REASONING ABILITY

1. If DIG is coded as 25 and CUT is codes as 49, then how will KICK be coded as ?
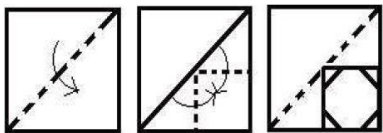(a) 43　　　　　　　　　　(b) 39
(c) 41　　　　　　　　　　(d) 34

2. Select the option in which the given figure is embedded
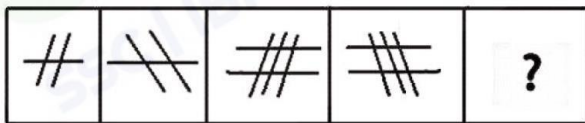

(a)　　　　　　　　　　(b)

(c)　　　　　　　　　　(d)

3. A paper is folded and cut as shown below. How will it appear when unfolded ?

(a)　　　　　　　　　　(b)

(c)　　　　　　　　　　(d)

4. Select the figure that will come next in the following figure series.

(a)　　　　　　　　　　(b)

(c)　　　　　　　　　　(d)

5. Select the set in which the numbers are related in the same way as are the numbers of the following set.
(9, 35, 16)
(a)(16,50,64)　　　　　　(b)(25,30,4)
(c)(36,55,25)　　　　　　(d)(81,65,36)

6. Select the set in which the numbers are related in the same way as are the numbers of the following set.
(3, 24, 4)
(a)(6,35,11)　　　　　　(b)(2,30,8)
(c)(12,84,4)　　　　　　(d)(4,72,9)

7. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.
(a) CFIL　　　　　　　　(b) GHIJ
(c) MOQS　　　　　　　(d) PSUX

8. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.
(a) 126　　　　　　　　(b) 189
(c) 254　　　　　　　　(d) 217

9. In a family of eight persons, there are two couples, each having two children. B and D are brothers and each has two children. E is the aunt of A, who is the cousin brother of C. C is the sister of H, who is the cousin brother of G. F is the wife of B. How is H related to F ?
(a) Nephew　　　　　　(b) son-in-law
(c) Son　　　　　　　　(d) Brother-in-law

10. Arrange the following words in a logical and meaningful order
1. Buy　　　　　　　**2.** Dinner
3. market　　　　　　**4.** Vegetables
5. Cook
(a)1,4,5,3,2　　　　　　(b)3,5,4,1,2
(c)4,5,3,1,2　　　　　　(d)3,4,1,5,2

11. Select the venn diagram that best illustrates the relationship between the following classes
Uncle, Relatives, Rich

(a)
(b)
(c)
(d)
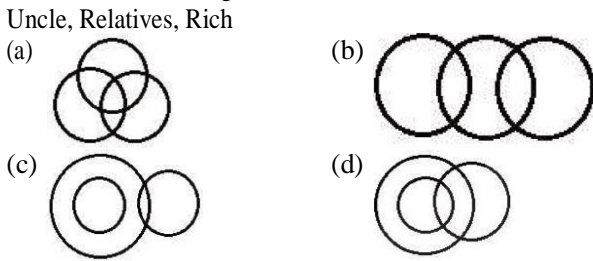
12. Two different positions of the same dice are shown. Which number will be at the top if 6 is at the bottom?
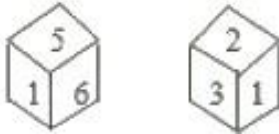
(a) 4 (b) 3
(c) 5 (d) 2

13. 'Lawyer' is related to 'Justice' in the same way as 'Arbitrator' is related to '_____'.
(a) Judgment (b) Injustice
(c) Settlement (d) Communication

14. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.
(a) Groundnut (b) Mustard
(c) Cumin (d) Fennel

15. Two statement are given followed by three conclusion numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusion logically follow(s) from the statements.
Statements
All rules are machines
Some machines are costly items
Conclusion
I. some rules are costly items
II. some costly items are machines
(a) Both conclusion II and III follow
(b) Both conclusion I and II follow
(c) Only conclusion II follow
(d) Only conclusion I follows

16. Select the option that is related to the third letter- cluster in the same way as the second letter-cluster is related to the first letter-cluster.
CEGI : AGEK : : DFHJ : ?
(a) CHFI (b) CGIK
(c) BHFL (d) BDJK

17. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series. b_bab_bc_abbb_ba_b
(a) cbbac (b) cbabc
(c) cbbcb (d) bcbab

18. Which number will replace the question mark (?) in the following series ?
3, 7, 16, 35, ?, 153
(a) 84 (b) 74
(c) 78 (d) 63

19. In the code language, VICTORY is written as CIVSYRO. How will TRAITOR be written as in that language?
(a) RATHORT (b) RTAJORT
(c) ARTJOTR (d) ARTHROT

20. Select the number-pair in which the two numbers are related in the same way as are the two numbers of the following number pair.
36 : 84
(a) 27:63 (b) 21:51
(c) 57:135 (d) 45:95

21. Rs 1,875 is divided among A, B and C in such a way that A's share is half of the combined share of B and C, and B's share is one-fourth of the combined share of A and C. By what amount is C's share more than that of A ?
(a) Rs 500 (b) Rs 225
(c) Rs 250 (d) Rs 200

22. Select the word-pair in which the two words are related in the same way as are the two words in the following word pair
Book : Thesaurus
(a) Tree:forest (b) Reptile:Python
(c) Furniture:Wood (d) Tennis:Ball

23. Which two signs should be interchanged in the following equation to make it correct?
$12 - 8 + 12 \times 9 \div 3 = 9$
(a) + and ÷ (b) + and ×
(c) − and ÷ (d) + and −

24. How many squares are there in the following figure?
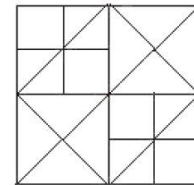
(a) 12 (b) 16
(c) 13 (d) 14

25. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.

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

26. _____ dance, performed by Buddhists to ward off evil spirits, is a dance form of Himachal Pradesh.
(a) Chham
(b) Natya
(c) Dham
(d) Gogra

27. The Musi and Bhima are tributaries of the river _____.
(a) Mahanadi
(b) Krishna
(c) Kaveri
(d) Brahmaputra

28. The Malimath Committee Report deals with
(a) Judicial delays
(b) Textile sector reforms
(c) Criminal justice system reforms
(d) Stock market reforms

29. Who attacked and looted the famous Somnath temple in 1026 AD?
(a) Muhammad Gori
(b) Mahmud of Ghazni
(c) Nadir shah
(d) Genghis khan

30. Which country was the first to implement Goods and services Tax (GST)?
(a) France
(b) USA
(c) Germany
(d) Canada

31. Which of the following is mined in the Badampahar mines of Odisha?
(a) Azurite
(b) Dolomite
(c) Bauxite
(d) Hematite

32. Sundari is a well-known species of trees, is found in
(a) Tropical rainforests
(b) Himalayan mountains
(c) Tropical deciduous forests
(d) Mangrove forests

33. The tata Iron and Steel company (TISCO) was established by Dorabji Tata in :
(a) 1919
(b) 1913
(c) 1907
(d) 1911

34. Who was the first female Director General of Police in Puducherry?
(a) Aswathy Tonge
(b) Kanchan Choudhary
(c) Kiran Bedi
(d) Sundari Nanda

35. Which of the following elements is a metalloid?
(a) tin
(b) Bismuth
(c) Silicon
(d) Phosphorus

36. Methyl propane is an isomer of
(a) n-hexane
(b) n-butane
(c) n-propane
(d) n-pentane

37. According to the Economist Intelligence Unit report 'World wide Cost of living Survey 2019', which of the following is NOT one of the three cheapest cities in India?
(a) Mumbai
(b) Bengaluru
(c) New delhi
(d) Chennai

38. Which of the following places was ruled by the Wadiyar dynasty?
(a) Mysore
(b) Guwahati
(c) Jabalpur
(d) Patna

39. Name the first ever judge of the Supreme Court against whom the motion of impeachment was introduced into Parliament in Independent India.
(a) Justice Viraswami
(b) Justice Ramaswami
(c) Justice Mahajan
(d) Justice Subba Rao

40. In march 2019, _____ was sworn in as the new chief minister of Goa, following the demise of Manohar Parrikar.
(a) Vasundhara Raje
(b) H D Kumaraswamy
(c) Ashok Gehlot
(d) Pramod Sawant

41. J J Thomson received the Nobel Prize in Physics for the discovery of .
(a) Protons
(b) Electrons
(c) Neutrons
(d) Positrons

42. Which queen died fighting Mughal armies while defending Garha Katanga in 1564?
(a) Rani Avantibai
(b) Rani Rudrambara
(c) Rani Durgavati
(d) Rani Ahilyabai

43. Which gas in its solid state is also known as dry ice?
(a) Nitrogen
(b) Carbon dioxide
(c) Oxygen
(d) Hydrogen

44. The Olympic Council of Asia (OCA) has decided to reintroduce in the 2022 Asian Games to be held at Hangzhou, China after it was dropped in 2018.
(a) Fencing
(b) Cricket
(c) soccer
(d) Volleyball

45. The property of catenation is predominant in .
(a) Sulpur
(b) nitrogen
(c) silicon
(d) carbon

46. 'Thoda' a sport dance belongs to which of the following states?
(a) Sikkim
(b) Andhra pradesh
(c) Haryana
(d) Himachal pradesh

47. The lone gold medal for India was won by ………….at the 38th GeeBee Boxing Tournament held at Helsinki, Finland.
(a) Kavinder Singh Bisht
(b) Naveen Kumar
(c) Mohammmad Hussamuddin
(d) Shiva Thapa

48. The _____ edition of the India-Indonesia coordinated patrol (IND-INDO CORPAT) held from 19 March to 4th April 2019 was inaugurated at Port Blair, Andaman and Nicobar Islands

(a) 23rd (b) 42nd
(c) 45th (d) 33rd

49. _____ is the founder of Facebook
(a) Mark Zuckerberg (b) Brian Acton
(c) Jimmy Wales (d) Large Page

50. The Indian National Association was established in 1876 by ___ in Calcutta
(a) Badruddin Tyabji (b) V K Chiplunkar
(c) Anand Mohan Bose (d) Sisir kumar ghosh

QUANTITATIVE APTITUDE

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51. A circle is inscribed in a triangle ABC. It touches the sides AB, BC and AC at the points R, P and Q respectively. If AQ=4.5cm, PC=5.5cm and BR=6 cm, then the perimeter of the triangle ABC is

(a) 30.5cm (b) 28cm
(c) 32cm (d) 26.5cm

52. The table shows the production of different types of cars (in thousands)

Years Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

If the data related to the production of cars of type E is represented by a pie chat, then the central angle of the sector representing the data of production of cars in 2013 will be

(a) 102° (b) 84°
(c) 70° (d) 80°

53. A truck covers a distance of 384 km at a certain speed. if the speed is decreased by 16 km/h, it will take 2 hrs more to cover the same distance. 75% of its original speed (in km/h) is

(a) 45 (b) 54
(c) 48 (d) 42

54. The ratio of the ages of A and B, four years ago, was 4 : 5. Eight years from now, the ratio of the ages of A and B will be 11 : 13. What is the sum of their present ages?

(a) 80yrs (b) 96yrs
(c) 72yrs (d) 76yrs

55. In ΔABC, F and E are the points on sides AB and AC, respectively, such that FE ∥ BC and FE divides the triangle in two parts of equal area. If AD ⊥ BC and AD intersects FE at G, then GD : AG=?

(a) $\sqrt{2}:1$ (b) $(\sqrt{2}-1):1$
(c) $2\sqrt{2}:1$ (d) $(\sqrt{2}+1):1$

56. If $4-2\sin^2\theta-5\cos\theta=0, 0°<\theta<90°$, then the value of $\sin\theta+\tan\theta$ is

(a) $\frac{3\sqrt{2}}{2}$ (b) $\frac{3\sqrt{3}}{2}$
(c) $3\sqrt{2}$ (d) $2\sqrt{3}$

57. The table shows the production of different types of cars (in thousands)

Years Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

What is the ratio of the total production of cars of type A in 2014 and type C in 2013 taken together to the total production of cars of type B in 2016 and type E in 2015 taken together?

(a) 12:13 (b) 11:12
(c) 10:11 (d) 12:11

58. if decreasing 120 by x% gives the same result as increasing 40 by x%, then x% of 210 is what percent less than (x + 20)% of 180 ?

(a) $33\frac{1}{3}$ (b) 18
(c) $16\frac{2}{3}$ (d) 20

59. If $(5\sqrt{5}\square^3 - 81\sqrt{3}\square^3) \div (\sqrt{5}\square - 3\sqrt{3}\square) = (Ax^2 + By^2+Cxy)$, then the value of $(6A+B-\sqrt{15}C)$ is (a) 10

(b) 9
(c) 15 (d) 12

60. If a nine-digit number 985x3678y is divisible by 72, then the value of (4x−3y) is

(a) 5 (b) 4
(c) 6 (d) 3

61. If $\sin\theta=\frac{\square^2-1}{\square^2+1}$, then $\cos\theta$ is equal to

(a) $\frac{2\square}{1+\square^2}$ (b) $\frac{\square}{\frac{\square^2-1}{2\square}}$
(c) $\frac{\square}{1+\square^2}$ (d) $\frac{2\square}{\square^2-1}$

62. The ratio of the efficiencies of A, B and C is 2:5:3. Working together, they can complete a work in 27 days. B and C together can complete $\frac{4}{9}$ the part of that work in:

(a) 27 days   (b) 15 days

(c) $17\frac{1}{7}$ (d) 24 days

63. The average of twelve numbers is 42. The average of the last five numbers is 40, and that of the first four numbers is 44. The 6th number is 6 less than the fifth and 5 less than the 7th number. The average of the 5th and the 7th numbers is

(a) 44   (b) 44.5

(c) 43   (d) 43.5

64. If $x+y+z=19$, $x^2+y^2+z^2=133$ and $xz=y^2$, then the difference between z and x is

(a) 5   (b) 3

(c) 6   (d) 4

65. $\dfrac{2 + \tan^2\theta + \cot^2\theta}{\sec\theta\,\csc\theta}$ is equal to

(a) $\cot\theta$ (b) $\cos\theta\sin\theta$

(c) $\sec\theta\csc\theta$ (d) $\tan\theta$

66. In a circle of radius 10 cm, with centre O, PQ and PR are two chords each of length 12 cm. PO intersects chord QR at the points S. The length of OS is

(a) 2.8 cm   (b) 2.5 cm

(c) 3.2 cm   (d) 3 cm

67. A sum amounts to Rs 8,028 in 3 yrs and to Rs 12,042 in 6 yrs at a certain rate percent per annum, when the interest is compounded yearly.

The sum is

(a) Rs 5,352   (b) Rs 5,235

(c) Rs 5,325   (d) Rs 5,253

68. The value of $2\times3\div2$ of $3\times2\div(4+4\times4\div4$ of $4 - 4\div4\times4)$ is :

(a) 8   (b) 1

(c) 4   (d) 2

69. After giving two successive discounts, each of x%, on the marked price of an article, total discount is Rs 259.20. if the marked price of the article is Rs 720, then the value of x is :

(a) 18   (b) 24

(c) 20   (d) 25

70. A solid cube of volume 13824 cm³ is cut into 8 cubes of equal volumes. the ratio of the surface area of the original cube to the sum of the surface areas of three of the smaller cubes is

(a) 2:3   (b) 4:3

(c) 8:3   (d) 2:1

71. The table shows the production of different types of cars (in thousands)

Years \ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

The total production of type B cars in 2012, 2014 and 2015 taken together is approximately what percent more than the total production of type A cars in 2013 and 2016 taken together?

(a) 31.9   (b) 33.2

(c) 36.3   (d) 34.4

72. The table shoes the production of different types of cars (in thousands)

Years \ Cars	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

The numbers of years, in which the production of cars of type B is less than the average production of type D cars over the years is

(a) 4   (b) 1

(c) 3   (d) 2

73. A person sold an article at a loss of 15%. had he sold it for Rs 30.60 more, he would have gained 9%. To gain 10%, he should have sold it for

(a) Rs 140.25   (b) Rs 132

(c) Rs 130   (d) Rs 128.40

74. In a $\triangle ABC$, the bisectors of $\angle B$ and $\angle C$ meet at point O, inside the triangle. If $\angle BOC = 122°$, then the measure of $\angle A$ is

(a) 64°   (b) 62°

(c) 72°   (d) 68°

75. If $x^4 + x^{-4} = 194$, $x>0$, then the value of $(x-2)^2$ is

(a) 1   (b) 6

(c) 2   (d) 3

Directions (76-80): In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Seoul's city government is asking people for help to correct poorly translated street sings-with prizes on offer for (76) _____ who spot the most errors. It's running (77) _____ two-week campaign calling on Koreans and foreigners (78) _____ to keep their eyes peeled for (79) _in English, Japanese and Chinese text, the Korea Times reports. There's (80) _____ focus on public transport signs, maps and information signs at historic sites, as part of a drive to improve the experience of foreign tourists in the South Korean capital.

76. Select the most appropriate option for blank no. 1
(a) this
(b) those
(c) that
(d) these

77. Select the most appropriate option for blank no. 2
(a) one
(b) the
(c) an
(d) a

78. Select the most appropriate option for blank no. 3
(a) same
(b) similarly
(c) alike
(d) likely

79. Select the most appropriate option for blank no. 4
(a) guffaws
(b) blunder
(c) oversight
(d) mistakes

80. Select the most appropriate option for blank no. 5
(a) particular
(b) important
(c) signifying
(d) meticulous

81. Select the synonym of the given word
COERCE
(a) enchant
(b) pressurize
(c) cajole
(d) leave

82. In the sentence identify the segment which contains the grammatical error.
We had to decline several orders in case that the production was held up due to labour strike.
(a) in case that
(b) the production was held up
(c) due to labour strike
(d) we had to decline

83. Select the most appropriate word to fill in the blank
His company has the _____ of producing the best cricket balls in the country.
(a) opinion
(b) brand
(c) reputation
(d) position

84. Select the antonym of the given word
EXPANSION
(a) inflation
(b) augmentation
(c) extension
(d) compression

85. Select the antonym of the given word
SCARCE
(a) scanty
(b) few
(c) seldom
(d) plentiful

86. Select the wrongly spelt word
(a) calander
(b) career
(c) callous
(d) carriage

87. Select the most appropriate word to fill in the blank
Around sixty bands in colourful _____ took part in the Notting Hill Carnival.
(a) clothings
(b) costumes
(c) apparels
(d) dressing

88. Select the word which means the same as the group of words given
A person, animal or plant much below the usual height
(a) wizard
(b) dwarf
(c) creature
(d) witch

89. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select "no improvement". The workers of this textile factory demand higher wages for a long time.
(a) have been demanding higher wages
(b) demanded higher wages
(c) no improvement
(d) has demanded higher wages

90. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select "no improvement". If you park your car here, the traffic police **has fined you**
(a) will fine you
(b) no improvement
(c) fine you
(d) fined you

91. Given below are four jumbled sentences. Select the option that gives their correct order.
A. The cafe's owner says he's interested in conservation, and hopes customers will realise the animals are worth saving, even though they often have a bad reputation.
B. None of them are venomous, meaning customers can get up close and personal with the reptiles.
C. Here you sip your drink in the company of 35 snakes.
D. This café, which has just opened in Tokyo, is not for the faint-hearted.
(a) DBCA
(b) DCBA
(c) ABCD
(d) ABDC

92. Given below are four jumbled sentences. Select the option that gives their correct order.
   A. An environmental group performed a necropsy on the animal and found about 40 kilograms of plastic, including grocery bags and rice sacks.
   B. A 4.7-metre long whale died on Saturday in Philippines where it was stranded a day earlier.
   C. "It is very disgusting and heartbreaking," he said. "We've done necropsies on 61 dolphins and whales in the last 10 years and this is one of the biggest amounts of plastic we've seen."
   D. "The animal died from starvation and was unable to eat because of the trash filling its stomach," said Darrell Blatchley, Director of D'Bone Collector Museum Inc.
   (a) ABCD   (b) DABC
   (c) BADC   (d) BACD

93. Select the most appropriate meaning of the given idiom.
   To play ducks and drakes
   (a) to use recklessly   (b) to change places
   (c) to be friendly   (d) to act cleverly

94. In the sentence identify the segment which contains the grammatical error.
   Cyclone Idai killed at least 157 people in Zimbabwe and Mozambique although it tore across southern Africa.
   (a) cyclone ldia killed (b) it tore across
   (c) although   (d) at least 157 people

95. Select the correct active form of the given sentence.
   Every passing vehicle was being thoroughly checked by the guards.
   (a) the guards were thoroughly checking every passing vehicle
   (b) the guards have thoroughly checked every passing vehicle
   (c) every passing vehicle were thoroughly checking the guards
   (d) the guards have been thoroughly checking every passing vehicle.

96. Select the wrongly spelt word
   (a) exploite   (b) explicit
   (c) expire   (d) explode

97. Select the synonym of the give word
   CHRONIC
   (a) ordinary   (b) persistent
   (c) common   (d) temporary

98. Select the most appropriate meaning of the given idiom.
   At daggers drawn
   (a) deceiving somebody
   (b) without hope
   (c) friendly with each other
   (d) bitterly hostile

99. Select the word which means the same as the group of words given
   A student who idly or without excuse absents himself/herself from school
   (a) truant   (b) vagrant
   (c) itinerant   (d) migrant

100. Select the correct passive form of the given sentence
   Do not buy medicines without the doctor's prescription.
   (a) Medicines should not be bought without the doctor's prescription.
   (b) Medicines need to be bought without the doctor's prescription.
   (c) Medicines might not be bought without the doctor's prescription.
   (d) Medicines could not be bought without the doctor's prescription.