## IBPS Clerks MODEL PAPER - 2

## REASONINGABILITY

Directions (Q. 1-5): In the following questions, the symbols $\delta, \#, \$, \%$ and $\star$ are used with the following meanings as illustrated below.
'A $\delta$ B' means 'A is neither smaller nor greater than $B^{\prime}$.
'A \# B' means 'A is not smaller than B'.
'A \$ B' means 'A is either smaller than or equal to $\mathrm{B}^{\prime}$.
' $\mathrm{A} \% \mathrm{~B}$ ' means ' A is smaller than B '.
' $\mathrm{A} \star \mathrm{B}$ ' means ' A is neither smaller than nor equal to $B^{\prime}$.

Now, in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true.

## Give answer -

1) if only conclusion I is true
2) if only conclusion II is true
3) if either conclusion I or II is true
4) if neither conclusion I nor II is true
5) if both conclusion I and II are true
1. Statements:

D $\delta \mathrm{U}, \mathrm{R} \$ \mathrm{U}, \mathrm{R} \% \mathrm{M} \star \mathrm{N}$

## Conclusions:

I. $\quad N \star U$
II. $\mathrm{D} \$ \mathrm{M}$
2. Statements:

$$
\mathrm{P} \star \mathrm{Q}, \mathrm{Q} \# \mathrm{R}, \mathrm{~S} \delta \mathrm{R}
$$

## Conclusions:

I. P \# S
II. Q \# S
3. Statements:

$$
\mathrm{S} \$ \mathrm{~T}, \mathrm{~T} \% \mathrm{U}, \mathrm{U} \star \mathrm{~W}
$$

## Conclusions:

I. U $\quad$ S
II. $\mathrm{W} \star \mathrm{T}$
4. Statements:

$$
\text { D } \star \mathrm{E} \# \mathrm{~F}, \mathrm{~B} \delta \mathrm{C} \delta \mathrm{D}
$$

## Conclusions:

I. $\quad B \star E$
II. F \% C
5. Statements:

G \% H \$ I, I $\delta$ J \# K

## Conclusions:

I. J \# H
II. K \$ I

Directions (Q. 6-10): Study the following information carefully and answer the questions given below.

E, F, G, H, I, K and L are seven friends sitting in a straight line facing north, but not necessarily in the same order. I sits in the middle of the row. G sits at one of the extreme ends of the row. F does not sit at any of the extreme ends of the row. $H$ sits third to the left of $L$, who is not the neighbour of $E$. $F$ sits on the immediate left of K .
6. Which of the following pairs are the immediate neighbours of H ?

1) $\mathrm{E}, \mathrm{G}$
2) $\mathrm{I}, \mathrm{L}$
3) $\mathrm{E}, \mathrm{F}$
4) G,K
5) None of these
7. How many persons sit to the right of $E$ ?
1) None
2) One
3) Two
4) Three
5) None of these
8. Who among the following sits third to the right of the fifth person from the right end of the row?
1) E
2) I
3) F
4) H
5) None of these
9. If all the persons are made to sit in alphabetical order from left to right, the position of how many persons will remain unchanged?
1) None
2) One
3) Two
4) Three
5) None of these
10. Four of the following five are alike in a certain way based on the information given above and so form a group. Which is the one that does not belong to that group?
1) I
2) $G$
3) H
4) $F$
5) E

Directions (Q. 11-15): In each question below are given two statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts,
Give answer -

1) if only conclusion I follows
2) if only conclusion II follows
3) if either conclusion I or II follows
4) if neither conclusion I nor II follows
5) if both conclusion I and II follow
11. Statements:

Some vegetables are mangoes.
No mango is a potato.

## Conclusions:

I. Some vegetables are not potatoes.
II. Some potatoes are not mangoes.
12. Statements:

No orange is sweet.
All grapes are sweets.

## Conclusions:

I. Some sweets are grapes.
II. Some grapes are not oranges.
13. Statements:

All schools are coachings.
Some coachings are classes.

## Conclusions:

I. All classes being schools is a possibility.
II. All classes are schools.
14. Statements:

Some sets are books.
All books are copies.

## Conclusions:

I. All sets are copies.
II. Some copies are sets.

## 15. Statements:

All rings are circles.
Some circles are squares.

## Conclusions:

I. Some rings are squares.
II. All squares are rings.

Directions (Q. 16-20): In each question below is given a group of letters followed by four combinations of digits/symbols numbered (1), (2), (3) and (4). You have to find out which of the combinations correctly represents the group of letters based on the following coding system and mark the number of that combination as the answer. If none of the four combinations correctly represents the group of letters, mark 5), i.e., 'None of these', as the answer.

| Letter | T | G | E | L | P | I | C | B | R | A | Q | M | U | H | J |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Digit/ <br> Symbol | © | $\#$ | $\%$ | 9 | 7 | 3 | $\star$ | $\$$ | 1 | 8 | 2 | 6 | 4 | $@$ | 5 |

## Conditions:

(i) If both the first and the last letter of the group are vowels, their codes are to be interchanged.
(ii) If the first letter is a consonant and the last letter is a vowel, both are to be coded as the code for the consonant.
16. ERHBMT

1) \%1@\$6®
2) \%1\$@6®
3) ©1\$@6®
4) @\%1\$6®
5) None of these
17. PQGALE
1) $72 \# 89 \%$
2) $72 \# 897$
3) $72 \% \# 97$
4) $27 \# 892$
5) None of these
18. EMTAHA
1) $8 \bigcirc 68 @ 8$
2) $36 \bigcirc \# 83$
3) $86 \bigcirc 8 @ 3$
4) $86 \bigcirc 8 @ \%$
5) None of these
19. BQRLHA
1) $8219 @ \$$
2) $\$ 219 @ 8$
3) $\$ 219 @ \$$
4) 82198@
5) None of these
20. RGMALB
1) $1 \# 6891$
2) $\$ \# 6891$
3) $16 \# 89 \$$
4) $\$ \# 689 \$$

Directions (Q. 21-22): Study the following information carefully and answer the questions given below.
' $A-B$ ' means ' $A$ is daughter of $B$ '
'A + B' means 'A is wife of B'
' $A \div B$ ' means ' $A$ is father of $B$ '
' $A \times B$ ' means ' $A$ is son of $B$ '
21. How is S related to P in the given expression

$$
' \mathrm{P}+\mathrm{R} \div \mathrm{S}+\mathrm{T} \text { '? }
$$

1) Son
2) Sister
3) Daughter
4) Can't be determined
5) None of these
22. In the expression ' $\mathrm{M}-\mathrm{Q}+\mathrm{T}$ ' how is M related to T ?
1) Father
2) Son
3) Daughter
4) Mother
5) None of these
23. How many such pairs of letter are there in the word SENDING, each of which has as many letters between them as in the English alphabet?
1) One
2) Two
3) Three
4) Four
5) None of these
24. In a certain code language THEN is written as GSVM. How is WORLD written in that code language?
1) XLIOW
2) DLIOW
3) LWIWO
4) WOILD
5) None of these
25. Which of the following will come in place of question marks (?) in the following series based on the English alphabetical series?
CAB FDE IGH ?
1) LJK
2) LMN
3) KIL
4) MKL
5) None of these

Directions (Q. 26-30): Study the following information carefully and answer the questions given below.

There are seven family members A, B, C, D, E, F and G. All of them start a business together. There are three females in the family and two married couples. Each of them is going to a different city, viz Kolkata, Patna, Ranchi, Kanpur, Varanasi, Jaipur and Bengaluru, to promote their business. B goes to Kolkata and is father of E. F goes to Ranchi and is grandfather of E. C goes to Jaipur. A goes neither to Kanpur nor to Bengaluru. G goes to Varanasi and is son of D. C is not mother of $E$ and $D$ is not married to $B$. No female member goes to Bengaluru. C is sister of E .
26. A goes to which of the following cities?

1) Jaipur
2) Patna
3) Varanasi
4) Can't be determined
5) None of these
27. What is the relation between F and A ?
1) $F$ is father-in-law of $A$
2) $A$ is daughter of $F$
3) $F$ is grandfather of $A$
4) $A$ is sister of $F$
5) None of these
28. Who among the following goes to Bengaluru?
1) $G$
2) $A$
3) E
4) $D$
5) None of these
29. How is E related to D?
1) Son
2) Daughter
3) Husband
4) Grandson
5) None of these
30. Who among the following is a couple?
1) $\mathrm{C}, \mathrm{E}$
2) $A, B$
3) $G D$
4) $\mathrm{F}, \mathrm{A}$
5) None of these

Directions (Q. 31-35): Study the following information carefully and answer the questions given below.

In a certain code language 'go and sit' is written as 'pa da na', 'come with me' is written as 'sa ra ta', 'sit with her' is written as 'la da sa', and 'you can go' is written as 'pa ha ja'.
31. What is the code for 'go'?

1) ja
2) ha
3) pa
4) na
5) None of these
32. 'you can come' can be written as
1) ja ha ta
2) ta ra ha
3) ha ja ra
4) Either 1) or 3)
5) None of these
33. What is the code for 'you'?
1) ja
2) pa
3) la
4) ha
5) Can't be determined
34. What does 'la' stand for?
1) with
2) her
3) and
4) can
5) None of these
35. What is the code for 'come'?
1) ta
2) ra
3) sa
4) Either 1) or 2)
5) None of these
(1-5) Given

| $\delta \rightarrow=$ | $\# \rightarrow \geq$ | $\$ \rightarrow \leq$ |
| :---: | :--- | :--- |
| $\% \rightarrow<$ | $\star \rightarrow>$ |  |

1. (4) Given statements:

$$
\begin{align*}
& \mathrm{D}=\mathrm{U}  \tag{i}\\
& \mathrm{R} \leq \mathrm{U}  \tag{ii}\\
& \mathrm{R}<\mathrm{M}>\mathrm{N} \tag{iii}
\end{align*}
$$

Combining all these statements, we get

$$
\mathrm{D}=\mathrm{U} \geq \mathrm{R}<\mathrm{M}>\mathrm{N}
$$

We can't compare D and M or, N and U .
Hence neither conclusion I nor II is true.
2. (2) Given statements:

$$
\begin{align*}
& \mathrm{P}>\mathrm{Q}  \tag{i}\\
& \mathrm{Q} \geq \mathrm{R}  \tag{ii}\\
& \mathrm{~S}=\mathrm{R} \tag{iii}
\end{align*}
$$

Combining all these statements, we get


Hence only conclusion II is true.
But $\mathrm{I}(\mathrm{P} \geq \mathrm{S})$ is not true.
3. (1) Given statements:

$$
\begin{align*}
& \mathrm{S} \leq \mathrm{T}  \tag{i}\\
& \mathrm{~T}<\mathrm{U}  \tag{ii}\\
& \mathrm{U}>\mathrm{W} \tag{iii}
\end{align*}
$$

Combining all these statements, we get


We can't compare T and W .
Hence II is not true.
Again, $\mathrm{S}<\mathrm{U}$ or $\mathrm{U}>\mathrm{S}$ is true.
Hence I is true
4. (5) Given statements:

$$
\begin{align*}
& \mathrm{D}>\mathrm{E} \geq \mathrm{F}  \tag{i}\\
& \mathrm{~B}=\mathrm{C}=\mathrm{D} \tag{ii}
\end{align*}
$$

Combining all these statements, we get


Hence both conclusion I (B $\star$ E) and II ( $\mathrm{F} \% \mathrm{C}$ ) are true.
5. (5) Given statements:

$$
\begin{align*}
& \mathrm{G}<\mathrm{H} \leq \mathrm{I}  \tag{i}\\
& \mathrm{I}=\mathrm{J} \geq \mathrm{K} \tag{ii}
\end{align*}
$$

Combining all these statements, we get


Hence both conclusion I and II are true.

6. (1)
7. (5) Four
8. (3) $(5-3=) 2$ nd from the right, ie., F.
9. (1)


After rearranging in alphabetical order,


No person remains at the same position.
10. (2) Others are not at extreme ends.
11. (1) Some vegetables are mangoes (I) + No mango is a potato $(\mathrm{E})=\mathrm{I}+\mathrm{E}=\mathrm{O}=$ Some vegetables are not potatoes.

Hence conclusion I follows.

Again, No mango is a potato $\rightarrow$ conversion $\rightarrow$ No potato is a mango.

Hence conclusion II does not follow.
12. (5) No orange is sweet (E) + (All grapes are sweets $\rightarrow$ conversion $\rightarrow$ Some sweets are grapes $(\mathrm{I})=\mathrm{E}+\mathrm{I}=\mathrm{O}^{*}=$ Some grapes are not oranges.

Hence, both conclusion I and II follow.
13. (1) All schools are coachings (A) + Some coachings are classes (I) = A + I = No conclusion. But the possibility in I exists.

Hence conclusion I follows. But II does not follow.
14. (2) Some sets are books (I) + All books are copies $(\mathrm{A})=\mathrm{I}+\mathrm{A}=\mathrm{I}=$ Some sets are copies $\rightarrow$ conversion $\rightarrow$ some copies are sets.

Hence conclusion II follows. But conclusion I does not follow.
15. (4) All rings are circles (A) + Some circles are squares $(\mathrm{I})=\mathrm{A}+\mathrm{I}=$ No conclusion.

Hence neither conclusion I nor II follows.
16. (1)

| E | R | H | B | M | T |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| $\%$ | 1 | $@$ | $\$$ | 6 | © |

17. (2) Condition (ii) apples

18. (4) Condition (i) apples

19. (3) Condition (ii) apples

| B | Q | R | L | H | A |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| $\$$ | 2 | 1 | 9 | $@$ | $\$$ |

20. (5)

| R | G | M | A | L | B |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| 1 | $\#$ | 6 | 8 | 9 | $\$$ |

21. (3) $\quad P(-) \Leftrightarrow R(+)$


Hence, S is daughter of P .
22. (3)


Hence, T is father of M .
23. (3)

24. (2)
$\begin{array}{llll}\mathrm{T} & \mathrm{H} & \mathrm{E} & \mathrm{N}\end{array}$
G S V N —Opposite letters

Similarly,

$$
\begin{array}{ccccc}
\mathrm{W} & \mathrm{O} & \mathrm{R} & \mathrm{~L} & \mathrm{D} \\
\downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
\mathrm{D} & \mathrm{~L} & \mathrm{I} & \mathrm{O} & \mathrm{~W}
\end{array}
$$

25. (1)

(26-30):

| Person | City |
| :---: | :---: |
| A (-) | Patna |
| $\mathrm{B}(+)$ | Kolkata |
| $\mathrm{C}(-)$ | Jaipur |
| $\mathrm{D}(-)$ | Kanpur |
| $\mathrm{E}(+)$ | Bengaluru |
| $\mathrm{F}(+)$ | Ranchi |
| $\mathrm{G}(+)$ | Varanasi |

Family Tree

26. (2) 27. (1) 28. (3) 29. (4) 30 . (2)
(31-35):
go and sit $\rightarrow$ pa da na
come with me $\rightarrow$ sa ra ta
sit with her $\rightarrow$ la da sa
you can go $\rightarrow$ pa ha ja
From (i) and (iii),
sit $\rightarrow$ da
From (i) and (iv),
go $\rightarrow$ pa
From (i), (v) and (vi),
and $\rightarrow$ na
From (ii) and (iii)
with $\rightarrow$ sa
From (ii) and (viii),
come/me $\rightarrow$ ra/ta
From (iii), (v) and (viii),
her $\rightarrow$ la
From (iv) and (vi),
you/can $\rightarrow$ ha/ja .....(xi)
31. (3)
32. (4)

33
(5) 34
(2)
35. (4)

