

30. One third of the members of the Rajya Sabha have to retire after every

   (a) One year

   (b) Two year

   (c) Three Year

   (d) Four Year

31. How many types of emergencies can be imposed by the Indian President?

   (a) One

   (b) Three

   (c) Four

32. In which of the Parliament of India enacted the "Protection of Human Rights Act"?

   (a) 1993

   (b) 1994

   (c) 1995

   (d) 1996

33. The Bhakra Nangal project is a joint venture between which of the following Indian States?

   (a) Haryana, Punjab and Madhya Pradesh

   (b) Haryana, Punjab and Goa

   (c) Haryana, Punjab and Rajasthan

   (d) Haryana, Punjab and Maharashtra

34. In which year the Zamindari System was abolished in India?

   (a) 1940

   (b) 1950

   (c) 1960

   (d) 1970

35. The full form of MNCs is

   (a) Multi National Corporations

   (b) Multi National Cosmopolitan

   (c) Multi National Confederations

   (d) Multi National Companies

MATHEMATICS

1. The multiplication inverse of $\dfrac{0}{1}$ is
    (a) 1
    (b) -1
    (c) 0
    (d) not defined

2. Three rational numbers lying between $\dfrac{-3}{4}$ and $\dfrac{1}{2}$ are

    (a) $\dfrac{-1}{2}$, 0, $\dfrac{3}{4}$

    (b) $\dfrac{-1}{4}$, $\dfrac{1}{4}$, $\dfrac{3}{4}$

    (c) $\dfrac{-1}{4}$, 0, $\dfrac{1}{4}$

    (d) $-\dfrac{5}{4}$, 0, $\dfrac{1}{4}$

3. One(1) is
    (a) The identity for addition of rational numbers
    (b) The identity for subtraction of rational numbers
    (c) The identity for multiplication of rational numbers
    (d) The identity for division of rational numbers

4. Listed below are the temperatures in °C for 10 days:
    -6, -8, 0, 3,2,0,1,5,4,4
    The range of the data is
    (a) 8 °C
    (b) 10 °C
    (c) 12 °C
    (d) 13 °C

5. The given pie chart depicts the information viewers watching different types of programmers are viewed the most?
    (a) News
    (b) Entertainment
    (c) Sports
    (d) Informative

News 15
informative 10%
Entertainment 50%
Sports 25%
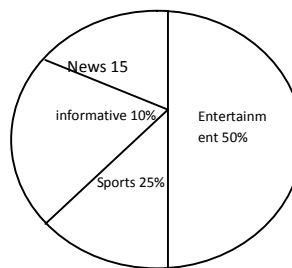
6. A perfect square can never have the following digit at ones place
   (a) 8
   (b) 6
   (c) 5
   (d) 1

7. if m is the cube root of n, then n is
   (a) m^2
   (b) $\sqrt{m}$
   (c) $n\big/3$
   (d) $3\sqrt{m}$

8. Linear equation is one variable has
   (a) Only one variable with any power
   (b) Only one term with a variable
   (c) Only one variable with power
   (d) Only constant term

9. IF $8\chi-3 = 25 + 17\chi$, then χ is
   (a) Is a fraction
   (b) Is an integer
   (c) Is a rational number
   (d) Cannot be solved

10. The sum of the angles of a quadrilateral is
    (a) $180°$
    (b) $270°$
    (c) $300°$
    (d) $360°$

11. For which of the following quadrilaterals, the diagonals bisects other at right angles?
    (a) Trapezium
    (b) Rhombus
    (c) Kite
    (d) Rectangle

12. Which of the following is a regular polyhedron?
    (a) Cuboid
    (b) Triangular prism
    (c) Cube
    (d) Square prism

13. On a polynomial, the exponents of the variables are always
    (a) Integers
    (b) Non-negative integers
    (c) positive integers
    (d) Non-positive integers

14. The volume of a rectangular box (cuboid) with length – 2ab , breadth=3ac
    and height = 2ac is
    (a) $12a^3bc^2$
    (b) $12a^3bc$
    (c) $12a^2bc^2$
    (d) 2ab+3ac+2ac

15. The coefficient of y is the term $\dfrac{-y}{3}$ is

    (a) -1
    (b) -3
    (c) $\dfrac{1}{3}$
    (d) $\dfrac{-1}{3}$

16. The value of $3^5 \div 3^6$ is
    (a) 3
    (b) 3^{-1}
    (c) 3^{11}
    (d) 3^{-11}

17. A car covers distance in 40 minutes with an average speed of 60 km per
    hour. the average speed to cover the same distance in 30 minutes is
    (a) 80km/h
    (b) 45 km/h
    (c) 70 km/h
    (d) $\dfrac{45}{2}$ km/h

18. Which of the following may inversely with each other?
    (a) Speed and distance covered
    (b) Distance covered and taxi fare
    (c) distance travelled and time taken
    (d) Speed and time taken.

19. The Perimeter of a trapezium is 52cm and its each non-parallel sided is
    equal to 10cm with its height 8cm. Its area is
    (a) 128cm²
    (b) 124cm²
    (c) 118 cm²
    (d) 112cm²

20. The volume of a cube is 64cm³. Its surface area is
    (a) 128 cm²
    (b) 96cm²
    (c) 64cm²
    (d) 24cm²

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL MEANS CUM- MERIT SCHOLARSHIP 2015-16
MENTAL ABILITY TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	A	36	C	71	A
2	C	37	B	72	A
3	C	38	D	73	D
4	B	39	A	74	B
5	C	40	D	75	A
6	D	41	C	76	D
7	C	42	B	77	C
8	C	43	B	78	B
9	D	44	D	79	C
10	D	45	C	80	A
11	B	46	A	81	A
12	A	47	D	82	B
13	B	48	C	83	A
14	D	49	A	84	D
15	D	50	C	85	A
16	D	51	E	86	C
17	A	52	D	87	C
18	D	53	C	88	C
19	C	54	E	89	D
20	A	55	B	90	D
21	A	56	C		
22	C	57	B		
23	D	58	C		
24	C	59	B		
25	C	60	B		
26	B	61	A		
27	C	62	C		
28	B	63	D		
29	D	64	E		
30	D	65	C		
31	D	66	C		
32	B	67	B		
33	C	68	A		
34	D	69	B		
35	D	70	B		

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL MEANS CUM- MERIT SCHOLARSHIP – 2015-2016
SCHOLASTIC APTITUDE TEST
KEY ANSWER

Science		Social Science		Mathematics	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	B		B	1	D
2	D		A	2	C
3	B		D	3	C
4	B		B	4	D
5	D		A	5	B
6	B		C	6	A
7	A		C	7	A
8	C		A	8	C
9	A		D	9	C
10	D		B	10	D
11	B		B	11	B
12	A		D	12	C
13	C		C	13	B
14	A		A	14	A
15	B		B	15	D
16	D		C	16	C
17	D		A	17	A
18	B		D	18	D
19	A		D	19	A
20	D		B	20	B
21	B		C		
22	D		D		
23	B		C		
24	C		A		
25	B		B		
26	C		D		
27	D		A		
28	B		C		
29	A		A		
30	D		B		
31	C		C		
32	C		A		
33	C		C		
34	C		B		
35	C		D		

NATIONAL MEANS CUM MERIT SCHOLARSHIP EXAMINATION
2016-17

Part I – 90 minutes   *Maximum Marks –90*

Part II – 90 minutes   *Maximum Marks –90*

Class VIII Code	State Code	Year	Centre Code	Serial No.
1	1 4	1 6		

INSTRUCTION TO CANDIDATES

Read the following instructions carefully before answering the questions.

1. Answers are to be written on supply **ANSWER SHEET**

2. Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.

3. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit is to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and **ANSWER SHEET.** For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.

4. Avoid over writing the numbers/ digits for both Centre Code and Serial No.

5. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consist 90 questions.

6. All Questions carry one mark each.

7. All Questions are Compulsory.

8. Begin with the first question and keep trying one question after another till you finish both the parts.

9. Since the time allotted to the two parts of these questions booklets is very limited, you should make the best of it by not spending time on any one question

10. Record your answer using Ball Point Pen only. You have to indicate your answer on the answer sheet as advice.

11. Separate pages for Rough Work are provided at the last page of your question booklet.

12. The answer sheet has two parts Part I and Part II corresponding to Part I and Part II of the Question Booklet. In part II, answers to a subject are to be given under the column where the name of the subject is given.

13. Answer to each is to be indicated by encircling around alternative **1 or 2 or 3 or 5 OR a or b or c or d or e** from amongst the ones given for the corresponding questions in the question Booklet,
e.g.., if you think that alternative **1or a** is correct then encircle as example given below

$$\boxed{1}\ \textbf{or}\ \boxed{a}$$

14. Now turn to the next page and start answering the questions.

15. Hand over your Question Booklet and Answer Sheet to the Invigilators before you leave the Examination Hall.

Timing 10:00 Am To 1 : 00 Pm

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

MENTAL ABILITY TEST

Directions (Q No1-5): there are four figures (a), (b), (c) and (d). Out of the these four figures, three figures are similar but one is different. Spot out the different figure:

Q1.
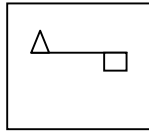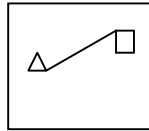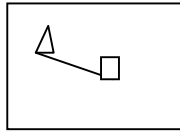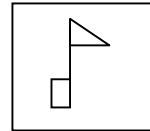
A	B	C	D

Q2.
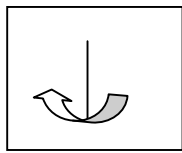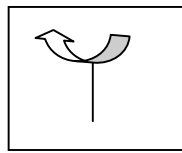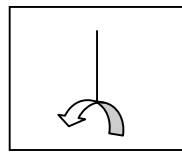
A	B	C	D

Q3.

A	B	C	D

Q4.

A	B	C	D

Q5.
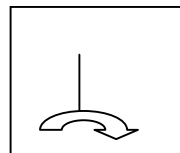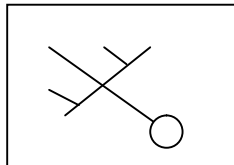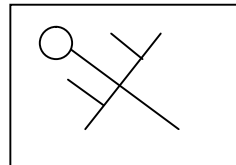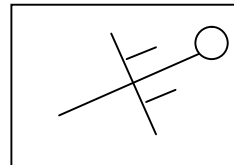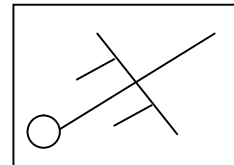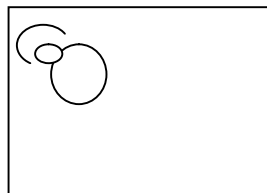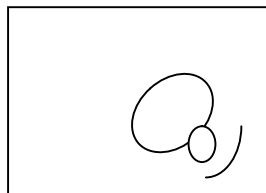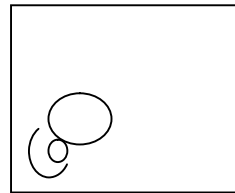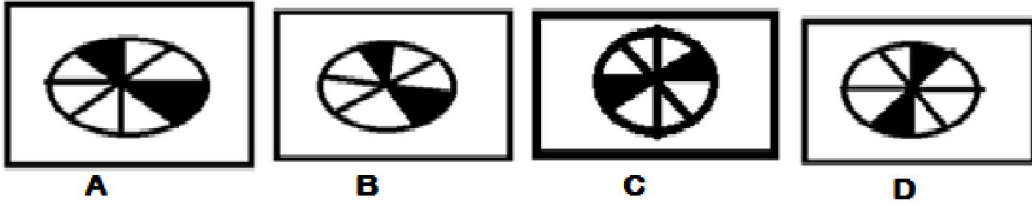
| A | B | C | D |

Directions (QNo.6 – 15): There are four figures. Three figures have common relation or characteristics and belong to one class. Select the figure which different and does not have any relation with the other figures in the group.

Q6.

A   B   C   D

Q7.

A   B   C   D

Q8.
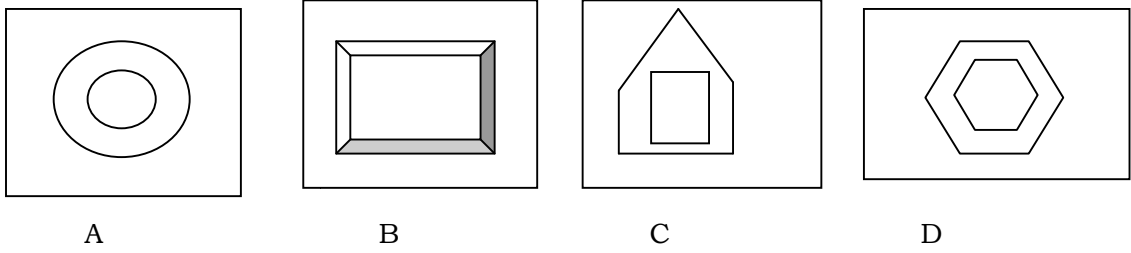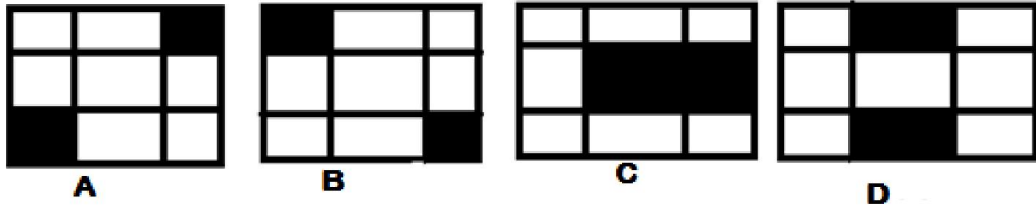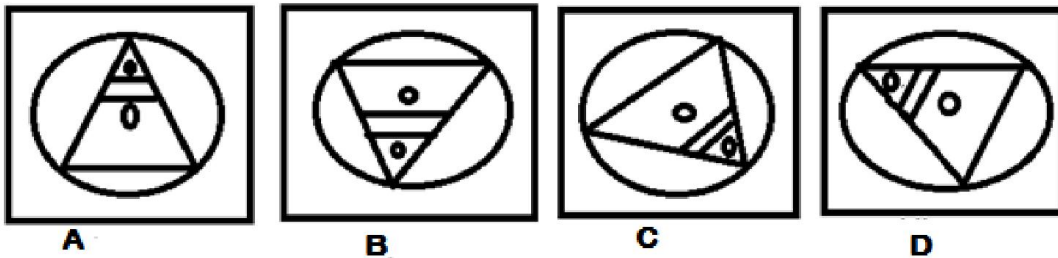
A   B   C   D

Q9.
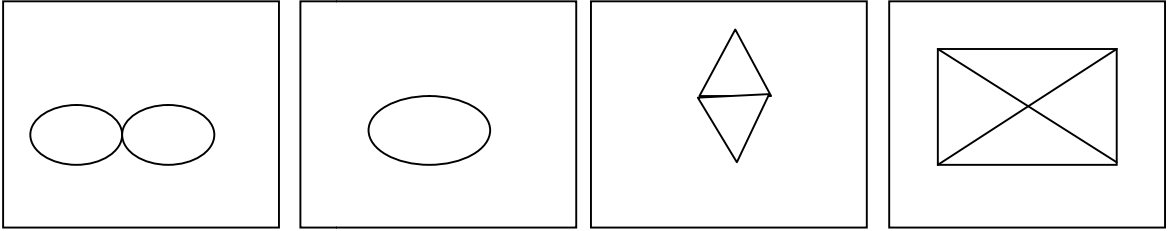
A   B   C   D

Q10.
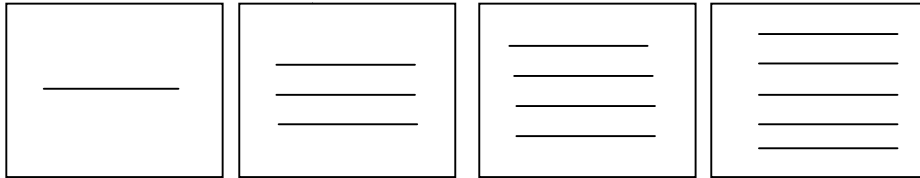
A   B   C   D

Q11.
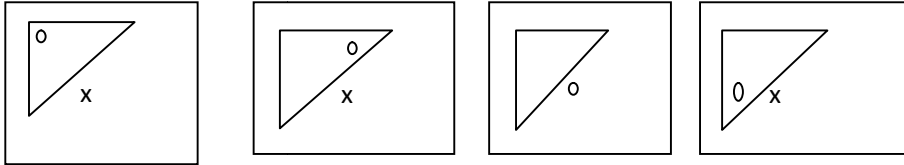
A   B   C   D

Q12.
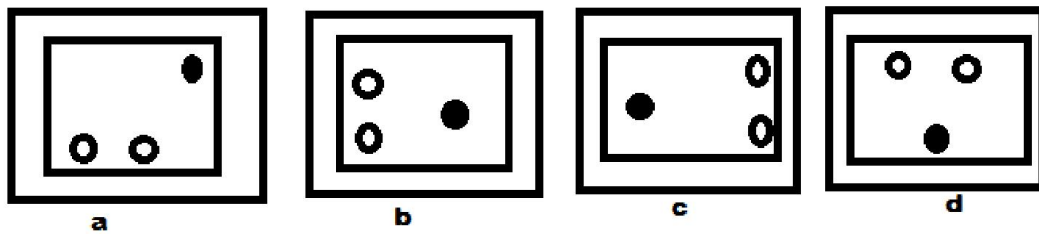
a   b   c   d

Q13.
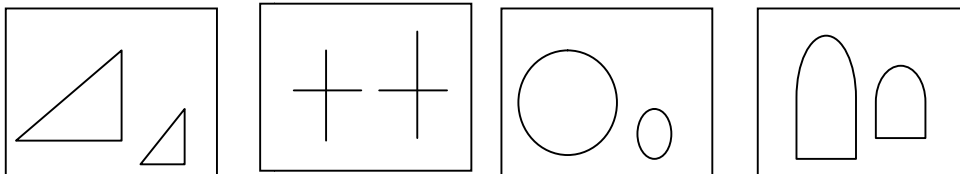
A   B   C   D
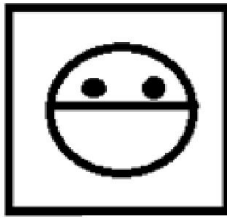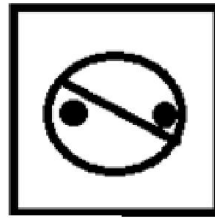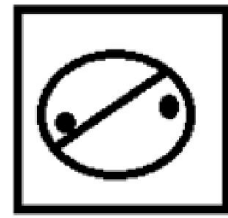
Q14.
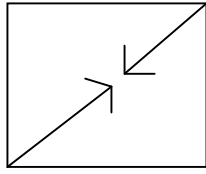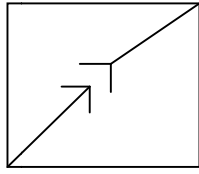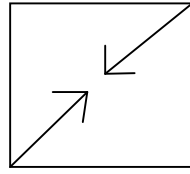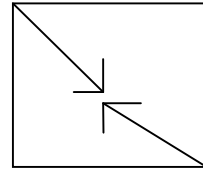
(A) (B) (C) (D)

Q15.
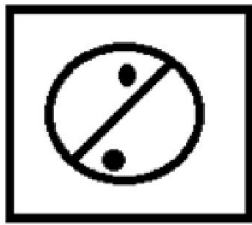
A B C D

Directions (Q. Nos 16 – 22): In these questions, you are to select the correct answer based on the part of the statement in the given questions.

Q16. In a certain code BOARD is written as 53169 and NEAR is written as 2416. How is NODE written in that code?

   A. 2394
   B. 2894
   C. 2934
   D. 2694

Q17. If 'ANT' is coded as TNA what should be the code for DIN

   A. IND
   B. NID
   C. NDI
   D. None of these

Q18. IF 'BADGE' is coded as 65811 what will be the code number for 'AGE'

   A. 811
   B. 561
   C. 511
   D. 115

Q19. In a code, 'EDITION' is written as 'IDETNOI'. How will 'MEDICAL' be written
in that code.

    A. DEMILAC

    B. LACIDMED

    C. DIEMCAL

    D. CADILE

Q20. In a certain code 'LUTE' is written as MUTE and GATE is written as HATE,
then how BLUE will be written in that code

    A. GLUE

    B. FLUD

    C. FLUE

    D. CLUE

Q21. EARN is related to RANE and BOND is related to NODB in the same way as
TEAR is related to _____

    A. AERT

    B. ATRE

    C. ARET

    D. REAT

Q22. In a certain code 'PAISE' is code as 'QBJTF' and 'CEASE' is coded as 'DFBTF'.
How will 'TRIANGLE' be coded in the same code?

    A. USBJOIMF

    B. USBMHMFJ

    C. USOBIMF

    D. USJBOHMF

**Directions (Q. Nos 23-32): the first two items of each of the following
questions bear some relationship. Discover that relation and on the basis of
the relation pick up one item from choices, which bears the same relation
with the third word.**

Q23. Shoe : Leather : : Highway: ?
    A. Passage
    B. Road
    C. Asphalt
    D. Trail

Q24. Medicine : Cure : : Book : ?
   A. Educated

   B. Cure

   C. Read

   D. Library

Q25. Drift : Snow : : Dune : : ?
   A. Rain

   B. Hill

   C. Sand

   D. Sweep

Q26. Faulty : Useless : : Slow: ?
   A. Intelligent

   B. Winner

   C. Fresh

   D. Delay

Q27. Moon : Satellite : : Earth : ?
   A. Planet

   B. Solar System

   C. Sun

   D. Jupiter

Q28. Shout : Whisper : : Rum : ?
   A. Stay

   B. Stand

   C. Walk

   D. Hop

Q29. Skin : Man : : Walls : ?
   A. Room

   B. House

   C. Passage

   D. Window

Q30. ABC : EFG : : JKL : ?
   A. QRS

   B. TVW

   C. PNO

   D. NOP

Q31. NOR : PQT : : STW : ?

   A. STU

   B. VUZ

   C. SUT

   D. UVY

Q32. 4 : 7 : : 9: ?

   A. 15

   B. 12

   C. 16

   D. 8

Direction (Q.nos. 33-42): In each of the following questions four of the following are alike in a certain way and so form a group. Find the odd one that does not belong to the group.

Q.33

   A. Air Marshal

   B. Group captain

   C. Wing commander

   D. Captain

Q34.

   A. Mica

   B. Zinc

   C. Iron

   D. Chlorine

Q35.

   A. Square

   B. Rhombus

   C. Kite

   D. Rectangle

Q36.

   A. Coconut

   B. Lotus

   C. Marigold

   D. Lilly

Q37.
   A. Brass

   B. Bronze

   C. Silver

   D. Steel

Q38.
   A. Strawberries

   B. Apples

   C. Rubber

   D. Mango

Q39.
   A. Earthquake

   B. Eclipse

   C. Flood

   D. Drought

Q40.
   A. Dirty

   B. Unclean

   C. Filthy

   D. Beautiful

Q41.
   A. Stall

   B. Shop

   C. Godown

   D. Market

Q42.
   A. Book

   B. Newspaper

   C. Magazine

   D. Pen

Directions (Q nos. 43-46): In each question you are to select the answer based on the information given

Q43. Raj walks north east and after some distance turns left and walk, then again he turns left. In which direction is he going now?
  A. South West
  B. South
  C. West
  D. North

Q44. At 12:30 the hour of a clock faces North and the minute hand faces South. At 1:45 the hour hand will be in which direction?
  A. North West
  B. North East
  C. South East
  D. South West

Q45. A man started walking from North to South. He turned right at right angles then again right at right angles. In which direction was he ultimately walking?
  A. East
  B. West
  C. North
  D. South

Q46. A man walks 20 metres east, then further 10 metres south, then walks 35 metres west and further 5 metres north. Then he walks 15 metres towards east. What is the distance between his starting point and to the finishing point?

  A. 0 metre
  B. 5 metres
  C. 10 metres
  D. 20 metres

Direction (Q Nos.47-56): Complete the following series.

Q47. A, D, H, M, S, ?

    A. Y

    B. Z

    C. B

    D. C

Q48. NM KL JI GH FE ?

    A. BE

    B. AC

    C. CD

    D. DF

Q49. 43, 37, 32, 28, ?

    A. 18

    B. 20

    C. 25

    D. 30

Q50. 5, 3, 6, 2, 7, 1, ?

    A. 6

    B. 7

    C. 8

    D. 10

Q51. 7, 4, 12, 9, 27, ?

    A. 35

    B. 42

    C. 24

    D. 50

Q52. 5, 8, 14, 26, 50 ?

    A. 96

    B. 68

    C. 70

    D. 98

Q53. A, Z, B, Y, C, X, D, ?

    A. E

    B. F

    C. W

    D. V

Q54. M, K, J, H, F, ?
    A. D
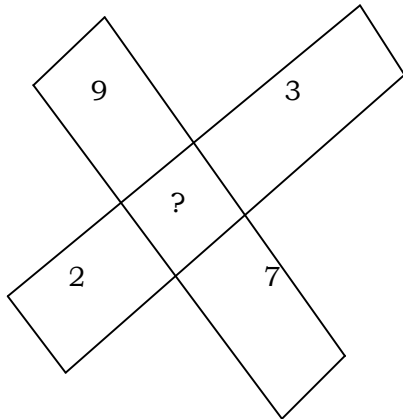   B. C
    C. E
    D. O

Q55. A, Y, B, Z, C, W, D, X, E, ?
    A. V
    B. W
    C. U
    D. S

Q56. 16, 18, 21, 25, 30, 36, ?
    A. 38
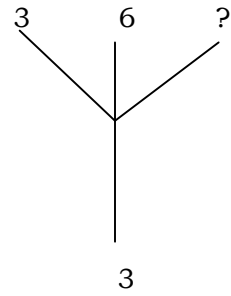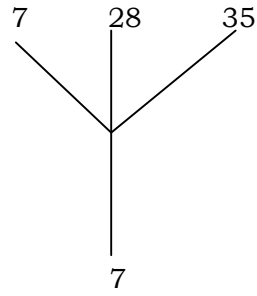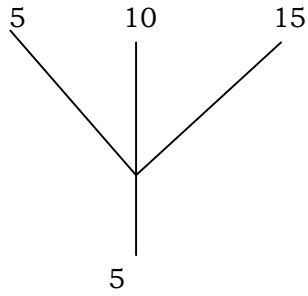   B. 61
    C. 43
    D. 51

Directions (Q. No. 57- 61): In the following questions, select the missing number from the given responses.
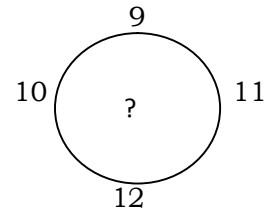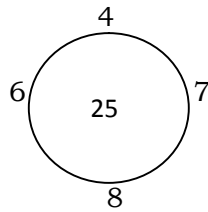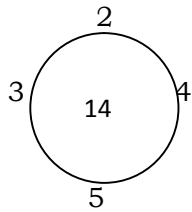
Q57.

    A. 27
    B. 21
    C. 20
    D. 24

Q58. 5   10   15   7   28   35   3   6   ?

5   7   3
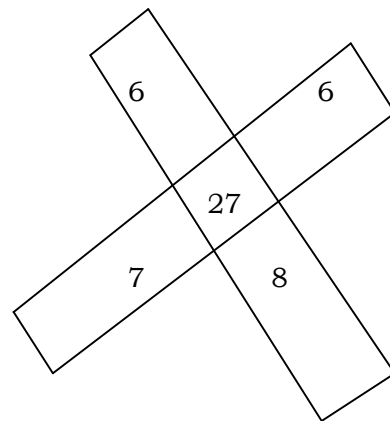
A. 3

B. 9

C. 18

D. None of these

Q59.

2   4   9

3   14   4   6   25   7   10   ?   11

5   8   12

A. 42

B. 44

C. 46

D. 48

Q60.

| 7	3	8
3	4	2
4	7	?

A. 4

B. 6

C. 8

D. 10

Q61.
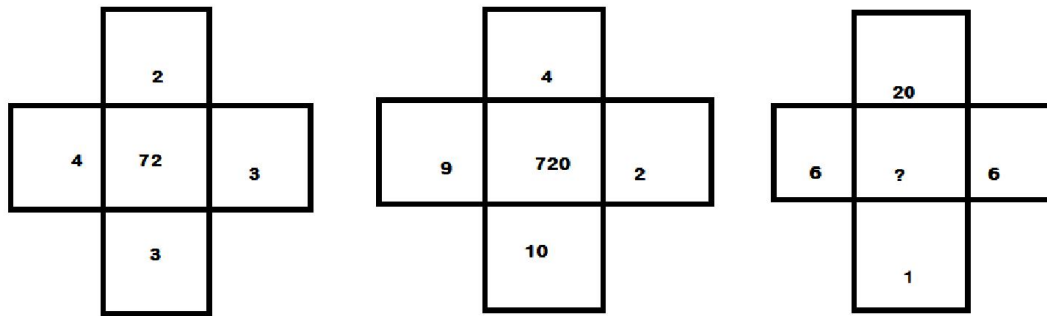
A. 72

B. 720

C. 7200

D. 38

Direction (Q no. 62-66): Read the following information carefully and answer the questions.

Q62. The average age of 30 boys of a class is equal to 14 years. When the age of the class teacher is included the average becomes 15 years. The age of the class teacher is

A. 40 years

B. 42 years

C. 48 years

D. 45 years

Q63. How many triangles are there in the figure?

A. 24
B. 28
C. 20
D. 14

13
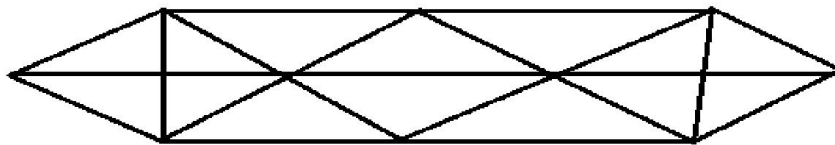
Q64. The average age of a brother and sister was 35 years, 5 years ago. What will be their average age (in year) at present?

   A. 37.5

   B. 42

   C. 40

   D. 40.5

Q65. There are five books A, B, C, D and E. C lies above D, E is below A, D is above A, B is below E. Which is the bottom most book?

   A. E

   B. B

   C. A

   D. C

Q66. What do you find once in YEAR but twice in WEEK

   A. Friends

   B. Holidays

   C. Letter

   D. Telephone Calls

Directions (Qnos.67-68): In each of the following questions if interchanges are made in signs and number. Find the correct alternatives.

Q67. If 'x' stands for '+' , '÷' stands for 'x' ; '+' stands for '−' and '−' stands for '÷' then 24 + 36 − 12 x 8 ÷ 4 = ?

   A. 36

   B. 53

   C. 5

   D. -20

Q68. If Q means '+', J means 'x', T means '−' and K means '÷' then 30K2Q3J6T5 = ?

   A. 18

   B. 28

   C. 31

   D. 103

Directions (Q.nos. 69-71): In the following diagram one circle represent business, another educated people and third politicians. The space are numbered. See the diagram and answer the questions which follow.
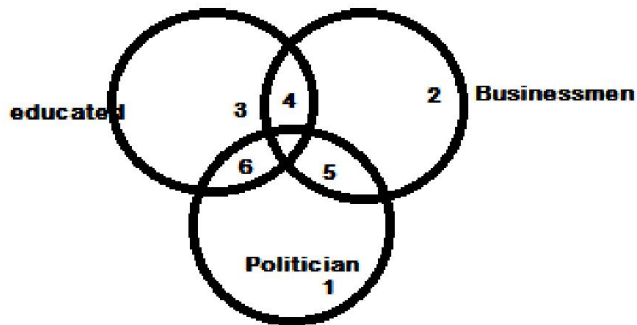
Q69. The total number of educated people were
  A. 11
  B. 10
  C. 4
  D. 13

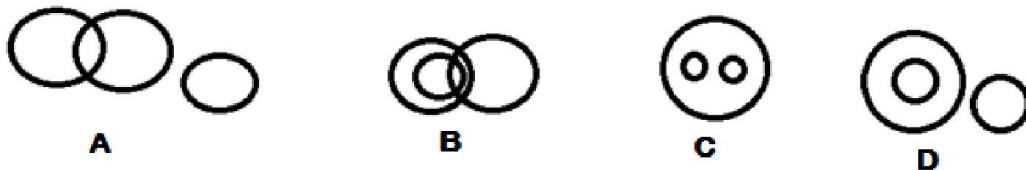Q70. Which number represent educated persons who are politician

  A. 1
  B. 6
  C. 4
  D. 5

Q71. The number of people in total who were businessmen
  A. 15
  B. 6
  C. 11
  D. 5

Directions (Qnos 72-77): Which of the following diagram represent the correct relationship among the three classes?

Q72. Doctor, Specialist Doctors and Patients

15

Q73. Traveller, Train and Bus

A   B   C   D
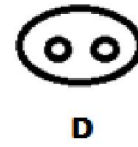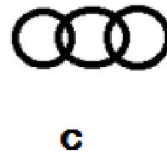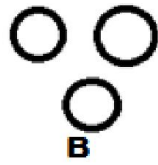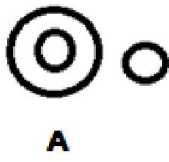
Q74. Factory, Product and Machinery

A   B   C   D
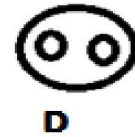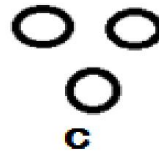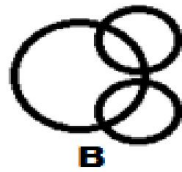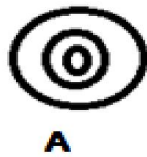
Q75. Steel, Wood and Building Material

A   B   C   D
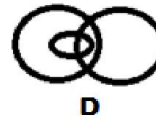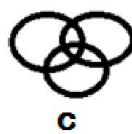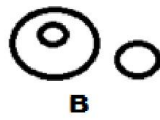
Q76. Males, Father and Human Being

A   B   C   D
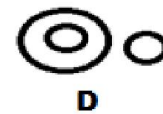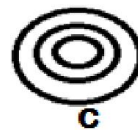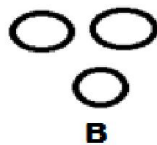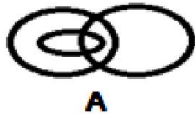
Q77. Tigers, Lions, Animals
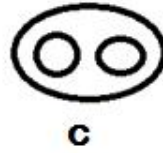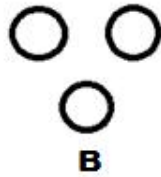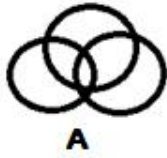
Directions (Q. 78-82): Study the following information to answer the given questions

Q78. Sushil and Kiran are the children of Ram. Ram is the father of Sushil but Kiran is not the son of Ram. What is Kiran to Ram?

    A. Son – in – Law

    B. Niece

    C. Daughter

    D. Mother

Q79. A's mother is aunt of my daughter. I have no nephew, what is A to me?

    A. Niece

    B. Cousin

    C. Brother

    D. Sister

Q80. A is older than B, C is younger to D. D is older than B but younger to A. Who is the older?

    A. B

    B. A

    C. D

    D. C

Q81. Mary has two brothers Jack and Tom. They have two cousins Ellen and Jane. How many cousins have Ellen and Jane

    A. 4

    B. 3

    C. 2

    D. 1

Q82. John is the brother of Sam. Jane is the sister of Jack. Sam is the son of Jane. How is John related to Jane.

    A. Father

    B. Brother

    C. Son

    D. Nephew

Directions (Q.No. 83-85): Read the following information carefully and answer the questions which follow :

Raja and Baldev are good at Hockey and Volley Ball. Deepak and Raja are good at Hockey and Baseball. Gurnam and Baldev are good at Cricket and Volley ball. Deepak, Gurnam and Joseph are good at football and baseball.

Q83. Who is good at Cricket, Baseball and Football?

    A. Baldev

    B. Gurnam

    C. Deepak

    D. Raja

Q84. Who is good at Hockey, Volley Ball and Baseball?

    A. Joseph

    B. Baldev

    C. Raja

    D. Deepak

Q85. Who is good in the largest number of games?

    A. Raja

    B. Gurnam

    C. Baldev

    D. Joseph

Directions (Q.no. 86-90) : are based on letter series.

In each question some letters are missing. The missing letters are given in the proper sequence as one of the alternatives among the five given under each question. Find the correct alternatives in each question.

Q86. a a c – b b a – c c – b a a – c b -

    A. gcbac

    B. bacbc

    C. abaac

    D. bbcacb

    E. cabcb

Q87. a-bbaa-baa-baab-aabb

    A. abab

    B. baba

    C. abbb

    D. bbaa

    E. aaab

Q88. aba-bc a-a c-c ab-cbc

    A. bbbb

    B. ccba

    C. cbba

    D. caac

    E. cbbb

Q89. a-a bb - -cc

    A. acb

    B. bac

    C. cab

    D. abc

    E. aab

Q90. a-b bc – aab-aaa-b ba-

    A. cabba

    B. bacba

    C. bbaaa

    D. aabba

    E. ababa

Scholastic Ability Test

Science

1. Which of the following measurements is most precise?

   A.   5.00 mm

   B.   5.00 cm

   C.   5.00 m

   D.   5.00 km

2. Which of the following ratios express pressure?

   A.   Force/Area

   B.   Area/Volume

   C.   Energy/Area

   D.   Force/Volume

3. Which of the following statements is true?

   A. A Scalar quantity is the one that is conserved in a process

   B. A Scalar quantity is the one that can never take negative values

   C. A scalar quantity is the one that does not vary from one point to another in space

   D. A scalar quantity has the same value for observers with different orientation of the axes.

4. The distance between two cities is 10.5 km. The distance in metres is

   A. 1050 m

   B. 10500 m

   C. 10.500 m

   D.   None of the above

5. The motion of a wheel is

   A. Vibratory

   B. Rotational

   C. Oscillatory

   D. Revolution

6. Which of the following is not a natural source of light

   A. Sun

   B. Moon

   C. Stars

   D. Burning candle

7. The Luminescence is the

   A. Emission of light by a hot body

   B. Emission of light from a body that is not hot

   C. Emission of light from materials

   D. None of the above

8. In a pinhole camera the image that is produced on the screen is

   A. reflected

   B. refracted

   C. absorbed

   D. inverted

9. Electricity we use at home is

   A. static

   B. current

   C. current and static

   D. None of the above

10. Artificial magnets are made of

   A. iron

   B. steel

   C. both iron and steel

   D. None of the above

11. Permanent magnets are made of

   A. iron

   B. steel

   C. both iron and steel

   D. None of the above

12. A substance consisting of molecules resulting from a very large number of molecules joined together is known as-
    A. Monomer

    B. Polymer

    C. Plastic

    D. Fibre

13. Which of the following is a fuel?
    A. Butter

    B. Sugar

    C. Walnut

    D. Coke

14. The hydro carbon in which one atom of carbon is bonded to four atom of hydrogen is known as –
    A. Ethane

    B. Butane

    C. Methane

    D. Propane

15. The lightest metal is-
    A. Osmium

    B. Lithium

    C. Helium

    D. Mercury

16. The quality of being moulded or shaped is-
    A. Elasticity

    B. Plasticity

    C. Ductility

    D. Malleability

17. The total number of zones in the structure of a candle flame is
    A. 1

    B. 4

    C. 3

    D. 5

18. Which of the following is not a metal?
    A. Sodium

    B. Hydrogen

    C. Potassium

    D. Lithium

19. Acid rain is caused by
    A. Carbon Dioxide

    B. Sulphur Dioxide

    C. Carbon Monoxide

    D. Hydrogen peroxide

20. Containers of dry cells are made of-
    A. Zinc

    B. Aluminium

    C. Copper

    D. Iron

21. The liquid wastes produced in factories are called-
    A. Effluents

    B. Fertilizers

    C. Pollutants

    D. Garbage

22. A good fuel must have-
    A. Low calorific value

    B. High calorific value

    C. Moderate calorific value

    D. No calorific value

23. During photosynthesis _____ is form as a product
    A. Carbon dioxide

    B. Carbon trioxide

    C. Oxygen

    D. Carbon monoxide

24. The most important site of digestion is
    A. Duodenum

    B. Liver

    C. Pancreas

    D. Villi

25. A fruit is a ripened
    A. Stamen

    B. Ovule

    C. Ovary

    D. Carpel

26. In a plant cell photosynthesis occurs at
    A. Chloroplast

    B. Chromoplasts

    C. Cytoplast

    D. Leucoplasts

27. The ability of living things to adjust to the conditions of their surroundings is called-
    A. Habitat

    B. Adaptation

    C. Acclimatization

    D. Accommodation

28. The elbow has a combination of-
    A. Sliding joint and a hinge joint

    B. Hinge joint and pivot joint

    C. Hinge joint and Ball socket joints

    D. Sliding joint and pivot joint

29. Reproduction in yeasts occurs by
    A. Budding

    B. Fragmentation

    C. Spore formation

    D. fission

30. Malaria is caused by a
    A. Bacterium

    B. Fungus

    C. Protozoa

    D. Virus

31. The cell that does not have a nucleus is
    A. Red blood cell

    B. White Blood cell

    C. Platelets

    D. Nerve cell

32. The hormone which is produced and released when a person is angry, frightened or excited is
    A. Thyrotropic hormone

    B. Thyroxine hormone

    C. Insulin

    D. Adrenaline

33. Common cold are caused by-
    A. Protozoa
    B. Bacteria
    C. Fungus
    D. Virus

34. Which of the following enable the earthworms to grip the ground without sliding-
    A. Circular muscle
    B. Longitudinal muscle
    C. Setae
    D. Belly plates

35. The end products during the oxidation of glucose in the living cells are
    A. $CO_2 + H_2O$
    B. $CO_2 + H_2O$ + Energy
    C. CO_2 + Energy
    D. $CO_2 + C_2H_5OH$ + Energy

SOCIAL STUDIES

1. The modern period in India started in which century
   A. 14th
   B. 16th- 17th
   C. 15th
   D. 18th

2. Who was the world's largest producer of natural indigo in the 19th century?
   A. Bengal
   B. Delhi
   C. Orissa
   D. Punjab

3. Name the founder of the Mughal Empire
   A. Aurangzeb
   B. Babur
   C. Akbar
   D. Humayun

4. Where is Hawa Mahal located?
   A. Delhi
   B. Agra
   C. Jaipur
   D. Rajasthan

5. Which emperor granted permission to the English East India Company to set up a factory at Surat.
   A. Babur
   B. Jahangir
   C. Akbar
   D. Humayun

6. What economic reform was introduced by Lord Cornwallis?
   A. Permanent Settlement
   B. Dual Government
   C. Subsidiary Alliance
   D. Temporary Alliance

7. Who helped establish a Sanskrit College at Varanasi in 1791 A.D
   A. Warren Hastings
   B. David Hare
   C. Jonathan Duncan
   D. Lord Minto

8. Which Act forced the East India Company to recognise the education of the Indians as its duty
    A. Charter Act of 1811
    B. Charter Act of 1813
    C. Charter Act of 1812
    D. Charter Act of 1814

9. Pa Togan Sangma died while fighting the British in
    A. December, 1872
    B. May, 1876
    C. March, 1873
    D. September,1879

10. Khasi Women fought guerrilla warfare against the British under the leadership of
    A. Ka Nohkalikai
    B. Ka Wet Nonglait
    C. Ka Bon Phandieng
    D. Ka Phan Nonglait

11. U Kiang Nagbah was publicly hanged on
    A. 28th Decenber 1862
    B. 30th December 1862
    C. 29th December 1862
    D. 31st December 1862

12. The Halbaas are so called because they use the
    A. Spade
    B. Sickle
    C. Plough
    D. Hoe

13. Resources which are harmful to the environment are
    A. Natural resources
    B. Artificial resources
    C. Human resources
    D. None of the above.

14. In order to improve soil structure and fertility we practice-
    A. Contour cultivation
    B. Strip cultivation
    C. Terrace cultivation
    D. Crop cultivation

15. Humus present in the soil are-
    A. In Organic substances

    B. Organic substance

    C. Organic and inorganic substance

    D. All of the above.

16. Resources will rapidly be depleted if there is-
    A. Sustainable development

    B. Unsustainable development

    C. Both of the above

    D. None of the above

17. The biggest multipurpose river valley project in India is-
    A. Hirakud dam

    B. Tehri Bhagirathi dam

    C. Bhakra Nangal dam

    D. Damodar valley project

18. Oak, Chestnut, Pine and Fir are the important spicies of-
    A. The Himalayan vegetation

    B. The Tropical deciduous

    C. The Tropical evergreen forest

    D. The desert vegetation

19. India has the world's largest reserves of –
    A. Iron ore

    B. Manganese

    C. Coal

    D. Mica and bauxite

20. The largest concentration of minerals in India is found in-
    A. The valley of Damodar

    B. The Deccan Plateau

    C. The Chota Nagpur Plateau

    D. The North Eastern Region

21. Intensive subsistence agriculture is practised in-
    A. Densely populated part of the world

    B. Sparsely populated part of the world

    C. Hilly regions of the world

    D. Desert region

22. Example of rabi crops grown in India is-
    A. Wheat

    B. Oilseeds

    C. Barley

    D. All of the above

23. Birth rate is calculated as-
    A. Number of births per 1000 people in a year

    B. Number of births per 100 people in a year

    C. Number of deaths per 1000 people in a year

    D. Number of deaths per 100 people in a year

24. The leading producer of sugar in the world is-
    A. Brazil

    B. India

    C. Cuba

    D. Indonesia

25. The census of India defines a literate person as-
    A. A person aged 7 or above who can both read and write with understanding in any language

    B. A person aged 8 or above who can both read and write with understanding in any language

    C. A person aged 9 or above who can both read and write with understanding in any language

    D. A person aged 10 or above who can both read and write with understanding in any language

26. In which year the United Nations' Declaration of Human Rights was adopted?
    A. 1948

    B. 1949

    C. 1950

    D. 1951

27. Which of the following reasons are the major causes of Environmental Degradation?
    A. Cutting trees

    B. Nuclear Tests

    C. Overpopulation

    D. All the above

28. Which of the following Continents faced problems of overpopulation?

   A. Asia, Africa and Europe

   B. Asia, Africa and North America

   C. Asia, Africa and South America

   D. North America, South America and Asia

29. After which World War the United Nations was established?

   A. 1st World War

   B. 2nd World War

   C. Kargil War

   D. None of the above

30. How many non permanent members are elected to the UN Security Council?

   A. 15

   B. 14

   C. 11

   D. 10

31. What is the major role of UNESCO?

   A. To improve health and medical facilities

   B. To improve condition of labourers

   C. To improve condition of children

   D. To promote scientific and cultural cooperation

32. In which year the first summit meeting of SAARC was held?

   A. 1984

   B. 1985

   C. 1986

   D. 1987

33. Radioactive Fall-out from nuclear tests is a form of:

   A. Environmental degradation

   B. Population degradation

   C. Family degradation

   D. None of the above

34. Which agreement was followed after the Indo-Pak war of 1965?

   A. Lahore Agreement

   B. Tashkent Agreement

   C. Delhi Agreement

   D. Simla Agreement

35. Which country attacked India in 1962?
    A. Pakistan

    B. Nepal

    C. China

    D. Bangladesh

MATHEMATICS

1. Three rational numbers lying between $-\dfrac{3}{4}$ and $\dfrac{1}{2}$ are

    A. $-\dfrac{1}{2}, 0, \dfrac{3}{4}$

    B. $-\dfrac{1}{4}, \dfrac{1}{4}, \dfrac{3}{4}$

    C. $-\dfrac{1}{4}, 0, \dfrac{1}{4}$

    D. $-\dfrac{5}{4}, 0, \dfrac{1}{4}$

2. Which of the following is not true?

    A. Rational numbers are closed under addition

    B. Rational numbers are closed under subtraction

    C. Rational numbers are closed under multiplication

    D. Rational numbers are closed under division

3. The additive inverse of $\dfrac{-7}{19}$ is

    A. $\dfrac{-7}{19}$

    B. $\dfrac{7}{19}$

    C. $\dfrac{19}{7}$

    D. $\dfrac{-19}{7}$

4. The height of a rectangle in a histogram shows the

    A. width of the class

    B. upper limit of the class

    C. lower limit of the class

    D. frequency of the class

5. The rage of the data 30, 61, 55, 56, 60, 20, 26, 46, 28, 56 is

    A. 26

    B. 30

    C. 41

    D. 61

6. A perfect square can never have the following digit at ones place.
   A. 1
   B. 3
   C. 5
   D. 6

7. If m is the square of a natural number n, then n is
   A. equal to $\sqrt{m}$
   B. the square of m
   C. greater than m
   D. equal to m

8. The value of x for which the expressions $3x - 4$ and $2x + 1$ become equal is
   A. -3
   B. 0
   C. 1
   D. 5

9. The digit in the tens place of a two digit number is 3 more than the digit in the units place. Let the digit in the units place be b. Then the number is
   A. $11b + 3$
   B. $10b + 3$
   C. $11b + 30$
   D. $10b + 30$

10. For which of the following quadrilaterals, the diagonals bisect each other at right angles?
    A. Trapezium
    B. Rhombus
    C. Rectangle
    D. Kite

11. How many sides does an octagon have?
    A. 10
    B. 9
    C. 8
    D. 7

12. If three angles of a quadrilateral are each equal to 75°, the fourth angle is

    A. 135°

    B. 150°

    C. 45°

    D. 75°

13. The sum of adjacent angles of a parallelogram is

    A. 360°

    B. 180°

    C. 120°

    D. 90°

14. Which of the following 3D shapes does not have a vertex?

    A. Pyramid

    B. Prism

    C. Cone

    D. Sphere

15. Which of the following is a binomial?

    A. $7 \times a + a$

    B. $6a^2 + 7b + 2c$

    C. $4a \times 3b$

    D. $6(a^2 + b)$

16. The volume of a cuboid with length = 2ab, breadth = 3ac and height = 2ac is

    A. $12a^3bc^2$

    B. $12a^3bc$

    C. $12a^2bc$

    D. $2ab + 3ac + 2ac$

17. The factors of $x^2 - 4$ are

    A. $(x - 2), (x - 2)$

    B. $(x+2), (x - 2)$

    C. $(x+2), (x+2)$

    D. $(x - 4), (x - 4)$

18. The reciprocal of $\left(\dfrac{2}{5}\right)^{-1}$ is

    A. $\dfrac{-2}{5}$

    B. $\dfrac{-5}{2}$

    C. $\dfrac{5}{2}$

    D. $\dfrac{2}{5}$

19. The lengths of the parallel sides of a trapezium are 36 cm and 64 cm, and the distance between then is 20 cm. The area of the trapezium is

    A. 1000 cm²

    B. 1280 cm²

    C. 2000 cm²

    D. 2304 cm²

20. The area of a quadrilateral ABCD is 20 cm², and the perpendiculars on BD from opposite vertices are 1 cm and 3 cm. The length of BD is

    A. 15 cm

    B. 12 cm

    C. 10 cm

    D. 5 cm

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NATIONAL MEANS CUM- MERIT SCHOLARSHIP 2016
MENTAL ABILITY TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	36	A	71	C
2	A	37	C	72	D
3	A	38	C	73	D
4	B	39	B	74	D
5	A	40	D	75	A
6	C	41	C	76	C
7	C	42	D	77	C
8	B	43	A	78	C
9	B	44	B	79	A
10	C	45	C	80	A
11	C	46	B	81	B
12	A	47	B	82	B
13	B	48	C	83	B
14	B	49	C	84	C
15	B	50	C	85	B
16	A	51	C	86	E
17	A	52	D	87	C
18	C	53	C	88	B
19	A	54	A	89	D
20	D	55	A	90	A
21	A	56	C		
22	D	57	B		
23	C	58	B		
24	C	59	A		
25	C	60	A		
26	D	61	B		
27	A	62	C		
28	C	63	A		
29	A	64	C		
30	D	65	B		
31	D	66	C		
32	A	67	B		
33	D	68	B		
34	D	69	D		
35	C	70	B		

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NATIONAL MEANS CUM- MERIT SCHOLARSHIP - 2016
SCHOLASTIC APTITUDE TEST
KEY ANSWER

Science		Social Science		Mathematics	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	A	1	D	1	C
2	A	2	A	2	D
3	D	3	C	3	B
4	B	4	B	4	D
5	B	5	C	5	C
6	D	6	A	6	B
7	B	7	B	7	A
8	D	8	C	8	D
9	B	9	A	9	C
10	C	10	D	10	B
11	B	11	C	11	C
12	B	12	B	12	A
13	D	13	B	13	B
14	C	14	D	14	D
15	B	15	B	15	D
16	B	16	A	16	A
17	B	17	C	17	B
18	B	18	A	18	D
19	B	19	D	19	A
20	A	20	C	20	C
21	A	21	A		
22	B	22	D		
23	C	23	A		
24	A	24	C		
25	C	25	A		
26	A	26	A		
27	B	27	D		
28	B	28	C		
29	A	29	B		
30	C	30	D		
31	A	31	D		
32	D	32	B		
33	D	33	A		
34	C	34	B		
35	B	35	C		