## Reasoning Ability

1. In question select the related letter number from the given Alternatives.
8:9::64:?
(A) 87
(B) 25
(C) 36
(D) 46
2. In question select the related letter number from the given Alternatives.
DFHj: WUSQ : : CEGi : ?
(A) XWTR
(B) XURT
(C) XVTR
(D) XYZR
3. In question select the related letter number from the given Alternatives.
9, 81, $9: 3,9,3:: 4,16,4:$ ?
(A) $8,32,8$
(B) $6,9,6$
(C) $2,8,2$
(D) $2,4,2$
4. In question select the related letter number from the given Alternatives.
RAJASTHAN : JODHPUR : : PUNJAB : ?
(A) JALANDHAR
(B) LUDHIANA
(C) CHANDIGARH
(D) AMRITSHAR
5. In question select the related letter number from the given Alternatives.
Nephew : ? : : Niece: Daughter
(A) Son
(B) Brother
(C) Sister
(D) Mother
6. In question select the related letter number from the given Alternatives.
B2Y25: D4W23 : : C3X24:?
(A) AIZ26
(B) F6U21
(C) E5U 22
(D) E5V22
7. In question select the related letter number from the given Alternatives.
Cripps Mission : 1942 : : Cabinet Mission : ?
(A) 1946
(B) 1949
(C) 1944
(D) 1947
8. In question find the odd

Word/Number/Letter/ Number pair from the given alternatives.
Choose the right options.
(A) Gujarat
(B) Kerala
(C) Orissa
(D) Meghalaya

## 9. In question find the odd

Word/Number/Letter/ Number pair from the given alternatives.
Choose the right options-
(A) Atal Behari Vajpayi
(B) Dr. A.P.J. Abdul Kalam
(C) Charan Singh
(D) Manmohan Singh
10. In question find the odd

Word/Number/Letter/ Number pair from the given alternatives.
Choose the right options-
(A) 289
(B) 361
(C) 484
(D) 441
11. In question find the odd

Word/Number/Letter/ Number pair from the given alternatives.
Choose the right options-
(A) 26
(B) 216
(C) 124
(D) 63
12. In question find the odd

Word/Number/Letter/ Number pair from the given alternatives.
Choose the right options-
(A) JKN
(B) UVX
(C) CDF
(D) PQS
13. In question select the related letter number from the given Alternatives.
ADGJ : NQTW : : ACEG : ?
(A) NRTX
(B) NPRT
(C) NRPT
(D) NPST
14. In question select the missing number from the given responses.
501, 485, 460? 375
(A) 385
(B) 424
(C) 433
(D) 418 .
15. In question select the missing number from the given responses.
BCDEWXYZQRSTMNO?
(A) A
(B) L
(C) P
(D) K
16. In question select the missing number from the given responses.
30, 20, 12, 6 ?
(A) 2
(B) 1
(C) 4
(D) 0
17. In question select the missing number from the given responses.
CD, DEF, EF, FGH, GH ?
(A) HIJ
(B) IJK
(C) HJI
(D) GHI
18. In question which one set of letters when sequentially placed at the gaps in the given letter series shall be complete it
$\mathrm{BA}-\mathrm{BBB}-\mathrm{AABB}-$
(A) BAA
(B) BAB
(C) ABB
(D) BBB
19. In question which one set of letters when sequentially peaced at the gaps in the given letter series shall be complete it $-\mathrm{BCAB}-\mathrm{CABC}-\mathrm{ABCA}-\mathrm{B}$
(A) ABCA
(B) AABC
(C) BBCA
(D) ABAC
20. If + Means $\div$, - means $\times, \times$ Means,$+ \div$ Means -, Give the value far
$12+2 \times 6-2 \div 3=$ ?
(A) 3
(B) 4
(C) 15
(D) 2
21. The given word is followed by 4 responses, one of which cannot be formed by using the Letters of the word given 'CONTRACTING'. Find out the word.
(A) TRANING
(B) TRACTOR
(C) ACTING
(D) CONTACT
22. Arrange the following words as per order in the English Dictionary.
(1) Brisk (2) Bren (3) Brief (4) Bridge
(A) $1,2,3,4$
(B) $4,3,2,1$
(C) $2,4,1,3$
(D) $2,4,3,1$
23. Arrange the following words as per order in the English Dictionary.
(1) Hail (2) Handle (3) Half (4) Handed
(A) $1,3,4,2$
(B) $1,2,3,4$
(C) $3,1,4,2$
(D) $1,3,2,4$
24. In certain code SELDOM is written as TFMEPN. In that code MOBILE will be written as -
(A) FMJCPN
(B) NPCJMF
(C) NPCJFM
(D) NPEJFM
25. Choose the correct code for the given letters.

| Y | R | E | D | B | A | S | P | V |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| O | + | $\%$ | $@$ | $\Delta$ | $\#$ | $\Theta$ | $\times$ | $=$ |

(A) +\#\%@
(B) $+@ \Delta \%$
(C) $+\%$ \#
(D) $=\ominus$ \#@
26. If in row of 56 students Rohit is at 25th

Position from Left, Then what is the Position of Rohit from Right End?
(A) 31
(B) 34
(C) 30
(D) 32
27. The height of $\underline{P}$ is more than that of $\underline{S} . R$ is Shorter than $\mathbf{Q}$. S's height is more than that of $Q$. Whose height is maximum?
(A) P
(B) Q
(C) S
(D) R
28. A man walks towards east. He turns left and he again turns left. Finally he turns Right. Now is which direction he is walking?
(A) South
(B) East
(C) North
(D) West
29. If $\mathbf{3 7}+\mathbf{1 4}=\mathbf{5 0}$ and $\mathbf{2 8}+\mathbf{3 5}=\mathbf{8 0}$ then $\mathbf{8 9}+$ $41=$ ?
(A) 77
(B) 85
(C) 130
(D) 95
30. If $6 * 3=216,7 * 2=49$ then $18 * 2=$ ?
(A) 36
(B) 20
(C) 324
(D) 81
31. If Seema is the Daughter of the wife of the only son of the father of Priya's father, how is

Seema repated to Priya If Seema's grandfather has no grandson?
(A) Mother
(B) Sister
(C) Cousin
(D) Sister - in - low
32. In the year 2008, the Republic day was celebrate on Saturday. On which day was the Republic day celebrated in the year 2012?
(A) Saturday
(B) Thursday
(C) Monday
(D) Sunday
33. Statements are given followed by two conclusion I and II. you have to consider the statements to be true. even if they seem to be at variance from commonly known facts. you are to decide which of the given conclusions can definitely be drawn from the given statements. Indicate your answer
Statement:
I. All Banana are Apple
II. All Apple are fruit.

Conclusion:

1. Some Banana are Apple
2. No fruit is Apple.
(A) Only 1 follows
(B) Only 2 follows
(C) 1 and 2 both follow
(D) None of these
3. Statements are given followed by two conclusion I and II. you have to consider the statements to be true. even if they seem to be at variance from commonly known facts. you are to decide which of the given conclusions can definitely be drawn from the given statements. Indicate your answer
Statement:
I. All phones are mobiles.
II. All mobile are laptops.

Conclusion:

1. Some phones are mobile
2. Some laptops are mobile
(A) Only 1 follows
(B) Only 2 follow
(C) 1 and 2 both follow
(D) None of these

## 35. Arranged below chronological

1. Atal Bihari Vajpaye
2. Dr. Manmohan singh
3. Indira Gandhi
4. Lal Bahadur Shastri
(A) $1,2,3,4$
(B) $4,3,2,1$
(C) $4,3,1,2$
(D) $4,1,2,3$
5. In the following question select the related letters / word / numbers / figures from the given alternatives.
LMN : VWX : : BCD
(A) LMN
(B) GEH
(C) HFG
(D) FHG
6. In the question from the given alternatives words, select the word which can not be formed using the Letters of the given word.
UNADVENTUROUS
(A) Tours
(B) Rous
(C) Advent
(D) Advance
7. If Cat is coded as 410 then how 'Dog' will be coded?
(A) 287
(B) 290
(C) 274
(D) 288
8. If Rohtak is coded as 'IOSLAU'. Then how Tridev will be coded?
(A) JRUWEE
(B) VRJEWE
(C) JRUWEF
(D) RJUEWE
9. If $52 \times 34=49,61 \times 10=7$ then $25 \times 44=$ ?
(A) 58
(B) 68
(C) 56
(D) 96
10. In the given series, how many number of 8 which has nearest primarily 6 and not nearest by 4 .
$6,8,4,7,8,4,5,3,6,8,1,9,8,5,4,6,8,2,9,6$,
$8,1,3,6,8,4,3,6$
(A) 3
(B) 4
(C) 1
(D) 2
11. Vinay has a brother Vikas. Vinay is the son of Mahesh. Tarun is Mahesh's father. How Vikas is related to Tarun?
(A) Brother
(B) Grand father
(C) Son
(D) Grandson
12. Find out Odd no. / Letter / word from the given alternatives.
Choose correct alternative.
(A) 1109-1134
(B) 1433-1458
(C) 1698-1723
(D) $1284-1305$
13. Find out Odd no. / Letter / word from the given alternatives.
Choose correct alternative.
(A) EGKQ
(B) CEIO
(C) LNQW
(D) PRVB
14. If '+' stands for division, ' - ' stands for multiplication and '-' stands for addition, which one of the following is correct?
(A) $21-7 \times 4 \div 5+2=18$
(B) $21+7 \div 4-5 \times 2=21$
(C) $21 \times 7+4 \div 5 \times 2=24$
(D) $21 \div 7 \times 4-5+2=15$
15. A man walking from the point " $A$ " towards north east and walk 13 meter and turn left and walk 12 meter. At this place he reached at point ' $B$ '. Then what is the distance between $A$ and $B$ and now the person faces to which direction?
(A) 5 m , west
(B) 5 m , south
(C) 25 m , south west
(D) 5 m , east
16. A statement is followed by two assumptions I and II is given. Which of the foul alternatives is correct?
Statements :
Tree gives out $\mathrm{CO}_{2}$ at night.
Conclusions :
I. One should not sleep under a tree at night
because it is harmful for health.
II. $\mathrm{CO}_{2}$ is a green house gas.
(A) Only I is follow
(B) Only II is follow
(C) I and II both follow
(D) Neither I, nor II follow
17. In the question a series is given and one number is missing from the series, select the best alternative to complete the given series?
$\mathrm{AB}_{-} \mathrm{NABB}_{-} \mathrm{A}_{-} \mathrm{N}_{-} \mathrm{bb}_{-}$
(A) BNBBAN
(B) ABNNBB
(C) ABNNAN
(D) BABBAN
18. In the question a series is given and one number is missing from the series, select the best alternative to complete the given series?

$$
{ }_{-} \mathrm{CC}_{-} \mathrm{D}_{-} \mathrm{CDDC}_{-} \mathrm{D}
$$

(A) DDCD
(B) DCDC
(C) CDDC
(D) DDCC
50. From the given alternatives find out the order who shows the best or meaningful order of given word?
A. Pashan kaal
B. Gupt kaal
C. Harappan kaal
D. Vedic kaal
E. Mourya kaal
(A) $1,3,4,5,2$
(B) $1,2,3,4,5$
(C) $3,1,2,4,5$
(D) $1,4,3,5,2$
51. In which State Alluvial Soil is not found?
(A) Bihar
(B) Hrayana
(C) Jammu \& Kashmir
(D) Punjab
52. The Ancient University established by Kumar Gupt is:-
(A) Nalanda
(B) Taxila
(C) Aligarh
(D) None of these
53. Which One of the following Part of the Indian Constitution have Fundamental rights?
(A) Part 5
(B) Part 4
(C) Part 3
(D) Part 1
54. Which Article of Indian Constitution Defines the establishment and formation of Supreme Court?
(A) Article - 130
(B) Article - 124
(C) Article - 135
(D) Article - 195
55. Who founded 'AATMIYA SABHA'?
(A) Swami Dayanand Saraswati
(B) Swami Vivekanand
(C) Keshavchand Sen
(D) Raja Ram Mohan Roy
56. Which Commission is Known As "White Men Commission?
(A) Simon Commission
(B) Cripps Mission
(C) Cabinet Mission
(D) None of these
57. Which of the following is not produced during the weather of khareef?
(A) Millet and Rice
(B) Maize and Millet
(C) Barley and Mustard
(D) Millet and Rice
58. Kalibanga is situated in-
(A) Rajasthan
(B) Haryana
(C) Gujarat
(D) Uttar Pradesh
59. Which of the following pair has won

Australian open women's doubles 2016?
(A) Chan HaoChing - Chan Yung Jan
(B) Martina Hingis - Sania Mirja
(C) Rakvell Aarvo - Abigel Spear
(D) None of these
60. Who has been ap
pointed as the chief justice of India?
(A) Tirath Singh Thakur
(B) Deepak Mishra
(C) Mukul Mudgal
(D) Anil R. Dave
61. Which language has been adopted as the third official language of Canada?
(A) Hindi
(B) Punjabi
(C) Chinese
(D) French
62. According to which article of constitution, a person can file a petition on the violation of fundamental rights?
(A) Article - 19
(B) Article - 31
(C) Article - 32
(D) Article - 35
63. Which event did not occur during the tenure of lord curzon?
(A) Partition of Bengal
(B) Establishment of Indian national congress
(C) Delhi court
(D) Establishment of archeology department
64. Which ruler started the 'Mansabdari' system in mughal administrative system?
(A) Shahjahan
(B) Akbar
(C) Jahangir
(D) Akbar - II
65. Which metal's coin was started in Gupta dynasty?
(A) Copper
(B) Silver
(C) Gold
(D) Bronze
66. Who is the author of the book titled "On My Terms: From grass root to the corridor of power"?
(A) Sharad Pawar
(B) Natwar Singh
(C) Nandan Nilekani
(D) Manmohan Singh
67. Which acid is found in red ants?
(A) Formic Acid
(B) Benzene
(C) Acetic Acid
(D) Sulphuric Acid
68. Edible oil is converted to vegetable butter by which of the following process?
(A) Crystallisation
(B) Hydrogenation
(C) Oxidation
(D) Condensation
69. Which tax is responsible to attain maximum revenue to state governments?
(A) Excise duty
(B) Sales tax
(C) Custom duty
(D) Corporate tax
70. Monetary policy in Indian economy is prepared and implemented by-
(A) Central government
(B) ASSOCHAM
(C) Reserve Bank of India
(D) Ministry of Finance
71. What is the basis for the classification of climate based areas?
(A) Height
(B) Distance from sea
(C) Rain
(D) Distance from equator
72. Which kind of electricity is generated in India mostly?
(A) Hydro power
(B) Thermal power
(C) Solar power
(D) Nuclear power
73. What is the difference between fundamental rights and directive principles?
(A) Constitutional conservation
(B) Political conservation
(C) Legal conservation
(D) Ethical conservation
74. What is the source of oxygen generated during photosynthesis?
(A) Water
(B) $\mathrm{CO}_{2}$
(C) Chlorophyll
(D) Mesophyll cells
75. Solar energy used by plants in food chain is-
(A) $10 \%$
(B) $1 \%$
(C) $0.1 \%$
(D) $0.01 \%$
76. Which of the following is one dimensional flow in ecosystem?
(A) Light
(B) Water
(C) Biogas
(D) Energy
77. Which financial committee of parliament has no representative in lower house Rajya sabha?
(A) Expenditure committee
(B) Public Undertaking committee
(C) Estimates Committee
(D) Public service committee
78. Financial planning is a necessary characteristics of-
(A) Socialist economy
(B) Dualistic economy
(C) Capitalist economy
(D) Mixed economy
79. Which of the following is the highest civil officer of India?
(A) Solicitor general of India
(B) Home secretary
(C) Cabinet secretary
(D) Chief Secretary of prime minister
80. Rajya Sabha has got more rights than the Lok Sabha in context of-
(A) In Context of money bill
(B) Constitutional amendments
(C) Money distributed to MPs
(D) Creation of new all India Services
81. Which of the following woman had represented India in second round table conference.
(A) Aruna Asaf Ali
(B) Kasturba Gandhi
(C) Sarojini Naidu
(D) Sucheta Kriplani
82. How long it takes to light to trowel from sun to earth?
(A) 5.5 Min .
(B) 8.3 Min .
(C) 6.8 Min .
(D) 9.5 Min .
83. Which technique is used to find radioactive elements in alive cells?
(A) Centrifugal technique
(B) Chromatography
(C) Autoradiography
(D) All of the above
84. Which of the following is not matched correctly?
(A) Hobbs :- Hanging to charles I
(B) Ruso :- Revolution of france
(C) Lock :- Prideful revolution
(D) Hitler :- First world war
85. Which of the following Chemical is used in modern leather industries?
(A) Sodium thiosulphate
(B) Hydrochloric Acid
(C) Sulphuric Acid
(D) Chromium sulphate and bichromate
86. 'Ladakh' is situated between -
(A) Karakoram and Zanskar Mountain Range
(B) Peer Panjal and Dholadhar
(C) Shivalik and Dholadhar
(D) None of these
87. 'Emergency Provisions' are discussed in which part of Indian constitution?
(A) Part - 17
(B) Part - 18
(C) Part - 21
(D) Part - 11
88. Who among the following is called
'Napolean of India'?
(A) Skandagupta
(B) Chandragupta
(C) Brahmagupta
(D) Samudragupta
89. Which of the following ruler was the destroyer of Nalanda and Vikramshila Universities?
(A) Alauddin Khalji
(B) Mohammad bin Tuglaq
(C) Shershah suri
(D) Mohammad Bokhtiyar Khalji
90. Panchayati Raj System in India was firstly Implemented in-
(A) 1959 Andhra Pradesh
(B) 1959 Rajasthan
(C) 1960 Delhi
(D) 1960 Uttar Pradesh
91. Match the following

| Fall | State |
| :--- | :--- |
| (A) Elappy | I. Kerala |
| (B) Kakinada | II. Karnataka |
| (C) Tutikoran | III. Tamilnadu |
| (D) Bhatkal | IV. Andhra Pradesh |
| (A) A:- I, B:- IV, C:- III, D:- II |  |
| (B) A:- I, B:- IV, C:- II, D:- III |  |
| (C) A:- III, B:- II, C:- I, D:- IV |  |
| (D) A:- I, B:- II, C:- III, D:- IV |  |

92. Which of the following state is not part of seven sisters?
(A) Meghalaya
(B) Assam
(C) Tripura
(D) Sikkim
93. Consider the following statements -
I. South India's highest mountain peak 'Anaimudi is situated in 'Annamalai' Mountain range.
II. Dodabetta is the second highest peak of south India and located in Nilgiri mountain range.
III. The mountain connecting eastern and western piers in south India is Nilgiri mountain.
Which of the above statement is / are true?
(A) I and III
(B) I and II
(C) I, II and III
(D) II and III
94. Which of the following is statement is false when interest rate in economy is high?
(A) More saving
(B) Less debt
(C) High cost of Production
(D) High result of capital
95. Interest on public loan is a part of-
(A) Payment transfer by entrepreneurs
(B) Payment transfer by government
(C) National Income
(D) Interest paid by families
96. Which of the following should be done by Central bank to control inflation?
(A) Selling government securities in open market
(B) Lowering bank rate
(C) Lowering CRR
(D) Buying government from open market
97. Which device is used to measure time in submarines?
(A) Galvanometer
(B) Chronometer
(C) Manometer
(D) General watch
98. Former Defence secretary Mr. Radha krishna Mathur has been appointed as the chief of-
(A) Election Commission of India
(B) Information commission of India
(C) National human rights commission
(D) National Commission for justice and empowerment
99. Which of the following is the largest island and it is dominion of-
(A) Greenland - Denmark
(B) Greenland - USA
(C) Australia - Australia
(D) Hawaii - USA
100. Which gas is used by police to control the rush?
(A) $\mathrm{CO}_{2}$
(B) Ammonia
(C) Hydrogen Peroxide
(D) Chloropicrin

## Quantitative Aptitude

101. The average weight of 35 students in a class is 35 kg . If the teacher is also included, the average increases by 1 kg . Find the weight of the teacher?
(A) 70 kg
(B) 71 kg
(C) 69 kg
(D) 61 kg
102. The Value of $P$ for which the lines $3 x+8 y+9=0$ and $2 x+p y+19=0$ are perpendicular is -
(A) -12
(B) -9
(C) -11
(D) 9
103. A bag contains rupees, twenty paise, ten paise ans five paise coins in the ratio of $1: 2: 3$.If the total amount is Rs.30. find the number of coins of 5 paise.
(A) 50
(B) 10
(C) 150
(D) 200
104. 102. 2 men and 5 women can complete a piece of work in 12 days. 5 men and 2 women can complete the same work in 9 days. in how many days can 3 women complete the work alone.
(A) 36 days
(B) 21 days
(C) 30 days
(D) 42 days
1. The value of $\left(\cot 15^{\circ} . \cot 16^{\circ} . \cot \right.$
$17^{\circ}$ $\qquad$ $\left.\cot 74^{\circ} . \cot 75^{\circ}\right)$ is-
(A) $1 / 2$
(B) 0
(C) -1
(D) 1
2. A solid metal ball of diameter 8 cm is melted and cast into smaller balls, each of radius 1 cm . The number such balls is -
(A) 512
(B) 128
(C) 64
(D) 32
3. The ratio of radii of two right circular cylinder 2:3 and their heights are in the ratio $5: 4$.the ratio of their coverd surface area is-
(A) $5: 6$
(B) $3: 4$
(C) $4: 5$
(D) $2: 3$
4. A cone, a hemisphere and a cylinder stand on equal bases and have the same height. The ratio their respective volumes is -
(A) $1: 2: 3$
(B) $2: 1: 3$
(C) $1: 3: 2$
(D) $3: 1: 2$
5. Three numbers which are Co- prime to one another are such that the product of first two is 551 and that of last two is $\mathbf{1 0 7 3}$. The sum of the three numbers is-
(A) 75
(B) 81
(C) 85
(D) 89
$110.8 \%$ of voters in an election did not cast their votes. In this election there was only two candidates The winner by obtaining $48 \%$ of the total votes defeated his rival 1100 votes. The total number of voters in the election was-
(A) 21000
(B) 23500
(C) 22000
(D) 27500
6. What sum of money will amount to 520 Rs/- in 5 yrs and to 568 Rs/- in 7 yrs. at simple interest?
(A) $400 \mathrm{Rs} /-$
(B) $120 \mathrm{Rs} /-$
(C) $510 \mathrm{Rs} /-$
(D) $220 \mathrm{Rs} /-$
7. The average weight of three men $A, B, C$ is 84 kg . $D$ joins them and average weight of the four becomes 80 kg . If $E$ whose weight is 3 kg more than that of $D$, replaces $A$, the average weight of $B, C, D$ and $E$ becomes 79 kg . Then the weight of $A$ is-
(A) 65 kg
(B) 70 kg
(C) 75 kg
(D) 80 kg
8. The price of an article is raised by $30 \%$ and then two successive discounts, of $\mathbf{1 0 \%}$ each are allowed. Ultimately the price of the article is-
(A) $10 \%$ Ascending
(B) $5.3 \%$ Ascending
(C) $3 \%$ descending
(D) $5.3 \%$ descending
9. The population of a town increases at the rate of $20 \%$ during the first year and it decreases at the rate at $20 \%$ during the second. If it has $\mathbf{5 9 4 0 0}$ inhabitants two year ago-
(A) 5800
(B) 61875
(C) 54500
(D) 65900
10. Two numbers are $35 \%$ and $40 \%$ less than a $3{ }^{\text {rd }}$ number respectively by what percent is the $2^{\text {nd }}$ number smaller than $1^{\text {st }}$ one?
(A) $41 \%$
(B) $8.9 \%$
(C) $27.6 \%$
(D) $7.7 \%$
11. Two pipes $A$ and $B$ can fill a tank in 38 min and 57 min respectively. How much time after opening both taps, The tap A should be
turned off so that the tap B may take 12 min more to fill the take?
(A) 18 min
(B) 12 min
(C) 16 min
(D) 15 min
12. A person saves every year $30 \%$ of his salary.If his salary increases $\mathbf{2 0 \%}$ every year than by how much \% does his saving increases every year?
(A) $20 \%$
(B) $25 \%$
(C) $15 \%$
(D) $30 \%$
13. A, B, C enter into a partnership by making investment into the ratio $4: 9$ : 11.After a year $C$ invests another $\mathbf{2 , 2 0 , 0 0 0} \mathrm{Rs} /-$ while A withdraw $1,80,000 \mathrm{Rs} /$-. Then the ratio of their investments changes to $16: 72$ :
148.How Much did A investments initially?
(A) 3,60,000 Rs/-
(B) $3,40,000 \mathrm{Rs} /-$
(C) $3,80,000 \mathrm{Rs} /-$
(D) $4,20,000 \mathrm{Rs} /-$
14. If each of side of a rectangular field is diminished by $60 \%$.By how much \% is the area of the field decreased?
(A) $74 \%$
(B) $84 \%$
(C) $82 \%$
(D) $86 \%$
15. The difference between $n$ the interior and exterior angles of a regular polygon is 140.Then, how many sides are there in that polygon?
(A) 16
(B) 19
(C) 20
(D) 18
16. A shopkeeper sells his goods at $10 \%$ profit had he bought it $\mathbf{2 0 \%}$ less and sold it 54 Rs/more, he earns $60 \%$ profit. Find new S.P.(selling price)
(A) $374 \mathrm{Rs} /-$
(B) $364 \mathrm{Rs} /-$
(C) $384 \mathrm{Rs} /-$
(D) $394 \mathrm{Rs} /-$
17. A 630 meter long train crosses a platform of equal length in 30 second.what is the speed of the train (in $\mathrm{m} / \mathrm{sec}$ )?
(A) $52 \mathrm{~m} / \mathrm{s}$
(B) $42 \mathrm{~m} / \mathrm{s}$
(C) $43 \mathrm{~m} / \mathrm{s}$
(D) $47 \mathrm{~m} / \mathrm{s}$
18. Equation $a x+b=0$ and $c x+d=0$ will be consistent If
(A) $\mathrm{ad}=\mathrm{bc}$
(B) $a d+b c=0$
(C) $a b-c d=0$
(D) $a b+c d=0$
19. The value of $\lambda$ for which the expression $a^{3}+x^{3}-5 x+\lambda$ will be divisible by $(x-2)$ is-
(A) 2
(B) -2
(C) -3
(D) 4
20. If the polynomial $f(x)$ is such that $f(-1)=0$, then a factor of $f(x)$ is-
(A) -1
(B) $x-1$
(C) $x+1$
(D) $-(1+x)$
21. What is the height of a cylinder that has the same volume and radius as a sphere of diameter 12 cm ?
(A) 7 cm
(B) 10 cm
(C) 9 cm
(D) 8 cm
22. If $a, b$ and $c$ are the sides of a triangle and $a^{2}+b^{2}+c^{2}=a b+b c+c a$, then the triangle is-
(A) Equilateral
(B) Isosceles
(C) Right - angle
(D) Obtuse - angle
23. The In-radius of equilateral triangle is of length 3 cm , then the length of each of its medians is-
(A) 12 cm
(B) $9 / 2 \mathrm{~cm}$
(C) 4 cm
(D) 9 cm
24. Two pipes $x$ and $y$ can fill a cistern in 24 min . and 32 min . respectively. if both the pipes are opened together, than after how much time (in minutes) should $Y$ be closed so that the tank is full in $\mathbf{1 8}$ minutes?
(A) 5
(B) 10
(C) 8
(D) 6
25. $(y-z)^{3}+(z-x)^{3}+(x-y)^{3}$ is equal to-
(A) $3(y-z)(z+x)(y-x)$
(B) $(x-y)(y+z)(x-z)$
(C) $3(y-z)(z-x)(x-y)$
(D) $(y-z)(z-x)(x-y)$
26. If the average of $m$ number is $n^{2}$ and that of $n$ number is $\mathbf{m}^{\mathbf{2}}$, then the average of $(m+n)$ numbers is-
(A) $\mathrm{m} / \mathrm{n}$
(B) mn
(C) $m-n$
(D) $m+n$
27. A solid iron sphere of diameters 6 cm is melted and made to a hollow cylindrical pipe of external diameter 10 cm and of length 4 cm .
The width of the sheet of pipe is-
(A) 1 cm
(B) 2 cm
(C) 3 cm
(D) 4 cm
28. If the volume of a sphere and a cylinder of equal radius are same, then ratio of the radius and height of the cylinder will be
(A) $4: 3$
(B) $3: 2$
(C) $3: 4$
(D) $2: 3$
29. In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 40 , then the dividend in-
(A) 240
(B) 440
(C) 4040
(D) 4000
30. The minimum value of $\cos ^{2} \theta+\sec ^{2} \theta$ is-
(A) 0
(B) 1
(C) 3
(D) 2
31. Two numbers are respectively $25 \%$ and $\mathbf{4 0 \%}$ less than a third number what percent of the first is the second?
(A) $60 \%$
(B) $70 \%$
(C) $40 \%$
(D) $80 \%$
32. A reduction of $20 \%$ in the price of sugar enables Mr. Bhadra to buy an extra 5 kg of it for Rs. 320. The original rate of sugar is-
(A) Rs. 12 per kg
(B) Rs. 15 per kg
(C) Rs. 16 per kg
(D) Rs. 20 per kg
33. $(a+b-2 c)^{3}+(b+c-2 a)^{3}+(c+a-2 b)^{3}$ is equal to-
(A) $(a+b-2 c)(b+c-2 a)(c+a-2 b)$
(B) $2(a+b-2 c)(b+c-2 a)(c+a-2 b)$
(C) $3(\mathrm{a}+\mathrm{b}-2 \mathrm{c})(\mathrm{b}+\mathrm{c}-2 \mathrm{a})(\mathrm{c}+\mathrm{a}-2 \mathrm{~b})$
(D) $-3(a+b-2 c)(b+c-2 a)(c+a-2 b)$
34. If $\sec \theta-\operatorname{cosec} \theta=0$, then the value of $\tan$ $\theta+\cot \theta$
(A) 0
(B) 1
(C) -1
(D) 2
35. Three men can complete a piece of work in 6 days. Two days after they started the work, 3 more men joined them. How many days will they take to complete the remaining work.
(A) 4 days
(B) 1 day
(C) 2 days
(D) 3 days
36. $A$ and $B$ can together finish a work in 30 days. They worked together for 20 days and then B left. After another 20 days, A finished the reaming work. The number of days in which the $B$ alone can finish the work is-
(A) 60
(B) 50
(C) 48
(D) 54
37. Two trains, of same length, are running in parallel tracks in the same direction with speed $60 \mathrm{~km} / \mathrm{hr}$ and $90 \mathrm{~km} / \mathrm{hr}$ respectively. the latter completely crosses the former in 30 seconds. The length of each train (in meters) is-
(A) 115
(B) 250
(C) 150
(D) 100
38. LCM of two numbers is 2079 and their HCF is 27 . If one of the number is 189 , the other number is-
(A) 216
(B) 297
(C) 584
(D) 189
39. Rs. 180 contained in a box consists of one rupee, 50 paise and 25 paise coins in the ratio of $2: 3: 4$ what is the number of 50 paise coins
(A) 60
(B) 120
(C) 150
(D) 160
40. Between two consecutive years my incomes are in the ratio of $2: 3$ and expenses are in the ratio 5:9 If my income in the second year is Rs. 45000 and my expenses in the first year is Rs. 25000, my total saving for the two years is-
(A) 0
(B) Rs. 15000
(C) Rs. 20000
(D) Rs. 5000
41. The number of common tangents that can be drawn to two given intersecting circles is at the most-
(A) 1
(B) 2
(C) 3
(D) 4
42. A number divided by 68 gives a quotient 269 , and remainder zero. If the same number is divided by 67 then remainder will be ?
(A) 0
(B) 1
(C) 2
(D) 6
43. A man $B$ separately can do a piece of work in 9 and 15 days respectively. If they work on alternate days, starting with $A$, the work will complete in?
(A) 9 days
(B) 10 days
(C) 11 days
(D) 12 days

## Passage (151-155)

The object underlying the rules of natural justice 'is to prevent miscarriage of justice' and secure 'fair play in action'. As pointed out earlier the requirement about recording of reasons for its decision by an administrative authority exercising quasi-judicial functions achieves this object by excusing chances of arbitrariness and ensuring a degree of fairness in the process of decision making. Keeping in view the expanding horizon of the principle of natural justice, we are of the opinion that the requirement to record reason can be regarded as one of the principle of natural justice which governs exercise of power by administrative authorities. The rules of natural justice are not embodied rules. The extent of their application depends upon the particular statutory framework where jurisdiction has been conferred on the administrative authority. With regard to the exercise of a particular by an administrative authority including exercise of judicial or quasi-judicial functions the legislature, while conferring the said power, may feel that it would not be in the larger public interest that the reasons for the order passed by the administrative authority be recorded in the order and
149. A sum of money invested at compound interest amounts to Rs. 650 at the end of first years and 676 at the end of second years. The sum of money is ----
(A) 650
(B) 600
(C) 625
(D) 540
150. A boat goes 40 km upstream in 8 hours, and 36 km downstream in 6 hours. The speed of boat in still water is----
(A) $5.5 \mathrm{~km} / \mathrm{hr}$
(B) $6.5 \mathrm{~km} / \mathrm{hr}$
(C) $7 \mathrm{~km} / \mathrm{hr}$
(D) $6 \mathrm{~km} / \mathrm{hr}$
be communicated to the aggrieved party and it may dispense with such a requirement.

1. According to the passage, there is always a gap between
(A) Demand for natural justice and its realization.
(B) Rules of natural justice and their application
(C) Intention and execution
(D) Conception of a rule and its concretization
2. According to the passage, natural justice can be brought about by
(A) Administrative authority framing rules suitably
(B) Administrative authority remaining vigilant
(C) Administrative authority observing the rules of fair play
(D) Administrative authority upholding rules of natural justice
3. 'To dispense with a requirement' means
(A) To drop the charge
(B) To alter the provisions of the case
(C) To cancel all formal procedure
(D) To do without the demand
4. "The rules of the natural justice are not embodied rules" means that these rules
(A) Are flexible
(B) Are left deliberately vague
(C) Cannot be visualised
(D) Cannot be satisfactorily interpreted
5. From the passage it is clear that it is the legislature that
(A) Invests the administrative authority with enormous powers
(B) Has the larger interests of public welfare
(C) Embodies rules
(D) Leaves administrative authority enough dimension to interpret rules

Directions: In Questions No. 156 to 165, in the following passage some of the words have been left out. Read the passage carefully and choose the correct answer to each question out of the four alternatives and fill in the blanks.

Some people believe that marriages are made in heaven. One cannot say (156) this is true or not. However, in America now many (157) who get married seek to evolve a fool proof (158) to ensure that the marriage survives. However, the idea of married persons (159) The burden of domestic chores, instead of all the dirty work being dumped on the woman has $\mathbf{( 1 6 0 )}$ been propagated by the feminist (161) and it has gradually, if grudgingly, been (162) . This arrangement may work on a temporary basis but taking (163) of a particular domestic work on a permanent basis will pose problems of its own. For instance, taking out of the rubbish may (164) make a refreshing change from washing baby's nappies. However, a contract is contract and
must be (165). You may not like it but this is what life is coming out to be in the most modern of the countries in the world.
156.
(A) whether
(B)
still
(D) that
157.
(A) pairs
(B) men (C) couples
(D) women
158. (A) method (B) project (C) plan(D) system
159.
(A) executing
(B) dividing
(C) undertaking
(D) sharing
160.
(A) long
(B) sometimes
(C) always
(D) occasionally
161.
162.
(A) group
(B) lobby
(C) section
(D) faction
(A) affirmed
(B) approved
(C) accepted
(D) favoured
163. (A) control
(B) care
(C) charge
(D) duty
164.
(A) occasionally
(B) often
(C) intermittently
(D) rarely
165.
(A) respected
(B) executed
(C)maintained
(D) obeyed

Directions: In Questions No. (166 to 170), sentences are given with blanks to be filled in with an appropriate word (s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval in the Answer Sheet.
166. A restaurant that presents spick and span look will naturally $\qquad$ more customers.
(A) accommodate
(B) avoid
(C) invite
(D) attract
167. My friend took his first pay to the bank to $\qquad$ it in his account.
(A) Deposit
(B) debit
(C) demote
(D) deficit
168. We must $\qquad$ the tickets for the movie in advance.
(A) draw
(B) remove
(C) buy
(D) took
169. A man remains narrow-minded, self complacent and ignorant unless he visits other people and $\qquad$ from them.
(A) hears
(B) learns
(C) earns
(D) borrows
170. Many women in developing countries experience a cycle of poor health that
$\qquad$ before they are born and persist throughout their life.
(A) derives
(B) begins
(C) establishes
(D) originates

In Questions No. (171 to 173), choose the word opposite in meaning to the given word and mark it in the Answer Sheet.

## 171. Evacuate

(A) Admit
(B) Abandon
(C) Invade
(D) Emerge
172. Terrible
(A) Horrible
(B) Hideous
(C) Delightful
(D) Awesome
173. Gratuity
(A) Annuity
(B) Discount
(C) Stipend
(D) Wages

Directions: In Questions No. (174 to 178), some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the oval corresponding to the appropriate letter ( $\mathbf{A}, \mathbf{B}, \mathbf{C}$ ). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet.
174. He is as clever if $(A) /$ not cleverer (B)/ than his brother. (C)/ No Error (D)
175. All the boys $(A) /$ returned back home (B)/ well in time for lunch. (C)/ No Error (D)
176. Please put away $(A) /$ the candle (B)/ before you leave. (C)/ No Error (D)
177. If I were him, $(A) /$ I would have taught (B)/ those cheats a lesson. (C)/ No Error (D)
178. The customer handed over (A)/ a hundred-rupees note (B)/ to the shopkeeper. (C)/ No Error (D)

Directions: In Questions No. (179 to 181), out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.
179. Misfortune
(A) Misery
(B) III-luck
(C) Sadness
(D) Poverty
180. Foster
(A) Encourage
(B) Foment
(C) Fabricate
(D) Nurture
181. Radiant
(A) Bright
(B) Light
(C) Beautiful
(D) Influential

Directions: In Questions No. (182 to 186), out of the four alternatives, choose the one which can be substituted for the given words/ sentences and indicate by blackening the appropriate oval in the Answer Sheet.
182. A light sailing boat built especially for racing
(A) Dinghy
(B) Yacht
(C) Canoe
(D) Frigate
183. A person who is made to bear the blame due to others
(A) Innocent
(B) Ignoramus
(C) Scapegoat
(D)

Nincompoop
184. The power of reading the thoughts of others
(A) Psychopath
(B) Psychology
(C)
Telecommunication (D) Telepathy
185. Deriving pleasure from inflicting pain on others
(A) Sadism
(B) Bigotry
(C) Malevolence
(D) Pleasure
186. Food which agrees with one's taste
(A) Pungent
(B) Sensuous
(C) Palatable
(D) Edible

Directions: In Questions No. (187 to 191), four alternatives are given for the Idiom/ Phrase underlined, choose the meaning of the Idiom /

Phrase from the alternatives given and mark it in the Answer Sheet.
187. To frame a person
(A) To befool someone
(B) To praise someone
(C) To make one appear guilty
(D) To trust people
188. He did me a good turn by recommending for the post of Vice-principal.
(A) became suddenly good
(B) did an act of kindness
(C) returned my kindness
(D) improved my prospects
189. There is no hard and fast rule regarding this subject.
(A) rule that is difficult
(B) rule that is fast changing
(C) rule that cannot be broken or modified
(D) rule that can be broken or modified
190. The question of abolition of private property is still a moot point.
(A) unknown
(B) not clear
(C) undecided
(D) uncertain
191. The new economic policy is likely to run into rough weather.
(A) make things difficult
(B) confuse matters
(C) create problems
(D) encounter difficulties

Directions: In Questions No. (192 to 195), four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt world and mark your answer in the Answer Sheet.
192.

> (A)Tentitive
(B) Tentative
(C) Tentaitive
(D)

Tantitive
193.
(A) Apparell
(B) Apperel
(C) Apparel

Aparrel
194.
(A) Damage
(B) Dammage
(C) Damege

Damaige
195.
(A) Accesible
(B) Acessible
(C) Accesseble
(D)

Accessible

Directions: In Questions No. (196 to 200), a sentence / a part of the sentence are underlined. Below are given alternatives to the underlined part at (A), (B), (C) which may improve the sentence. Choose the correct alternative. In case of no improvement is needed your answer is (D). Mark your answer in the Answer Sheet.
196. The teacher was angry with Anil as he had not done his homework..
(A) at
(B) on
(C) from
(D) No
improvement
197. She is very active and will be ready
within no time.
(A) A t no time
(B) in no time
(C) without taking time (D) No improvement
198. The houses in our street are more beautiful than on the main road.
(A) than that on the main road
(B) than there are on the main road
(C) than those on the main road
(D) No improvement
199. He prefers to walk than to ride.
(A) walking than riding
(B) to walk over riding
(C) walking to riding
(D) No improvement
200. Each of our students pay their tuition fee at the beginning of the month.
(A) student pay their
(B) students pays their
(C) students pays his
(D) No improvement

## English Language

## Questions and answers already sent. Please add them from Q. 1-200.

SSC Answer Sheet

| 1 | B | 21 | B | 41 | A | 61 | B | 81 | C | 101 | B | 121 | C | 141 | A | 161 | B | 181 | A |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2 | C | 22 | D | 42 | B | 62 | C | 82 | B | 102 | B | 122 | B | 142 | B | 162 | C | 182 | B |
| 3 | D | 23 | A | 43 | D | 63 | B | 83 | C | 103 | C | 123 | A | 143 | B | 163 | C | 183 | D |
| 4 | C | 24 | B | 44 | C | 64 | B | 84 | D | 104 | A | 124 | B | 144 | B | 164 | A | 184 | D |
| 5 | A | 25 | C | 45 | A | 65 | C | 85 | D | 105 | D | 125 | C | 145 | D | 165 | A | 185 | C |
| 6 | D | 26 | D | 46 | B | 66 | A | 86 | A | 106 | C | 126 | D | 146 | C | 166 | D | 186 | C |
| 7 | A | 27 | A | 47 | C | 67 | A | 87 | B | 107 | A | 127 | A | 147 | B | 167 | A | 187 | C |
| 8 | D | 28 | C | 48 | A | 68 | B | 88 | D | 108 | A | 128 | D | 148 | C | 168 | C | 188 | B |
| 9 | B | 29 | B | 49 | D | 69 | B | 89 | D | 109 | C | 129 | C | 149 | C | 169 | B | 189 | C |
| 10 | C | 30 | C | 50 | A | 70 | C | 90 | B | 110 | D | 130 | C | 150 | A | 170 | D | 190 | D |
| 11 | B | 31 | B | 51 | C | 71 | D | 91 | A | 111 | A | 131 | B | 151 | B | 171 | A | 191 | D |
| 12 | A | 32 | B | 52 | A | 72 | B | 92 | D | 112 | C | 132 | A | 152 | A | 172 | D | 192 | B |
| 13 | B | 33 | A | 53 | C | 73 | C | 93 | D | 113 | B | 133 | C | 153 | D | 173 | D | 193 | C |
| 14 | B | 34 | C | 54 | B | 74 | A | 94 | B | 114 | B | 134 | C | 154 | A | 174 | A | 194 | A |
| 15 | C | 35 | C | 55 | D | 75 | B | 95 | A | 115 | D | 135 | D | 155 | D | 175 | D | 195 | D |
| 16 | A | 36 | A | 56 | A | 76 | D | 96 | B | 116 | A | 136 | D | 156 | A | 176 | A | 196 | D |
| 17 | A | 37 | D | 57 | C | 77 | C | 97 | B | 117 | A | 137 | C | 157 | C | 177 | A | 197 | B |
| 18 | C | 38 | B | 58 | A | 78 | A | 98 | B | 118 | A | 138 | C | 158 | D | 178 | D | 198 | C |
| 19 | D | 39 | C | 59 | B | 79 | C | 99 | A | 119 | B | 139 | D | 159 | D | 179 | B | 199 | C |
| 20 | C | 40 | C | 60 | A | 80 | D | 100 | D | 120 | D | 140 | D | 160 | A | 180 | D | 200 | C |

## Solutions:

1. $2^{3}=8 \quad 4^{3}=64 \quad$ So $3^{2}=9 \quad 5^{2}=25$
2. $\mathrm{DFH}_{\mathrm{F}}$
C E G i
$\downarrow \downarrow \downarrow \downarrow$ So as $\downarrow \downarrow \downarrow \downarrow$

$$
\text { WU S Q } \quad \text { X VTR }
$$

Opposite pair.
3. $9,8,19$ is Square of 3, 9,3 So As $4,16,4$ is Square of $2,4,2$.
4. High Court of Rajasthan in Jodhpur and High Court of Punjab in Chandigarh.
5. Niece is Daughter of Brother; So Nephew is Son of Brother
6. Opposite pair and sum of their sequence number
$\underline{B}_{2} \underline{\mathrm{~V}} 25=\mathrm{B}$ opposite $2+25=27$
So $\mathrm{E}_{5}$ V2 $2=$ E opposite V $5+22=27$
7. Cripps Mission came in India in 1942.

Cabinet mission came in India in 1946.
8. Meghalaya has no coastal border.
9. Except Dr. A.P.J. Abdul Kalam all are Prime minister.
10. Except $C$ all are ODD Number Square.
11. $3^{3}-26$
$4^{3}-1=63$
$6^{3}-1=215$
14. $501-4^{2}=485$
$485-5^{2}=460$
$460-6^{2}=424$
15. In a group of four Alphabets Next of MNO be P.
16. The pattern is $-10,-8,-6,-4$
18. $\mathrm{BAABBB} / \mathrm{BAABBB}$
19. In the given series. It craters group of $\underline{A B A C}$.
20. Using the Bodmas Rules
$12 \div 2 \times 6-2 \div 3=?$
$=6+12-3=15$
22. According to Dictionary series Bren $\rightarrow$ Bridge $\rightarrow$ Brief $\rightarrow$ Brisk.
23. $*$ - Hail $\rightarrow$ Half $\rightarrow$ Handed $\rightarrow$ Handle
26. $(56-25)+1=32$
27. $\mathrm{P}>\mathrm{S}>\mathrm{Q}>\mathrm{R}$
29. $37(3+7)=10$
$+\quad \times$
$14(1+4)=5$
50
So As
$89(8+9)=17$
$+\quad x$
$41(4+1)=5$
85
30. $6 * 3=6^{3}=216$

So
$18 * 2=18^{2}=324$
36. Letters of second group is $10^{\text {th }}$ letter from the first group.
38. Square of -
$\mathrm{C} \rightarrow 3^{2} \rightarrow 9$
$\mathrm{A} \rightarrow 1^{2} \rightarrow 1$
$\mathrm{T} \rightarrow 20^{2} \rightarrow 400$

$$
=410
$$

So as,
D $\rightarrow 4^{2}=16$
$\mathrm{O} \rightarrow 152=225$
$\mathrm{G} \rightarrow 72=49$

$$
=290
$$

42. Mahesh is father of Vinay and Vikas and Tarun is father of Mahesh

Therefore, Tarun is grandfather of Vikas or Vinay.
43. All other have difference of 25 .
44. All have difference as $2,4,6$ $\qquad$
Excepts LNQW
48. $\operatorname{AB} \underline{B} N / A B \underline{B N} / \operatorname{ABBN} / \underline{A B B} \underline{N}$
49. $\underline{D C C} \underline{D} / \mathrm{DCCD} / \mathrm{DC} \underline{C} \mathrm{D}$
101. $35 \times 35=1225$
$36 \times 36=1296$
Weight of teachers $=1296-1225=71 \mathrm{~kg}$.
102. $\mathrm{a}, \mathrm{a}_{2}+\mathrm{b}, \mathrm{b}_{2}=0$
$3 \times 24+8 \times P=0$
$P=-9$
104. $(2 m+5 w) 12=(5 m+2 w) 9=$ work
$\mathrm{M}=2 \mathrm{w}$
Work $=(2 \mathrm{~m}+5 \mathrm{w}) \times 12=9 \times 12 \mathrm{w}$
Work done by 3 women in days $=36$
105. $\cot 75^{\circ}=\cot \left(90^{\circ}-15^{\circ}\right) \tan 150$
so $(1 \times 1 \times \cdot 1 \times 1 \times------\times 1)=1$
107. $2 \pi \mathrm{r}_{1} \mathrm{~h}_{1}: 2 \pi \mathrm{r}_{2} \mathrm{~h}_{2}$
$=2 \times 5: 3 \times 4$
$=5: 6$
109. HCF of 551 and $1073=29$

Ist and second Number $=29,19$
2nd and 3rd Number $=29,37$
sum of the Number $=19+29+37=85$
110. Let the total voters be $=100$
voter did not cast their votes $=8$
votes polled $=92$
votes obtained by winner $=48$
votes obtained by lesser $=92-48=44$
when difference is 4 . total votes is $=100$
when difference is 1100. total votes $=27500$
112. Total weight of $A, B$ and $C=84 \times 3=252 \mathrm{~kg}$.
again $\mathrm{A}+\mathrm{B}+\mathrm{C}+\mathrm{D}=4 \times 80=320 \mathrm{~kg}$.
$\mathrm{D}=(320-252)=68 \mathrm{~kg}$
$\mathrm{E}=(68+3)=71 \mathrm{~kg}$
$B+C+D+E=79 \times 4=316 \mathrm{~kg}$
Now.
$(A+B+C+D)-(B+C+D+E)=320-316=4 \mathrm{~kg}$.
$\mathrm{A}-\mathrm{E}=4$
A $-71=4$
$\mathrm{A}=75$
113. Let the price of the article be Rs. 100

Raised price $=$ Rs. 130
price of the article after two successive discounts of $10 \%$ each $=90 \%$ of $90 \%$ of $130=$ Rs. 105.3
124. $f(2)=0 \Rightarrow(2)^{3}+(2)^{2}-5 \times 2+\lambda=0$
$\lambda=-2$
125. Since $x=-1$, makes $f(x)$ zero .
so $(x+1)$ is a factor.
143. $\mathrm{LCM} \times \mathrm{HCF}=$ product of the two No. $2079 \times 27=189 \times 2^{\text {nd }} N$ No.
$2^{\text {nd }}$ No. $=297$
150. Let speed of boat in still water $=x$

Stream rate $=\mathrm{y}$
Upstream velocity $\Rightarrow \mathrm{x}-\mathrm{y}=40 / 8=5$
Downstream velocity $\Rightarrow x+y=36 / 6=6$
So $\mathrm{x}=6+5 / 2=5.5$

