## REASONING ABILITY

1. If FLOWER is coded as 14 and DISTANCE is coded as 18 , then how will BUREAUCRAT be coded as?
(a) 22
(b) 18
(c) 20
(d) 28
2. Select the Venn diagram that best illustrates the relationship between the following classes.
Graduates, Literates, Hardworking
(a)

(c)

(b)

(d)

3. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from therest.
(a) 123
(b) 789
(c) 457
(d) 567
4. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.
(a) MZLY
(b) KXJW
(c) GESO
(d) IVHU
5. Select the option that is related to the third lettercluster in the same way as the second letter-cluster is related to thefirst letter-cluster.
DKFM : FIHK : : BLGP : ?
(a) DNER
(b) CKHO
(c) ZNEN
(d) DJIN
6. The sequence of folding a piece of square paper (figures X and Y ) and the manner in which the folded paper has been cut (figure Z) are shown. How will the paper appear when unfolded?

(a)

(b)

7. P is the father of Q and R is the son of $\mathrm{S} . \mathrm{T}$ is the brother of P.Q is the sister of R. How is $S$ related to T?
(a) Brother-in-law
(b) Daughter
(c) Sister-in-law
(d) Brother
8. Three of the following four word pairs are alike in a certain way and one is different. Pick the odd work out.
(a) Bangladesh : Taka
(b) South Korean : Rupiya
(c) Russia : Ruble
(d) Malaysia : Ringgit
9. Select the option in which the given figure is embedded.


Rotation not allowed
(a)

(b)

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

(a)

(b)

(c)

(d)

11. 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.
Frown : Displeasure
(a) Grief: Sorrow
(b) Madness :Illness
(c) Laugh: Comedy
(d) Smile : Ecstasy
12. How many triangles are there in the following figure?

(a) 18
(b) 12
(c) 14
(d) 16
13. Select the option that is related to the third term in the same way as the second term is related to the first term.
29:13::37:?
(a) 15
(b) 21
(c) 17
(d) 14
14. Select the set in which the numbers are related in the same way as are the numbers of the following set.
$(9,15,27)$
(a) $(6,9,18)$
(b) $(15,25,35)$
(c) $(21,35,56)$
(d) $(12,20,36)$
15. In a codelanguageifFRIDGE is written as GTLHLK, then in the same language how will you write the word KETTLE?
(a) WQLGXK
(b) LGWXQK
(c) GLXWQK
(d) XKWQLG
16. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.
(a) TUWZ
(b) MNPS
(c) DEGJ
(d)PQTX
17. What will be the value of the following equation if ‘ $\because$ ' means 'addition', '+’ means 'subtraction', ‘-' means 'multiplication' and ' $\times$ ' means 'division'? $54 \times 6-7 \div 8+2=$ ?
(a) 63
(b) 57
(c) 69
(d) 61
18. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.

(a)

(b)

(c)

(d)

19. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series.
cb_db_cba_bc_bad_c
(a) acdcb
(b) cabdc
(c) acbed
(d) dcbcb
20. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.
(a) Benevolence
(b) Courtesy
(c) Indulgence
(d) Hindrance
21. Arrange the following words in a logical and meaningful order.

1. Salary
2. Recruitment
3. Education
4. Promotion
5. School
6. Employment
(a) $5,3,2,6,1,4$
(b) $5,3,2,6,4,1$
(c) $5,3,4,1,2,6$
(d) $3,5,4,2,6,1$
7. Which two signs should be interchanged in the following equation to make it correct?
$15-9 \div 6 \times 10+5=25$
(a) $\times$ and -
(b) + and -
(c) + and -
(d) $\times$ and $\div$
8. In a codelanguage, SUNDAYiswritten as DNUAYS. How will MOTHER be written as in that language?
(a) HTEOMR
(b) HTOERM
(c) HOTERM
(d) THEORM
9. Two rotated positions of a dice are given below. Which number will be at the top if ' 3 ' is at the bottom?
(a) 4

(c) 2
(b) 1
10. Two statements are given followed by three conclusions 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:

Some mobiles are instruments.
All instruments are heavyitems.
Conclusions:
I. Some mobiles are heavyitems.
II. No mobile is a heavyitem.
III. Some heavy items areinstruments.
(a) All conclusions follow
(b) Only conclusion I follows
(c) Only conclusion III and either conclusion I or II follow
(d) Only conclusions I and III follow
26. As of May 2016, which political party does actor

Raj Babbar belongs to?
(a) Samajwadi
(b) Indian National Congress
(c) Bahujan Samaj Party
(d) Bharatiya Janta Party
27. Who bagged the $4^{\text {th }}$ Carnot Prize 2018 for his contribution towards sustainable energy solutions?
(a) ArunJaitley
(b) Harsh Vardhan
(c) Hardeep Puri
(d) Piyush Goyal
28. The period between $\qquad$ in India's history is known as the Delhi Sultanate period.
(a) 1206 A.D. and 1526 A.D.
(b) 1456 A.D. and 1675 A.D.
(c) 745 A.D. and 1245 A.D.
(d) 1105 A.D. and 1445 A.D.
29. Mihira Bhoja was the ruler of $\qquad$ .
(a) Rashtrakuta
(b) Chola
(c) Pratihara
(d) Chalukya
30. In the year 1978, the $\qquad$ _amendment eliminated the right to acquire, hold and dispose of property as a fundamental right.
(a) $41^{\text {st }}$
(b) $43^{\text {rd }}$
(c) $44^{\text {th }}$
(d) $22^{\text {nd }}$
31. The defending champions $\qquad$ won the $85^{\text {th }}$ Ranji Trophy title in 2019.
(a) Mumbai
(b) Karnataka
(c) Saurashtra
(d) Vidarbha
32. Which of the following economic activities employs the maximum number of people in India?
(a) Tourism
(b) Manufacturing
(c) Agriculture
(d) Mining
33. Baglihar Dam is constructed on which river?
(a) Chenab
(b) Ravi
(c) Sutlej
(d) Indus
34. Who is the author of the book 'Rajatarangini'?
(a) Banabhatta
(b) Kalhana
(c) Kalidasa
(d) Somadeva
35. In which part of the Indian Constitution are

Centre-state relations mentioned?
(a) Part IV (Article 227 to 234)
(b) Part XI (Article 245 to 255 )
(c) Part X (Article 234 to 240)
(d) Part XII (Article 265 to 277)
36. Who was the first female chief justice of a state high court in India?
(a) Syeda Tahira
(b) Leila Seth
(c) Ruma Pal
(d) Fatima Bibi
37. The amount of light entering into eye can be controlled andregulated by
(a) Sclera
(b) cornea
(c) pupil
(d) retina
38. 'Mithun', a cattle breed is found in $\qquad$ .
(a) Tamilnadu
(b) Arunachal Pradesh
(c) Kerala
(d) Maharashtra
39. Veer Kunwar Sing Jayantiiscelebratedin $\qquad$ in order to recognize the achievements of Kunwar Singh during the Indian rebellion of 1857.
(a) Himachal Pradesh
(b) Bihar
(c) Uttarakhand
(d) Uttar Pradesh
40. Which cells in our body are popularly called 'soldiers of the human body"?
(a) Eosinophils
(b) White blood cells
(c) Redblood cells
(d) Basophils
41. Which hormone leads to the expulsion of milk from the breast during sucking?
(a) Estrogen
(b) Serotonin
(c) Prolactin
(d) Progesterone
42. The festival of Marabats and Badgyas celebrated in __ directly confronts social evils and criticize their perpetrators through a procession with effigies.
(a) Jabalpur
(b) Panaji
(c) Nagpur
(d) Hyderabad
43. The Nanda Devi Peak is located in $\qquad$ .
(a) Sikkim
(b) Jammu and Kashmir
(c) Uttarakhand
(d) Assam
44. Which of the following is a communicable disease?
(a) Measles
(b) Scurvy
(c) Asthma
(d) Diabetes
45. In 2019, Kazakhstan renamed its capital Astana to
(a) Nur Nazar
(b) Nursultan
(c) Nazarbayev
(d) Nurbayev
46. If there is a lack of money supply in comparison to the supply of goods and services, then the possible consequence would be $\qquad$ .
(a) Hyperinflation
(b) Deflation
(c) Devaluation
(d) Inflation
47. Which of the following has the highest protein content per gram?
(a) Apple
(b) Soyabean
(c) Wheat
(d) Groundnut
48. $\qquad$ won the inaugural Pro Volleyball League (PVL) title in 2019.
(a) Calicut Heroes
(b) Chennai Spartans
(c) Ahmedabad Defenders
(d) Kochi Blue Spikers
49. Vikramashila University was founded by $\qquad$ , a Pala king.
(a) Rajendra Chola
(b) Pulakeshin I
(c) Mihira Bhoja
(d) Dharmapala
50. 21 March 2019 was celebrated by the UN as World Down Syndrome Day and the theme was $\qquad$ .
(a) "Leave no one behind"
(b) "All is well"
(c) "Together we grow"
(d) "Live and letlive"

## QUANTITATIVE APTITUDE

51. On selling an article for Rs. 800, a person loss 20\% of its selling price. At what price should he sell it to gain $25 \%$ on its cost price?
(a) Rs. 1,280
(b) Rs. 1,152
(c) Rs. 1,250
(d) Rs.1,200
52. AB and CD are two parallel chords of a circlesuch that $\mathrm{AB}=6 \mathrm{~cm}$ and $\mathrm{CD}=2 \mathrm{AB}$. Both chords are on the same side of the centre of the circle. If the distance between them is equal to one-fourth of the length of $C D$, then the radius of the circle is:
(a) $3 \sqrt{5} \mathrm{~cm}$
(b) $4 \sqrt{3} \mathrm{~cm}$
(c) $4 \sqrt{5} \mathrm{~cm}$
(d) $5 \sqrt{3} \mathrm{~cm}$
53. If $\operatorname{Sec} \theta-\tan \theta=P$, then $\operatorname{cosec} \theta=$ ?
(a) $\frac{2 \square}{1-\square^{2}}$
(b) $\frac{1-\square^{2}}{1+\square^{2}}$
(c) $\frac{\square^{2}+1}{\square^{2}-1}$
(d) $\frac{2 \square}{1+\square^{2}}$
54. The table shows the production of different types of cars (in thousands).

| Cars | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| A | 64 | 56 | 57 | 63 | 70 |
| B | 48 | 54 | 63 | 64 | 72 |
| C | 33 | 42 | 48 | 57 | 64 |
| D | 25 | 45 | 40 | 55 | 35 |
| E | 40 | 48 | 52 | 61 | 60 |

The ratio of the total production of type A cars in 2015 and type B cars in 2014 taken together to the total production of type C cars in 2017 and type E cars in 2018 taken togetheris:
(a) $16: 19$
(b) $4: 5$
(c) $8: 9$
(d) $34: 39$
55. The ratio of the efficiencies of $\mathrm{A}, \mathrm{B}$ and C is $7: 5: 4$. Working together, they can finish a work in 35 days. A and B work together for 28 days. The remaining work will be completed (in days) by C alone:
(a) 56
(b) 63
(c) 49
(d) 60
56. If $\mathrm{a}^{2}+\mathrm{b}^{2}+64 \mathrm{c}^{2}+16 \mathrm{c}+3=2(\mathrm{a}+\mathrm{b})$, then the value of $4 a^{7}+b^{7}+8 c^{2}$ is:
(a) $3 \frac{7}{8}$
(b) $4 \frac{7}{8}$
(c) $4 \frac{1}{8}$
(d) $5 \frac{1}{8}$
57. The value of $2^{7}-\div\left(3_{8}^{5} \div \frac{2}{7} \square \square 2 \frac{1}{3}\right) \times\left[\left(2^{6}{ }_{7} \square \square 4_{5}^{1} \div\right.\right.$ $\left.{ }_{3}^{2}\right) \times \frac{5}{9}$ ] is:
(a) $\frac{1}{4}$
(b) 4
(c) $\frac{4}{23}$
(d) 5
58. If $x+y=1$ and $x y(x y-2)=12$, then the value of $x^{4}$ $+y^{4}$ is:
(a) 19
(b) 25
(c) 20
(d) 23
59. If the 8 -digit number 179 xo91y is divisible by 88 , the value of $(5 x-8 y)$ is:
(a) 4
(b) 7
(c) 9
(d) 5
60. What will be the compound interest (nearest to Rs.

1) on a sum of Rs. 25,000 for 2 years at $12 \%$ p.a., if the interest is compound8-monthly?
(a) Rs. 6,394
(b) Rs.6,439
(c) Rs. 6,493
(d) Rs.6,349
61. If $\left(27 x^{3}-343 y^{3}\right) \div(3 x-7 y)=\mathrm{Ax}^{2}+\mathrm{By}^{2}+7 \mathrm{Cyx}$, then the value of $(4 \mathrm{~A}-\mathrm{B}+5 \mathrm{C})$ is:
(a) o
(b) 3
(c) 2
(d) 1
62. If $a^{2}+b^{2}+c^{2}=21$, and $a+b+c=7$, then $(a b+b c+$ ca) is equal to:
(a) 12
(b) 28
(c) 14
(d) 8
63. If $x$ is added to each of $12,28,21$ and 45 , the numbers so obtained, in this order, are in proportion. What is the mean proportional between $(x+3)$ and $(4 x+1)$ ?
(a) 15
(b) 18
(c) 10
(d) 12
64. The income of A is $25 \%$ more than that of B and the income of C is $65 \%$ less than the sum of the incomes of A and B .
Income of C is what percent less than the income of A?
(a) 28
(b) 32
(c) 35
(d) 37
65. The table shows the production of different types of cars (in thousands).

| Cars | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| A | 64 | 56 | 57 | 63 | 70 |
| B | 48 | 54 | 63 | 64 | 72 |
| C | 33 | 42 | 48 | 57 | 64 |
| D | 25 | 45 | 40 | 55 | 35 |
| E | 40 | 48 | 52 | 61 | 60 |

In the data related to the production of type D cars is represented by a pie chart, then the central angle of the sector representing production of cars in 2015 will be:
(a) $72^{\circ}$
(b) $63^{\circ}$
(c) $81^{\circ}$
(d) $99^{\circ}$
66. The areas of the tree adjacent faces of a cuboid are $32 \mathrm{~cm}^{2}, 24 \mathrm{~cm}^{2}$ and $48 \mathrm{~cm}^{2}$. What is the volume of the cuboid?
(a) $192 \mathrm{~cm}^{3}$
(b) $256 \mathrm{~cm}^{3}$
(c) $288 \mathrm{~cm}^{3}$
(d) $128 \mathrm{~cm}^{3}$
67. Three numbers are such that if the average of any two of them is added to the third number, the sums obtained are 168,174 and 180 respectively. What is the average of the original three numbers?
(a) 86
(b) 87
(c) 89
(d) 84
68. The area of a triangle is $15 \mathrm{sq} . \mathrm{cm}$ and the radius of its incircle is 3 cm . Its perimeter is equal to:
(a) 12 cm
(b) 20 cm
(c) 5 cm
(d) 10 cm
69. The value of $\theta$, when $\sqrt{3} \cos \theta+\sin \theta=1\left(o^{\circ} \leq \theta \leq\right.$ $90^{\circ}$ ), is;
(a) $90^{\circ}$
(b) $30^{\circ}$
(c) $60^{\circ}$
(d) $0^{\circ}$
70. The Table shows the production of different types of cars (in thousands).

| Cars | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| A | 64 | 56 | 57 | 63 | 70 |
| B | 48 | 54 | 63 | 64 | 72 |
| C | 33 | 42 | 48 | 57 | 64 |
| D | 25 | 45 | 40 | 55 | 35 |
| E | 40 | 48 | 52 | 61 | 60 |

The total production of type D cars during 2015 to 2017 is what percent less than the total production of type E cars during 2014, 2015, 2016 and 2018 taken together?
(a) 35
(b) 32
(c) 28
(d) 30
71. The Table shows the production of different types of cars (in thousands).

| Cars | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| A | 64 | 56 | 57 | 63 | 70 |
| B | 48 | 54 | 63 | 64 | 72 |
| C | 33 | 42 | 48 | 57 | 64 |
| D | 25 | 45 | 40 | 55 | 35 |
| E | 40 | 48 | 52 | 61 | 60 |

The total production of type C cars in 2015 and type E cars in 2018 taken together is what percent of the total production of cars in 2014 and 2017 taken together?
(a) 22
(b) 25
(c) 20
(d) 27
72. A man purchase 100 copies of a book from the publisher and gets a discount of $25 \%$. He buys 50 copies from a retailer at a discount of $10 \%$. He got an overall discount of:
(a) $16.5 \%$
(b) $17.5 \%$
(c) $20 \%$
(d) $35 \%$
73. In a $\triangle A B C$, the sides $A B$ and $A C$ are extended to $P$ and Q, respectively. The bisectors of $\angle \mathrm{PBC}$ and $\angle Q C B$ interest at a point $R$. If $\angle R=66^{\circ}$, then the measure of $\angle \mathrm{A}$ is:
(a) $36^{\circ}$
(b) $24^{\circ}$
(c) $48^{\circ}$
(d) $72^{\circ}$
74. Anu allows a $20 \%$ discount on the marked price of an article and still makes a profit of $25 \%$. If she gains Rs. 44.80 on the sale of the article, then the cost price of the articleis:
(a) Rs. 188.80
(b) Rs. 192.80
(c) Rs. 184.20
(d) Rs. 179.20
75. ABCD is a cyclic quadrilateral in which $\angle \mathrm{A}=67^{\circ}$ and $\angle \mathrm{B}=92^{\circ}$. What is the difference between the measures of $\angle \mathrm{C}$ and $\angle \mathrm{D}$ ?
(a) $29^{\circ}$
(b) $27^{\circ}$
(c) $19^{\circ}$
(d) $25^{\circ}$
76. Select the most appropriate meaning of the given idiom.
Actions speak louder than words
(a) take up a task that you cannot finish
(b) what you do is more important than what you say
(c) do something without planning
(d) look for solutions in the wrong place
77. Select the correct active from of the given sentence. The crop was adversely affected by the inadequate rainfall.
(a) The adversely rainfall has affected the inadequate crop
(b) The inadequate rainfall was adversely affecting the crop
(c) The inadequate rainfall adversely affected the crop
(d) The inadequate crop adversely affected the rainfall
78. Select the antonym of the given word.

PARDON
(a) mercy
(b) punish
(c) kindness
(d) grace
79. Given below are four jumbled sentences. Select the option that gives their correct order.
A. And 844 million don't have access to clean water close to home, according to the latest report by WaterAid.
B. Around 4 billion people in the world live in physically water-scarce areas.
C. It is because globally we use six times as much water today as we did 100 years ago.
D. The world's water crisis is getting worse.
(a) DACB
(b) BDCA
(c) CADB
(d) BADC
80. Select the world which means the same as the group of words given.
A person who draws or produces maps
(a) calligrapher
(b) cartographer
(c) lexicographer
(d) choreographer
81. Select the word which means the same as the group of words given.
A cylindrical container bulging out in the middle, traditionally made of wooden states for keeping oil, beer etc.
(a) bin
(b) bushel
(c) barrel
(d) bale

Direction (82-86): 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 eachblank.

Eager to control the South Atlantic, the British Navy had tasked Admiral Byron (1) $\qquad$ setting an island off the South American coast (2) $\qquad$ ships could resupply, and then finding an alternative (3) $\qquad$ to the East Indies. After rounding the tip of South America, Admiral Byron confronted the world's (4) body of water the endless Pacific Ocean. After a month of empty blue horizon, a tiny island (5) $\qquad$ . Byron joyously described the island's "beautiful appearance surrounded by a beach of the finest white sand - and covered with tall trees."
82. Select the most appropriate option for blank no.1.
(a) for
(b) from
(c) of
(d) with
83. Select the most appropriate option for blank no. 2.
(a) there
(b) when
(c) where
(d) wherever
84. Select the most appropriate option for blank no. 3 .
(a) route
(b) road
(c) path
(d) means
85. Select the most appropriate option for blank no. 4.
(a) larger
(b) large
(c) more larger
(d) largest
86. Select the most appropriate option for blank no. 5 .
(a) came out
(b) appeared
(c) showed
(d) stood up
87. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select no improvement. If I have money, I purchase this house.
(a) I purchased
(b) no improvement
(c) Ihave purchased
(d) I will purchase
88. Select the most appropriate meaning of the given idiom.
Pull someone's leg
(a) trust someone
(b) joke with someone
(c) get upset with someone
(d) tell someone a secret
89. Select the most appropriate world to fill in the blank.
A number of Indian goods face a $\qquad$ competition from Chinese goods in terms of prices and looks.
(a) angry
(b) powerful
(c) fierce
(d) bold
90. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select no improvement. She read that novel since she got up in the morning.
(a) no improvement
(b) has been reading that novel
(c) reads that novel
(d) has read that novel
91. Select the most appropriate world to fill in the blank.
Many items made of ivory were $\qquad$ from a dealer in antiques by the custom authorities at the Delhi airport.
(a) appropriated
(b) confiscated
(c) annexed
(d) hijacked
92. In the sentence identify the segment which contains the grammatical error.
She lost a big order from a known showroom in case of her own carelessness.
(a) in case of
(b) her own carelessness
(c) she lost a big order
(d) form a known showroom
93. Select the synonym of the given word.

INEPT
(a) capable
(b) fit
(c) strong
(d) clumsy
94. Select the wrongly spelt word.
(a) exchange
(b) exercise
(c) exite
(d) exclaim
95. Select the synonym of the given word.

INARTICULATE
(a) fluent
(b) inevitable
(c) eloquent
(d) incoherent
96. Select the correct passive from of the given sentence.
Please show me my son's Mathematics notebook.
(a) I will please be shown my son's Mathematics notebook
(b) I may please be shown my son's Mathematics notebook
(c) My son's Mathematics notebook was please shown to me
(d) My son may please be shown the Mathematics notebook
97. Select the wrongly spelt word.
(a) comparable
(b) commission
(c) committee
(d) consceince
98. Select the antonym of the given word.

EXCEPTIONAL
(a) uncommon
(b) unthinkable
(c) unimaginable
(d) unremarkable
99. In the sentence identify the segment which contains the grammatical error.
Torrential rains and winds of upto 170 km per hour swept away roads, homes and bridges and knocking down power and communication lines.
(a) knocking down
(b) homes andbridges
(c) swept away roads (d) winds of upto
100. Given below are four jumbled sentences. Select the option that gives their correct order.
(A) An estimated $70 \%$ of this plastic which enters the sea sinks
(B) This is a problem that stretches far beyond India
(C) Eight million tonnes of plastic ends up in the world's oceans every year, causing damage to the fragile ecosystem
(D) And much of it is not biodegradable
(a) CADB
(b) ABDC
(c) CDBA
(d) ADBC

