## PRACTICE SET-1

## INSTRUCTIONS

- This Preliminary Exam practice set consists of three sections. Numerical Ability (Qs. 1-35); Reasoning Ability (Qs. 36-70) and English Language (Qs. 71-100).
- All the questions are compulsory.
- Each question has five options, of which only one is correct. The candidates are advised to read all the options thoroughly.
- There is negative marking equivalent to $1 / 4^{\text {th }}$ of the mark allotted to the specific question for wrong answer.

Time : $\mathbf{1} \mathbf{h r}$.

## NUMERICAL ABILITY

DIRECTIONS (Qs. 1-15): What will come in place of question mark (?) in the given question?

1. $4 \frac{1}{2}+\left(1 \div 2 \frac{8}{9}\right)-3 \frac{1}{13}=$ ?
(a) $1 \frac{9}{26}$
(b) $2 \frac{7}{13}$
(c) $1 \frac{11}{26}$
(d) $2 \frac{4}{13}$
(e) $1 \frac{10}{13}$
2. $\frac{6 \times 136 \div 8+132}{628 \div 16-26.25}=$ ?
(a) 15
(b) 24
(c) 18
(d) 12
(e) 28
3. $\left\{(441)^{1 / 2} \times 207 \times(343)^{1 / 3}\right\} \div\left\{(14)^{2} \times(529)^{1 / 2}\right\}$
(a) $6 \frac{1}{2}$
(b) $5 \frac{1}{2}$
(c) $5 \frac{3}{4}$
(d) $6 \frac{3}{4}$
(e) $6 \frac{1}{4}$
4. $\left\{\sqrt{7744} \times(11)^{2}\right\} \div(2)^{3}=(?)^{3}$
(a) 7
(b) 9
(c) 11
(d) 13
(e) 17
5. $(4356)^{1 / 2} \div \frac{11}{4}=\sqrt{?} \times 6$
(a) 2
(b) 4
(c) 8
(d) 6
(e) 16
6. $\frac{3}{8}$ of $\{4624 \div(564-428)\}=$ ?
(a) $13 \frac{1}{4}$
(b) $14 \frac{1}{2}$
(c) $11 \frac{5}{6}$
(d) $12 \frac{3}{4}$
(e) $12 \frac{1}{8}$
7. $456 \div 24 \times 38-958+364=$ ?
(a) 112
(b) 154
(c) 128
(d) 136
(e) 118
8. $(43)^{2}+841=(\text { ? })^{2}+1465$
(a) 41
(b) 35
(c) 38
(d) 33
(e) 30
9. $3 \frac{3}{8} \times 6 \frac{5}{12}-2 \frac{3}{16} \times 3 \frac{1}{2}=$ ?
(a) 21
(b) 18
(c) 14
(d) 15
(e) 16
10. $(34.5 \times 14 \times 42)+2.8=$ ?
(a) 7150
(b) 7365
(c) 7245
(d) 7575
(e) 7335
11. $(216)^{4}+(36)^{4} \times(6)^{5}=(6)^{\text {? }}$
(a) 13
(b) 11
(c) 7
(d) 9
(e) 10
12. $\frac{\sqrt{4356 \times \sqrt{?}}}{\sqrt{6084}}=11$
(a) 144
(b) 196
(c) 169
(d) 81
(e) 121
13. $\left(3 \frac{6}{17} \div 2 \frac{7}{34}-1 \frac{9}{25}\right)=(?)^{2}$
(a) $\frac{2}{5}$
(b) $\frac{1}{3}$
(c) $\frac{4}{5}$
(d) $\frac{1}{5}$
(e) $\frac{3}{5}$
14. $(1097.63+2197.36-2607.24) \div 3.5=$ ?
(a) 211.5
(b) 196.5
(c) 209.5
(d) 192.5
(e) 189.5
15. $\frac{1}{11}$ of $\left[(17424)^{1 / 2} \div(66)^{2} \times 3^{3}\right]=?^{2}$
(a) $\frac{1}{11}$
(b) $\frac{3}{11}$
(c) $\frac{2}{11}$
(d) $\frac{4}{11}$
(e) $\frac{5}{11}$
16. 12 yr ago the ratio between the ages of A and B was $3: 4$ respectively. The present age of A is $3 \frac{3}{4}$ times of C's present age. If C's present age is 10 yr , then what is B 's present age? (in years)
(a) 48
(b) 46
(c) 60
(d) 54
(e) 36
17. A certain number of capsules were purchased for $₹ 216,15$ more capsules could have been purchased in the same amount if each capsule was cheaper by $₹ 10$. What was the number of capsules purchased?
(a) 6
(b) 14
(c) 8
(d) 12
(e) 9
18. M, N, O and P divided ₹ 44352 among themselves. M took
$\frac{3}{8}$ th of the money, N took $\frac{1}{6}$ th of the remaining amount and rest was divided among O and P in the ratio of $3: 4$ respectively. How much did O get as his share?
(a) ₹ 9600
(b) ₹ 10600
(c) ₹ 10300
(d) ₹ 8700
(e) ₹ 9900
19. Pure milk costs $₹ 16$ per litre. After adding water the milkman sells the mixture $₹ 15$ per litre and thereby makes a profit of $25 \%$. In what respective ratio does he mix milk with water?
(a) $3: 1$
(b) $4: 3$
(c) $3: 2$
(d) $5: 3$
(e) $4: 1$
20. $1 / 3 \mathrm{rd}$ the diagonal of a square is $3 \sqrt{2} \mathrm{~m}$. What is the measure of the side of the concerned square?
(l) 12 m
(b) 9 m
(c) 18 m
(d) 6 m
(e) 7 m

DIRECTIONS (Qs. 21-25) : What will come in place of question mark (?) in the given number series?
21. 37, ?, $103,169,257,367$
(a) 61
(b) 59
(c) 67
(d) 55
(e) 71
22. $4,6,34, ?, 504,1234$
(a) 194
(b) 160
(c) 186
(d) 156
(e) 172
23. $3, ?, 14,55,274,1643$
(a) 11
(b) 5
(c) 6
(d) 8
(e) 7
24. $960,839,758,709, ?, 675$
(a) 696
(b) 700
(c) 688
(d) 678
(e) 684
25. 61, 72, ?, 73, 59, 367, 74, 58
(a) 70
(b) 60
(c) 71
(d) 62
(e) 63
26. Two pipes can full a tank in 10 h and 16 h respectively. A third pipe can empty the tank in 32 h . If all the three pipes function simultaneously, then in how much time the tank will be full? (in hours)
(a) $7 \frac{11}{21}$
(b) $7 \frac{13}{21}$
(c) $8 \frac{4}{21}$
(d) $6 \frac{5}{14}$
(e) $8 \frac{9}{14}$
27. A merchant bought some goods worth $₹ 6000$ and sold half of them at $12 \%$ profit. At what profit per cent should he sell the remaining goods to make and overall profit of $18 \%$ ?
(a) 24
(b) 28
(c) 18
(d) 20
(e) 26
28. A and B are two numbers. 6 times of square of B is 540 more than the square of $A$. If the respective ratio between $A$ and $B$ is $3: 2$, what is the value of $B$ ?
(a) 10
(b) 12
(c) 16
(d) 8
(e) 14
29. The perimeter of a rectangle whose length is 6 m more than its breadth is 84 m . What would be the area of a triangle whose base is equal to the diagonal of the rectangle and whose height is equal to the length of the rectangle? (in m${ }^{2}$ )
(a) 324
(b) 372
(c) 360
(d) 364
(e) 348
30. 56 workers can finish a piece of work in 14 days. If the work is to be completed in 8 days, then how many extra workers are required?
(a) 36
(b) 48
(c) 44
(d) 42
(e) 32

DIRECTIONS (Qs. 31-35) : Study the table carefully and answer the given questions.
Number of Pages Printed by 6 Printers in 5 Different Weeks

| Week Printer | A | B | C | D | E | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1st | 664 | 618 | 628 | 552 | 638 | 419 |
| 2nd | 569 | 441 | 519 | 438 | 621 | 537 |
| 3rd | 440 | 614 | 503 | 527 | 541 | 742 |
| 4th | 256 | 563 | 347 | 651 | 412 | 321 |
| 5th | 717 | 429 | 598 | 582 | 519 | 693 |

31. What is the respective ratio between the number of pages printed by Printer B in 2nd week and the number of pages printed by Printer F in 5th week?
(a) $4: 9$
(b) $11: 13$
(c) $9: 13$
(d) $7: 11$
(e) $9: 11$
32. What is the average number of pages printed by all the given printers in 4th week?
(a) 375
(b) 425
(c) 415
(d) 430
(e) 390
33. Which of the following printer printed maximum number of pages in all the given weeks together?
(a) Printer A
(b) Printer E
(c) Printer D
(d) Printer C
(e) Printer F
34. Number of pages printed by Printer A in 3rd week is what per cent of the total number of pages printed by Printed D in all the given weeks?
(a) 22
(b) 18
(c) 12
(d) 14
(e) 16
35. What is the difference between the total number of pages printed by Printer E in 1st, 2nd and 4th week together and total number of pages printed by Printer C in all the given
weeks together?
(a) 952
(b) 878
(c) 924
(d) 934
(e) 918

## REASONING ABILITY

36. Four of the following five are alike in a certain way and hence from a group. Which of the following does not belong to that group?
(a) Walk
(b) Cry
(c) Play
(d) Study
(e) Alive
37. How many such pairs of letters are there in the word 'VIRTUAL', each of which has as many letters between them in the word (in both forward and backward direction) as they have between them in the English alphabetical series?
(a) None
(b) One
(c) Two
(d) Three
(e) More than three
38. How many meaningful English words can be formed with the letters 'ILP' using all the letters only once in each word?
(a) None
(b) One
(c) Two
(d) Three
(e) More than three
39. If each alternate letter in the word 'FLIPPER' starting with $F$ is changed to the next letter in the English alphabetical series and each of the remaining letters is changed to the previous letters in the English alphabetical series then how many letters will appear more than once in the new arrangement?
(a) None
(b) One
(c) Two
(d) Three
(e) Four
40. Pointing to a girl, Mr. Arun said. "She is the daughter of my mother's only child". How is the girl related to Mr. Arun?
(a) Sister
(b) Mother
(c) Cousin
(d) Daughter
(e) Cannot be determined

DIRECTIONS (Qs. 41-45) : Study the following information to answer the given questions :

Eight friends A, B, C, D, E, F, G and H are sitting around a circle facing the centre, not necessarily in the same order. F sits fourth to the left of B. A and H are immediate neighbours of F. C sits third to the left of A. G sits third to the right of $E$.
41. What is D 's position with respect to B ?
(a) Immediate left
(b) Sixth to the right
(c) Second to the left
(d) Seventh to the left
(e) Fifth to the right
42. What arc the immediate neighbours of G ?
(a) F and H
(b) A and F
(c) C and H
(d) A and B
(e) B and C
43. If $C$ is related to $E$ in a certain way and similarly $F$ is related $B$ in the same way, to whom is A related to?
(a) H
(b) D
(c) G
(d) C
(e) Non of these
44. Four of the following five are alike in a certain way based on their seating positions in the above arrangement and so form a group. Which is the one that does not belong to the group?
(a) FE
(b) HA
(c) DG
(d) BE
(e) CF
45. If all the eight friends are made to sit alphabetically in the clockwise direction starting from A , positions of how many will remain unchanged (excluding A)?
(a) None
(b) One
(c) Two
(d) Three
(e) Four

DIRECTIONS (Qs. 46-50) : In each question below arc two statements followed by two conclusions numbered I and II. You have to take the two given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Give answer (a) if only conclusion 1 follows.
Give answer (b) if only conclusion II follows.
Give answer (c) if either conclusion I or conclusion II follows.
Give answer (d) if neither conclusion I nor conclusion II follows.
Give answer (e) ifboth conclusions I and II follow.
46. Statements :

Some windows arc grills.
All glasses are grills.
Conclusions :
I. All grills are windows.
II. At least some grills are glasses.
47. Statements :

Some painters are artists. Some dancers are painters.
Conclusions :
I. All artists are dancers.
II. All painters are dancers.
48. Statements :

All cabins are rooms.
All rooms are buildings.

## Conclusions:

I. All buildings are rooms.
II. All cabins are buildings.
49. Statements :

All rings are necklaces.
No necklace is a bracelet.

## Conclusions:

I. No ring is a bracelet.
II. All necklaces are rings.
50. Statements:

All hands are arms.
Some hands are muscles.

## Conclusions:

I. Some muscles are arms.
II. All muscles are arms.

DIRECTIONS (Qs. 51-55) : Study the following information to answer the given questions :

Seven friends - L, M, N, O, P, Q and R are sitting in a straight line facing North, not necessarily in the same order. M sits fifth to the right of O. P sits third to the right of L. Both L and $P$ do not sit at the extreme ends of the line. $Q$ and $R$ are immediate neighbours of each other. N sits third to the left of Q .
51. What is $O$ 's position with respect of $R$ ?
(a) Second to the right
(b) Third to the left
(c) Second to the left
(d) Third to the right
(e) None of these
52. Which of the following represents the friends sitting at the extreme ends of the line?
(a) $\mathrm{O}, \mathrm{M}$
(b) $\mathrm{Q}, \mathrm{O}$
(c) $\mathrm{N}, \mathrm{M}$
(d) $\mathrm{Q}, \mathrm{N}$
(e) None of these
53. If all the seven friends are made to sit in alphabetical order from left to right, the positions of how many will remain unchanged ?
(a) Four
(b) Three
(c) One
(d) Two
(e) None
54. Who sits exactly in the middle of the row?
(a) P
(b) L
(c) Q
(d) R
(e) None of these
55. Four of the following five are alike in a certain way based on their seating positions in the above arrangement and so form a group. Which is the one that does not belong to the group?
(a) MP
(b) RQ
(c) ON
(d) LN
(e) QL

DIRECTIONS (Qs. 56-58) : In each question below is given a group of numbers/symbols followed by five combinations of letter codes numbered (a), (b), (c), (d) and (e). You have to find out which of the combinations correctly represents the group of numbers/ symbols based on the following coding system and the conditions and mark the number of that combination as your answer.

| Number/ <br> Symbols | 9 | 4 | $\&$ | 5 | $\%$ | 3 | $\#$ | 7 | 6 | $@$ | 8 | + | 2 | $\$$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Letter <br> Codes | X | P | J | H | B | D | K | F | S | T | N | G | R | L |

## Conditions:

(i) If the first element is a symbol and the last element is a number, then the codes for both are to be interchanged.
(ii) If both the first and last elements are symbols, then the last element is to be coded as the code for the first element.
(iii) If the group of elements contains only one symbol, then that symbols is to be coded as A
56. $28 \% 956$
(a) RNBXHS
(b) RNAXSH
(c) RNBXSH
(d) RNAXHS
(e) RNASHX
57. © $62+74$
(a) PSRGFT
(b) TSRFGP
(c) PSRFGT
(d) PRSGFT
(e) TSRGFP
58. $+5963 \%$
(a) GHXSDG
(b) GSHXDB
(c) GHXDSG
(d) GHSXDB
(e) GXHSDG

DIRECTIONS (Qs. 59-62) : In these questions, relationships between different elements is shown in the statements. These statements are followed by two conclusions.

Give answer (a) if only conclusion I follows.
Give answer (b) if only conclusion II follows.
Give answer (c) if either conclusion I or conclusion II follows.
Give answer (d) if neither conclusion I nor conclusion II follows.
Give answer (e) if both conclusions I and II follow.
59. Statement :
$\mathrm{A}<\mathrm{L}<\mathrm{T}<\mathrm{R} \leq \mathrm{H}>\mathrm{K}$
Conclusions:
I. $\mathrm{H}>\mathrm{L}$
II. $\mathrm{K}>\mathrm{T}$
60. Statement:
$\mathrm{P}=\mathrm{N}>\mathrm{D} \geq \mathrm{G}<\mathrm{B}=\mathrm{J}$
Conclusions:
I. $\mathrm{G}<\mathrm{P}$
II. $\mathrm{G}<\mathrm{J}$
61. Statement:
$\mathrm{F} \leq \mathrm{C} \geq \mathrm{V}=\mathrm{Z}<\mathrm{X}=\mathrm{U}$
Conclusions :
I. $\quad \mathrm{V}<\mathrm{U}$
II. $\mathrm{Z}<\mathrm{F}$
62. Statement:
$\mathrm{Q} \leq \mathrm{E}=\mathrm{I}>\mathrm{N} \geq \mathrm{R} \geq \mathrm{S}$
Conclusions:
I. $\mathrm{E}=\mathrm{S}$
II. $\mathrm{S} \leq \mathrm{N}$
63. Which of the following symbols should replace question mark (?) in the given expression in order to make the expressions ' $\mathrm{A}>\mathrm{D}$ ' and ' $\mathrm{F} \geq \mathrm{C}$ ' definitely true?
$\mathrm{A}>\mathrm{B} \geq \mathrm{C}$ ? $\mathrm{D} \leq \mathrm{E}=\mathrm{F}$
(a) $>$
(b) $<$
(c) $\leq$
(d) $=$
(e) Either $=$ or $\geq$
64. Which of the following expressions is definitely true if the given expressions ' $\mathrm{R}<\mathrm{P}$ ' as well as ' $\mathrm{S}>\mathrm{Q}$ ' are definitely true?
(a) P $>$ Q $=$ R $\leq$ T $<$ S
(b) S $>$ T $\geq$ R $>$ Q $<$ P
(c) Q $>$ R $\leq$ T $>$ P $\geq$ S
(d) S $>$ T $\geq$ R $>$ Q $>$ P
(e) None of these
65. Read the following information carefully and answer the question which follows:
' $A \times B$ ' means ' $A$ is the father of $B$ '.
' $A+B$ ' means ' $A$ is the daughter of $B$ '.
' $A \div B$ ' means ' $A$ is the son of $B$ '.
' $\mathrm{A}-\mathrm{B}$ ' means ' A is the sister of B '.
What will come in place of question mark to establish that P is the son-in-law of S in the following expression?
$\mathrm{P} \times \mathrm{Q}+\mathrm{R}-\mathrm{T}$ ? S
(a) +
(b) $\times$
(c) -
(d) $\div$
(e) Either + or $\div$

DIRECTIONS (Qs. 66-70) : In each of the questions given below which one of the five answer figures on the right should come after the problem figures on the left, if the sequence were continued?
66. Problem figures


Answer figures

67. Problem figures


## Answer figures


(a)
(b)
(c)
(d)
(e)
68. Problem figures


Answer figures

| S O | ${ }^{\text {O }} \mathrm{S}$ | $\begin{aligned} & \mathrm{SO} \\ & \mathrm{C} \end{aligned}$ | $\begin{aligned} & S \star \\ & C \end{aligned}$ | $\begin{aligned} & \mathrm{T} S \\ & \mathrm{C} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| T $\star$ | + T | + T | O T | $\star \mathrm{O}$ |

(a) (b)
(c)
(d)
(e)
69. Problem figures


## Answer figures


70. Problem figures


Answer figures


DIRECTIONS (Qs. 71-75) : Which phrase should replace the phrase given in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given, then mark 'No correction required' as your answer.
71. We asked her that how she got time to write all these books.
(a) that how did she got
(b) that how she was getting
(c) how did she get
(d) how she got
(e) No correction required
72. Studies in the past have shown that those who limit their activity span during the day in winters are more likely to suffer from depression.
(a) more likely for
(b) mostly likely to
(c) most likely for
(d) most likeliest for
(e) No correction required
73. In some cases, factors like low salary, lack of growth prospects and lack of motivation compel all employee to look for a change.
(a) compel those employees
(b) compelling all employees
(c) compelling the employee
(d) compel employees
(e) No correction required
74. Living with compassion and contributing to others lives
would helping us add happiness to our lives as well.
(a) will helping us
(b) will help us
(c) would helped them
(d) will helped us
(e) No correction required
75. The easiest way for prevent stress caused by work or home pressures is to indulge in high levels of physical activity.
(a) easily way to
(b) easier ways for
(c) easiest way to
(d) easier way from
(e) No correction required

DIRECTIONS (Qs. 76-80) : Read this sentence to find out whether there is any grammatical mistake/error in it. The error, if any, will be in one part of the sentence. Mark that part with the error as your answer. If the sentence is correct as it is, mark 'No error' as your answer. (Ignore the errors of punctuation if any.)
76. A red and sore tongue/is an indicator from/lack of iron Vitamin- $\mathrm{B}_{12} /$ in the body.
(a) a red and sore tongue
(b) is an indicator from
(c) lack of iron and Vitamin- $\mathrm{B}_{12}$
(d) in the body
(e) No error
77. In the high-strung life/of over- crowded metros/there a constantly tug of war/over space and resources.
(a) in the high-strung life
(b) of over-crowded metros
(c) there a constantly tug of war
(d) over space and resources
(e) No error
78. The foremost criterion of selection we adopted/were the number of years of training/a singer had received/under a particular guru.
(a) The foremost criterion of selection we adopted
(b) were the number of years of training
(c) a singer had received
(d) under a particular guru
(e) No error
79. Excess weight is the result of/unhealthy eating habits/which are inherent risk factors/responsible for many diseases.
(a) excess weight is the result of
(b) unhealthy eating habits
(c) which are inherent risk factors
(d) responsible for many diseases
(e) No error
80. The therapeutic benefits/at helping others/have long been/ recognised by people.
(a) the therapeutic benefits
(b) at helping others
(c) have long been
(d) recognised by people
(e) No error

DIRECTIONS (Qs. 81-85): Rearrange the given five sentences $(A, B, C, D)$ and (E) in a proper sequence so as to form a meaningful paragraph and then answer the given questions.
A. With so many products and opportunities available in the market, it is very easy to get this planning wrong.
B. Planning, therefore, is imperative and should begin as early
as possible.
C. What amount will we need and when will we need it?
D. Most of us would put our children's education above any other priority in life including our own retirement
E. So, let's try to find the best solution by asking two important question.
81. Which of the following should be the SECOND sentence after rearrangement?
(a) D
(b) B
(c) C
(d) E
(e) A
82. Which of the following should be the FIFTH sentence after rearrangement?
(a) A
(b) B
(c) C
(d) E
(e) D
83. Which of the following should be the FIRST sentence after rearrangement?
(a) A
(b) B
(c) E
(d) C
(e) D
84. Which of the following should be the THIRD sentence after rearrangement?
(a) D
(b) B
(c) C
(d) E
(e) A
85. Which of the following should be the FOURTH sentence after rearrangement?
(a) A
(b) B
(c) E
(d) D
(e) C

DIRECTIONS (Qs. 86-90) : In these questions, two sentences (I) and (II) are given. Each sentence has a blank in it. Against each five options are suggested. Out of these, only one fits at both the places in the context of each sentence. Mark that option as your answer.
86. I. The report ended on $\qquad$ note.
II. They must take .......... steps to deal with the problem.
(a) criticising
(b) huge
(c) positive
(d) fancy
(e) cursory
87. I. In today's world parents usually $\qquad$ that their children do not talk to them as they are more involved in electronic gadgets and social media.
II. He would $\qquad$ about every other child on the playground and his parents would fight with other parents so as to protect him.
(a) feel
(b) defend
(c) fight
(d) complain
(e) observe
88. I. He was good with Mathematics so he could not fathorn why other people cribbed about such an $\qquad$ subject.
II. In a world so riddled with greed and corruption where
every man seems to be out to get another, it is not very .......... to trust others.
(a) good
(b) exciting
(c) wise
(d) easy
(e) interesting
89. I. The area under our eyes in connected to our kidneys, so any $\qquad$ change in the dark circles indicates dehydration or accumulating toxins.
II. Many Indian adults are struggling with weight, thus indulging in weight loss programmes that require changes in their current lifestyle.
(a) drastic
(b) frequent
(c) ambiguous
(d) severe
(e) aggressive
90. I. Usually fund-raising events and charity auctions raise a large amount of money as people from all sections of the society get an opportunity to $\qquad$ for a cause.
II. Today, a person needs to $\qquad$ . very hard for surviving in the corporate race.
(a) work
(b) contribute
(c) effort
(d) donate
(e) dedication

DIRECTIONS (Qs. 91-100): In the given passage there are blanks, each of which has been numbered. Against each, five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

Trust is the basic tenet for all relationships, so building an environment of trust is one of the (91) important things one can do to (92) a positive work environment. It is a philosophy that must be demostrated in everything you and your staff does. Trust is about doing what you say you are going to do and being who you say you (93). It is about showing your staff in everything you do that you are reliable, responsible and accountable and that they can (94) on you for consistency. Also, letting them know you (95) the same from them. When your words and behaviour are congruent you (96) trust. It will take sometime for your staff members to learn that you are a person of your word. If they see that you are consistent you will build trust, but if they see that your words don't match your behaviour their trust in you will be (97). The unfortunate thing about trust is that it takes a long time to build, but is very fragile and breaks easily. Once broken, it takes an (98) longer time to regain and it may never be fully rebuilt. Therefore, it is of primary importance that you are (99) of all your words and behaviour and ensure that they are worthy of your employees' trust. Even while dealing with uncomfortable situations, if you are honest and upfront it will make thing (100) for everyone.
91.
(a) most
(b) single
(c) extreme
(d) high
(e) crucial
92. (a) believe
(b) accept
(c) create
(d) lift
(e) add
93. (a) is
(b) will

8
(c) are
(d) would
(e) could
94. (a) trust
(c) believe
(b) rely
(e) try
95. (a) are
(d) expect
(c) demands
(e) harbour
96.
(a) foster
(c) ask
(e) collect
97. (a) broke
(b) seek
(b) belong
(d) expect
(d) built
(b) fall

## RESPONSE SHEET

1. (a)(b)(c)(d) (c)
2. (a)(b)(c)(C)
3. (a)(b)(C)(C)
4. (a)(b)(C)(C)
5. (a)(b)(C)(e)
6. (a)(b) (c)(C)
7. (a)(b)(C)(C)
8. (a)(b)(C) (e)
9. (a)(b)(C)(e)
10. (a)(b) (c) (e)
11. (a)(b) (c) (e)
12. (a)(b) (c) (d)
13. (a)(b)(C)(C)
14. (a)(b) (c) (c)
15. (a)(b)(C)(e)
16. (a)(b) (c) (c)
17. (a)(b) (c)(C)
18. (a)(b) (c) (e)
19. (a)(b)(C) (e)
20. (a)(b)(C)(C)
21. (a)(b)(C)(d)
22. (a)(b)(C)(C)
23. (a)(b)(C)(C)
24. (a)(b)(C)(C)
25. (a)(b)(C)(C)
26. (a)(b)(C)(C)
27. (a)(b)(C)(C)
28. (a)(b)(C)(C)
29. (a)(b)(C)(C)
30. (a)(b)(d) (e)
31. (a)(b)(d) (e)
32. (a)(b)(C)(C)
33. (a)(b)(C)(C)
34. (a)(b)(C)(C)
35. (a)(b)(C)(C)
36. (a)(b)(d)(C)
37. (a)(b)(C)(C)
38. (a)(b)(C)(C)
39. (a)(b)(d)(C)
40. (a)(b)(d)(C)
41. (a) (b) (c) (d) (c)
42. (a)(b)(C)(C)
43. (a) b(c)(d) (e)
44. (a)(b)(c)(C)
45. (a)(b)(c)(d)
46. (a)(b)(c)(d) (c)
47. (a)(b)(c)(d) (c)
48. (a)(b)(c)(d) (c)
49. (a) (b) (c) (d)
50. (a)(b)(c)(d)
51. (a)(b) (c) (c)
52. (a) (b) (c)(d)
53. (a)(b)(c)(d)
54. (a)(b)(c)(d) (c)
55. (a)(b) (c) (d) (c)
56. (a)(b)(c)(d)
57. (a)(b)(d)(C)
58. (a) (b) (c)(d) (c)
59. (a) (b) (c) (d)
60. (a)(b)(c)(d) (c)
61. (a)(b)(C)(C)
62. (a)(b)(C)(C)
63. (a)(b)(d) (c)
64. (a)(b)(C)(C)
65. (a)(b)(C)(C)
66. (a)(b)(C)(C)
67. (a)(b)(c)(C)
68. (a)(b)(C)(C)
69. (a)(b)(C)(C)
70. (a)(b)(C)(C)
71. (a) (b) (c) (C)
72. (a)(b)(C)(C)
73. (a)(b)(C)(C)
74. (a)(b)(C)(C)
75. (a)(b)(d)(C)
76. (a)(b)(d)(C)
77. (a)(b)(C)(C)
78. (a)(b)(C)(C)
79. (a)(b)(C)(C)
80. (a)(b)(C)(C)
81. (a)(b) (c)(d) (c)
82. (a)(b)(C)(C)
83. (a) (b) (c) (c)
84. (a) (b) (c) (d)
85. (a)(b) (c) (c)
86. (a) (b) (c) (d)
87. (a) (b) (c) (c)
88. (a) (b) (c) (c)
89. (a) (b) (c) (c)
90. (a) (b) (c) (c)
91. (a) (b) (c) (c)
92. (a)(b)(c)(c)
93. (a) (b) (d) (c)
94. (a) (b) (c) (e)
95. (a) (b) (c) (e)
96. (a) (b) (c) (c)
97. (a) (b)(C) (c)
98. (a) (b) (c) (c)
99. (a) (b) (c) (c)
100. (a)(b)(C)(C)

| Answer Key |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | (e) | 11 | (d) | 21 | (b) | 31 | (d) | 41 | (a) | 51 | (b) | 61 | (d) | 71 | (d) | 81 | (b) | 91 | (a) |
| 2 | (c) | 12 | (c) | 22 | (b) | 32 | (b) | 42 | (e) | 52 | (c) | 62 | (b) | 72 | (e) | 82 | (d) | 92 | (c) |
| 3 | (d) | 13 | (a) | 23 | (b) | 33 | (c) | 43 | (c) | 53 | (e) | 63 | (d) | 73 | (d) | 83 | (e) | 93 | (c) |
| 4 | (c) | 14 | (b) | 24 | (e) | 34 | (e) | 44 | (d) | 54 | (c) | 64 | (a) | 74 | (b) | 84 | (e) | 94 | (b) |
| 5 | (e) | 15 | (b) | 25 | (b) | 35 | (c) | 45 | (a) | 55 | (d) | 65 | (e) | 75 | (c) | 85 | (c) | 95 | (d) |
| 6 | (d) | 16 | (d) | 26 | (b) | 36 | (e) | 46 | (d) | 56 | (d) | 66 | (e) | 76 | (b) | 86 | (c) | 96 | (d) |
| 7 | (c) | 17 | (d) | 27 | (a) | 37 | (b) | 47 | (d) | 57 | (a) | 67 | (d) | 77 | (c) | 87 | (d) | 97 | (d) |
| 8 | (b) | 18 | (e) | 28 | (b) | 38 | (b) | 48 | (b) | 58 | (a) | 68 | (c) | 78 | (b) | 88 | (d) | 98 | (a) |
| 9 | (c) | 19 | (a) | 29 | (c) | 39 | (a) | 49 | (a) | 59 | (a) | 69 | (c) | 79 | (e) | 89 | (a) | 99 | (b) |
| 10 | (c) | 20 | (b) | 30 | (d) | 40 | (d) | 50 | (a) | 60 | (e) | 70 | (a) | 80 | (b) | 90 | (a) | 100 | (b) |

## Hints \& Explanations

1. 

(e) $4 \frac{1}{2}+\left(1 \div 2 \frac{8}{9}\right)-3 \frac{1}{13}=$ ?

$$
\begin{aligned}
& 4+\frac{1}{2}+1 \times \frac{9}{26}-\left(3+\frac{1}{13}\right) \\
& 4+\frac{1}{2}+\frac{9}{26}-3-\frac{1}{13} \\
& 1+\frac{1}{2}-\frac{1}{13}+\frac{9}{26}=\frac{26+13-2+9}{26}=1 \frac{10}{13}
\end{aligned}
$$

2. (c) $\frac{6 \times 136 \div 8+132}{628 \div 16-26.25}$

$$
\begin{aligned}
& =\frac{6 \times 136 \times \frac{1}{8}+132}{628 \times \frac{1}{16}-26.25} \\
& =\frac{102+132}{39.25-26.25}=\frac{234}{13}=18
\end{aligned}
$$

3. (d) $\left\{(441)^{1 / 2} \times 207 \times(343)^{1 / 3}\right\} \div\left\{(14)^{2} \times(529)^{1 / 2}\right\}$
$\left\{\left(21^{2}\right)^{1 / 2} \times 207 \times\left(7^{3}\right)^{1 / 3}\right\} \div\left\{(14)^{2} \times\left(23^{2}\right)^{1 / 2}\right\}$
$(21 \times 207 \times 7) \div\left((14)^{2} \times 23\right)$

$$
\frac{21 \times 207 \times 7}{14 \times 14 \times 23}=6 \frac{3}{4}
$$

4. (c) $\left\{\sqrt{7744} \times(11)^{2}\right\} \div(2)^{3}=(?)^{3}$
$\left\{88 \times(11)^{2}\right\} \div(2)^{3}$
$88 \times(11)^{2} \times \frac{1}{8}=(11)^{3}$
5. (e) $(4356)^{1 / 2} \div \frac{11}{4}=\sqrt{?} \times 6$
$\left(66^{2}\right)^{1 / 2} \times \frac{4}{11}$
$66 \times \frac{4}{11}=4 \times 6=\sqrt{16} \times 6$
$?=16$
6. (d) $\frac{3}{8}$ of $\{4624 \div(564-428)\}=$ ?
$\frac{3}{8} \times\left\{4624 \times \frac{1}{136}\right\}$
$\frac{3}{8} \times 34=12 \frac{3}{4}$
7. (c) $456 \div 24 \times 38-958+364=$ ?
$=456 \times \frac{1}{24} \times 38-958+364=722-958+364$
$=128$
8. (b) $(43)^{2}+841=(?)^{2}+1465$
$1849+841=(?)^{2}+1465$

$$
\begin{aligned}
1225 & =(?)^{2} \\
? & =35
\end{aligned}
$$

9. (c) $3 \frac{3}{8} \times 6 \frac{5}{12}-2 \frac{3}{16} \times 3 \frac{1}{2}$

$$
\begin{aligned}
& \left(3+\frac{3}{8}\right) \times\left(6+\frac{5}{12}\right)-\left(2+\frac{3}{16}\right) \times\left(3+\frac{1}{2}\right) \\
& \frac{27}{8} \times \frac{77}{12}-\frac{35}{16} \times \frac{7}{2} \\
& \frac{2079}{96}-\frac{245}{32}=\frac{2079-735}{96}=14
\end{aligned}
$$

10
10. (c) $(34.5 \times 14 \times 42) \div 2.8$
$=34.5 \times 14 \times 42 \times \frac{1}{2.8}$
$=7245$
11. (d) $(216)^{4} \div(36)^{4} \times(6)^{5}=(6)^{?}$
$\left(6^{3}\right)^{4} \div\left(6^{2}\right)^{4} \times(6)^{5}$
$\left(6^{3}\right)^{4} \times \frac{1}{6^{8}} \times(6)^{5}$
$6^{12+5-8}=6^{9}$
12. (c) $\frac{\sqrt{4356} \times \sqrt{?}}{\sqrt{6084}}=11$

$$
\begin{aligned}
\frac{\sqrt{66 \times 66} \times \sqrt{?}}{\sqrt{78 \times 78}} & =11 \\
\frac{66 \times \sqrt{?}}{78} & =11 \\
\sqrt{?} & =\frac{11 \times 78}{66} \\
\sqrt{?} & =13 \\
? & =169
\end{aligned}
$$

13. (a) $\left(3 \frac{6}{17} \div 2 \frac{7}{34}-1 \frac{9}{25}\right)=(?)^{2}$
$\frac{57}{17} \times \frac{34}{75}-\frac{34}{25}$
$\frac{19 \times 2}{25}-\frac{34}{25}=\frac{4}{25}=\left(\frac{2}{5}\right)^{2}$
$?=\frac{2}{5}$
14. (b) $(1097.63+2197.36-260.24) \div 3.5$
$(3294.99-2607.24) \times \frac{1}{3.5}$
$687.75 \times \frac{1}{3.5}=196.5$
15. (b) $\frac{1}{11} \times\left[(17424)^{1 / 2} \times \frac{1}{(66)^{2}} \times 3^{3}\right]$

$$
\begin{aligned}
& \frac{1}{11} \times\left[\left(132^{2}\right)^{1 / 2} \times \frac{1}{(66)^{2}} \times 3^{3}\right] \\
& \frac{1}{11} \times \frac{132}{(66)^{2}} \times 3^{3}=\frac{\not 2 \times \not 2 \not 9^{9}}{11 \times \nmid \not 60}=\left(\frac{3}{11}\right)^{2}
\end{aligned}
$$

$$
\begin{aligned}
\mathrm{A} & =\frac{15}{4} \mathrm{C} \\
\mathrm{~A} & =\frac{15}{4} \times 10=37.5 \\
\frac{37.5+12}{\mathrm{~B}+12} & =\frac{3}{4} \\
\mathrm{~B} & =54
\end{aligned}
$$

17. (d) Let $x$ be the price of one capsule $y$ be the total number of capsule.

$$
\begin{equation*}
x y=216 \tag{1}
\end{equation*}
$$

$$
\begin{equation*}
(x-10)(y+15)=216 \tag{2}
\end{equation*}
$$

From eqs (1) and (2)

$$
\begin{aligned}
\left(\frac{216}{y}-10\right)(y+15) & =216 \\
(216-10 y)(y+15) & =216 y \\
216 y+216 \times 15-10 y^{2}-150 y & =216 y \\
216 y+3240-10 y^{2}-150 y & =216 y \\
-10 y^{2}-150 y+3240 & =0 \\
y^{2}+15 y-324 & =0 \\
y & =12
\end{aligned}
$$

18. (e) M's share $=44352 \times \frac{3}{8}=16632$

Remaining after M's share $=27720$
N's share $=27720 \times \frac{1}{6}=4620$
Remaining after M\&N's share $=23100$
$\frac{\mathrm{O}}{\mathrm{P}}=\frac{3}{4} \Rightarrow \mathrm{O}$ 's share $=23100 \times \frac{3}{7}=9900$
19. (a) $\because$ SP of the mixture $=₹ 15$
$\therefore \mathrm{CP}$ of the mixture $=15 \times \frac{100}{125}=₹ 12$
Now, by the rule of mixture,

$\therefore$ Ratio of milk and water in the mixture $=12: 4=3: 1$
20. (b)


$$
\begin{aligned}
x^{2}+y^{2} & =(9 \sqrt{2})^{2} \\
2 x^{2} & =81 \times 9 \\
x & =9
\end{aligned}
$$

21. (b)

22. (b)

23. (b)

24. (e)

25. (b)


This is mixed series.
26. (b) 10 hr A pipe $\rightarrow 1$

16 hr B pipe $\rightarrow 1$
32 hr C pipe $\rightarrow 1$
$\frac{1}{10}+\frac{1}{16}-\frac{1}{32}=\frac{21}{160}$
$\frac{160}{21}=7 \frac{13}{21} \mathrm{hr}$
27. (a) Profit on all the goods $=18 \%$ of $6000=₹ 1080$

Profit on half of the goods $=12 \%$ of $3000=₹ 360$
$\therefore$ Profit on remaining half of the objects
$=1080-360=₹ 720$

Hence, required profit percentage $=\frac{720}{3000} \times 100 \%$ $=24 \%$
28. (b) $6 \mathrm{~B}^{2}=\mathrm{A}^{2}+540$

$$
\frac{\mathrm{A}}{\mathrm{~B}}=\frac{3}{2}
$$

$$
\mathrm{A}=\frac{3 \mathrm{~B}}{2}
$$

$$
6 \mathrm{~B}^{2}=\frac{9 \mathrm{~B}^{2}}{4}+540
$$

$$
3.75 \mathrm{~B}^{2}=540
$$

$$
\mathrm{B}=\sqrt{144}=12
$$

29. (c) $x+x+x+6+x+6=84$

$$
\begin{gathered}
4 x+12=84 \\
x=18 m
\end{gathered}
$$



$$
D^{2}=(x+6)^{2}+x^{2}
$$

$$
\begin{aligned}
\mathrm{D}^{2} & =24^{2}+18^{2} \\
\mathrm{D}^{2} & =576+324=900 \\
\mathrm{D} & =30 \mathrm{~m}
\end{aligned}
$$

Base of triangle $=30 \mathrm{~m}$
Height of triangle $=x+6=24 \mathrm{~m}$

$$
\text { Area of triangle }=\frac{1}{2} \times 30 \times 24=360 \mathrm{~m}^{2}
$$

30. (d) Here, $\mathrm{M}_{1}=56, \mathrm{D}_{1}=14, \mathrm{M}_{2}=$ ?, $\mathrm{D}_{2}=8$

Using

$$
\begin{aligned}
& M_{1} D_{1}=M_{2} D_{2}, \\
& 56 \times 14=M_{2} \times 8 \\
& \Rightarrow M_{2}=98
\end{aligned}
$$

Hence, extra workers to be required $=98-56=42$
31. (d) Ratio $=\frac{\text { number of pages printed by printer B in 2nd week }}{\text { number of pages printed by printer F in } 5^{\text {th }} \text { week }}$
32. (b) Average number of pages printed by all the printer $=$ $=\frac{256+563+347+651+412+321}{6}=425$
33. (c)

| Week <br> Wrinter | A | B | C | D | E | F |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 1st | 664 | 618 | 628 | 552 | 638 | 419 |
| 2nd | 569 | 441 | 519 | 438 | 621 | 537 |
| 3rd | 440 | 614 | 503 | 527 | 541 | 742 |
| 4th | 256 | 263 | 347 | 651 | 412 | 321 |
| 5th | 717 | 429 | 598 | 582 | 519 | 693 |
| Total up to <br> 5th week | 2646 | 2365 | 2595 | 2750 | 2731 | 2712 |

Printer D printed maximum pages.
34. (e) Required percentage $(\%)=$
$=\frac{\text { Pages printed by A in 3rd week }}{\text { Total page printed by D from 1st to } 5 \text { th weeks }} \times 100$
$=\frac{440}{2750} \times 100=16 \%$
35. (c) Required difference $=$ Total no. of pages printed by printer C in all given weeksTotal no. of pages by E in 1st, 2nd, 4th week
$=2595-(638+621+412)=924$
36. (e) Alive is different from the other four words. Walk, Cry, Play and Study are various actions of human being. Alive means 'living', 'not dead', 'in existence', 'continuing' etc.
37. (b) $\begin{array}{cccccccc}22 & 9 & 18 & 20 & 21 & \mathrm{I} & 12 \\ & \mathrm{~V} & \mathrm{I} & \mathrm{R} & \mathrm{T} & \mathrm{U} & \mathrm{A} & \mathrm{L}\end{array}$
38. (b) Meaningful word $\Rightarrow$ LIP
39. (a)

40. (d)


Therefore, the girl is the daughter of Arun.
(41-45):

41. (a) D is to the immediate left of B .
42. (e) B and C are immediate neighbours of G .
43. (c) C is sitting just opposite to E . F is sitting just opposite to B. Similarly, A is sitting just opposite to G.
44. (d) Except in the pair BE, in all other pairs the first person is second to the left of the second person. $B$ is second to the right of E .
45. (a)

(d)


Conclusion-I : False
II: False
47. (d)


Conclusion-I : False
II: False
48. (b)


Conclusion-I : False
II: True
49. (a)


Conclusion-I : True
II: False
50. (a)


Conclusion-I : True II: False
(51-55) :

51. (b) O is third to the left of R .
52. (c) N and M are sitting at the extreme ends of the line.
53. (e)

54. (c) Q is sitting exactly in the middle of the row.
55. (d) Except LN , in all others the first person is to immediate right of the second person. L is second to the right of N .
56. (d)


Condition (iii) is applicable.
57. (a)


Condition (i) is applicable.
58. (a)


Condition (ii) is applicable.
59. (a) $\mathrm{H}>\mathrm{K} \geq \mathrm{R}>\mathrm{T}>\mathrm{L}$

Conclusions:
I. H > L: True
II. K > T : Not True
60. (e) $\mathrm{P}=\mathrm{N}>\mathrm{D} \geq \mathrm{G}<\mathrm{B}=\mathrm{J}$

## Conclusions:

I. $\mathrm{G}<\mathrm{P}$ : True
II. G $<\mathrm{J}$ : True
61. (d) $\mathrm{F} \leq \mathrm{C} \geq \mathrm{V}=\mathrm{Z}>\mathrm{X}=\mathrm{U}$

## Conclusions:

I. V $<\mathrm{U}$ : Not True
II. $\mathrm{Z}<\mathrm{F}$ : Not True
62. (b) $\mathrm{Q} \leq \mathrm{E}=1>\mathrm{N} \geq \mathrm{R} \geq \mathrm{S}$

## Conclusions:

I. E = S : Not True
II. $\mathrm{S} \leq \mathrm{N}$ : True
63. (d) In the expression $\mathrm{A}>\mathrm{B} \geq \mathrm{C} \equiv \mathrm{D} \leq \mathrm{E}=\mathrm{F}$ to make $\mathrm{A}>\mathrm{D}$ true and $\mathrm{F} \geq \mathrm{C}$ true.
64. (a) Trying option (a)


Both the expressions are true in option (a)
65. (e) $P \times Q$ means $P$ is a father of $Q$.
$\mathrm{Q}+\mathrm{P}$ means Q is daughter of R
$\mathrm{R}-\mathrm{T}$ means R is sister of T .
It is clear that P is husband of R . If he establish that T is either son or daughter of S , then P would be son-inlaw of $S$.
$T+S$ means $T$ is daughter of $S$.
$T \div S$ means $T$ is son of $S$.
66. (e) Next figure of each question figure is changed by following way and N is replaced by a new design.

(1) to (2)

(2) to (3)

(3) to (4)

(4) to (5)

(5) to (6)

Similarly next figure is (e)
67. (d) In next figure of each question figure, there are two, three $\qquad$ design in upper part and three, four design in lower part is eliminate and hence next figure is (d).
68. (c) Next figure of earn question figure follows following ways


Accordingly next figure is (c)
69. (c) In next figure of each question figure there are 1, 2, 1, 2
line in left upper part are eliminated in each figure and $6,5,6,5, \ldots \ldots$ line are added in forward most direction, and a square is made by four lines. Hence accordingly option (c) is next figure.
70. (a) Next figure of each question figure is rotated clockwise by $45^{\circ}$ and one curve is added each side, hence accordingly next figure is (a).

