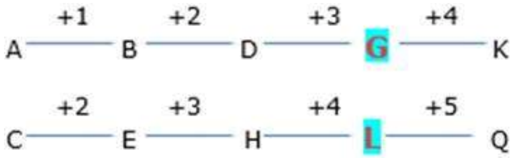
Solutions

Reasoning Ability

1. Ans. A.



Answer is option A

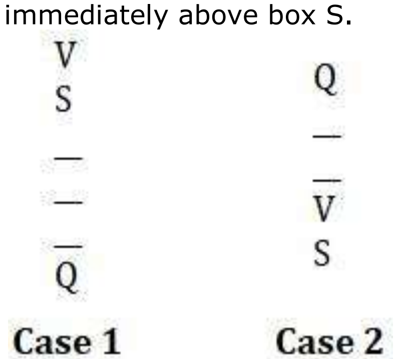
2. Ans. A.

P	R	O	A	C	T	I	V	E
A	C	E	I	O	P	R	T	V

Hence, option A is correct.

3. Ans. B.

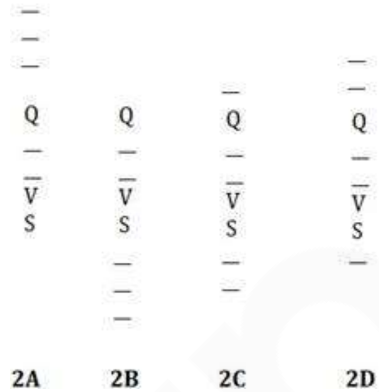
One box is between P and Q.
Three boxes are between Q and S. Box V is immediately above box S.



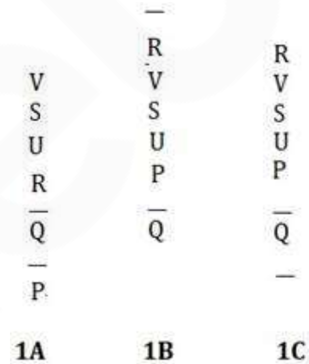
Now we can see that there is no direct information so we have to create diagram for every possibilities.

Case 1 diagram:

Case 2 diagram:

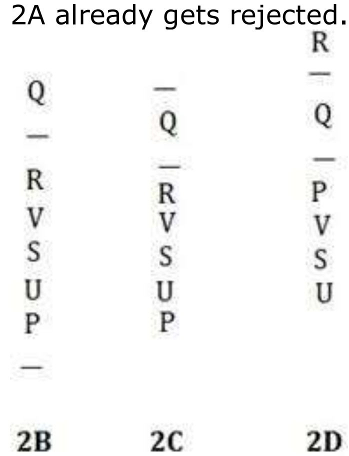


Take Case 1:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P.



There are as many boxes between R and W as W and S. But no diagram is follow this condition so all cases 1 gets rejected.

Take case 2:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P. As U is below V so case 2A already gets rejected.



There are as many boxes between R and W as W and S. Only case 2D satisfy this condition.
Here is the final arrangement:

R
T
Q
W
P
V
S
U

4. Ans. A.
Box R is at the top position.
Three boxes are between Q and S. Box V is immediately above box S.

V	Q
S	—
—	—
—	V
—	S
Q	
Case 1	**Case 2**

Now we can see that there is no direct information so we have to create diagram for every possibilities.
Case 1 diagram:

V	—	—
S	—	V
—	V	S
—	S	—
—	—	—
Q	—	—
—	—	Q
—	Q	—
1A	**1B**	**1C**

Case 2 diagram:

—	Q	—	—
—	—	Q	—
—	—	—	Q
Q	V	—	—
—	S	V	—
—	—	S	V
V	—	—	S
S	—	—	—
2A	**2B**	**2C**	**2D**

Take Case 1:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P.

V	—	R
S	R	V
U	V	S
R	S	U
—	U	P
Q	P	—
—	—	Q
P	Q	—
1A	**1B**	**1C**

There are as many boxes between R and W as W and S. But no diagram is follow this condition so all cases 1 gets rejected.
Take case 2:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P. As U is below V so case 2A already gets rejected.

Q	—	R
—	Q	—
R	—	Q
V	R	—
S	V	P
U	S	V
P	U	S
—	P	U
2B	**2C**	**2D**

There are as many boxes between R and W as W and S. Only case 2D satisfy this condition.

Here is the final arrangement:

R
T
Q
W
P
V
S
U

5. Ans. B.

S is at the 2nd last position.
Three boxes are between Q and S. Box V is immediately above box S.

Case 1	Case 2
V	Q
S	—
—	—
—	V
—	S
Q	

Now we can see that there is no direct information so we have to create diagram for every possibilities.

Case 1 diagram:

1A	1B	1C
V	—	—
S	V	V
—	S	S
—	—	—
—	—	—
Q	—	—
—	Q	Q
—		—

Case 2 diagram:

2A	2B	2C	2D
—	Q	—	—
—	—	Q	—
—	—	—	Q
Q	V	—	—
—	S	V	—
—	—	S	V
V	—	—	S
S	—	—	—

Take Case 1:

One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P.

1A	1B	1C
V	—	R
S	R	V
U	V	S
R	S	U
—	U	P
Q	P	—
—	—	Q
P	Q	—

There are as many boxes between R and W as W and S. But no diagram is follow this condition so all cases 1 gets rejected.

Take case 2:

One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P. As U is below V so case 2A already gets rejected.

2B	2C	2D
Q	—	R
—	Q	—
R	—	Q
V	R	—
S	V	P
U	S	V
P	U	S
—	P	U

There are as many boxes between R and W as

W and S. Only case 2D satisfy this condition.
Here is the final arrangement:

R
T
Q
W
P
V
S
U

Last but one position - 2nd from the bottom. So, that box is S.

6. Ans. D.
Box T is above box W.
Three boxes are between Q and S. Box V is immediately above box S.

Case 1	Case 2
V	Q
S	—
—	V
—	S
Q	

Now we can see that there is no direct information so we have to create diagram for every possibilities.
Case 1 diagram:

1A	1B	1C
V	—	—
S	V	V
—	S	S
—	—	—
Q	—	—
—	Q	Q
—		—

Case 2 diagram:

2A	2B	2C	2D
—	Q	—	—
—	—	Q	—
—	V	—	Q
Q	S	V	—
—	—	S	V
V	—	—	S
S	—	—	—

Take Case 1:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P.

1A	1B	1C
V	—	R
S	R	V
U	V	S
R	S	U
—	U	P
Q	P	—
—	—	Q
P	Q	—

There are as many boxes between R and W as W and S. But no diagram is follow this condition so all cases 1 gets rejected.
Take case 2:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P. As U is below V so case 2A already gets rejected.

2B	2C	2D
Q	—	R
—	Q	—
R	—	Q
V	R	—
S	V	P
U	S	V
P	U	S
—	P	U

There are as many boxes between R and W as W and S. Only case 2D satisfy this condition.
Here is the final arrangement:

R
T
Q
W
P
V
S
U

7. Ans. A.
No box is below U.
Three boxes are between Q and S. Box V is immediately above box S.

Case 1	Case 2
V	Q
S	—
—	—
—	V
—	S
Q	

Now we can see that there is no direct information so we have to create diagram for every possibilities.
Case 1 diagram:

1A	1B	1C
V	—	—
S	—	V
—	V	S
—	S	—
—	—	—
Q	—	—
—	—	Q
—	Q	—

Case 2 diagram:

2A	2B	2C	2D
—	Q	—	—
—	—	Q	—
—	—	—	Q
Q	V	—	—
—	S	V	—
—	—	S	V
V	—	—	S
S	—	—	—

Take Case 1:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P.

1A	1B	1C
V	—	R
S	R	V
U	V	S
R	S	U
—	U	P
Q	P	—
—	—	Q
P	Q	—

There are as many boxes between R and W as W and S. But no diagram is follow this condition so all cases 1 gets rejected.
Take case 2:
One box is kept between V and U. Box U is below box V. 3 boxes are kept between R and P. Box R is above P. As U is below V so case 2A already gets rejected.

2B	2C	2D
Q	—	R
—	Q	—
R	—	Q
V	R	—
S	V	P
U	S	V
P	U	S
—	P	U

There are as many boxes between R and W as W and S. Only case 2D satisfy this condition.

Here is the final arrangement:

R
T
Q
W
P
V
S
U

8. Ans. C.
Either conclusion I or conclusion II is true
Explanation:
A ≥ J = N; H > Y > I < S = N
From the statements we have,
A ≥ J = N. So, A ≥ N
Conclusions:
I. A = N
II. A > N
So, I and II are complementary

9. Ans. B.
Only conclusion II is true
Explanation:
U > J ≤ H = S; T ≤ J > F
From the statements we have,
U > J > F. So, U > F.
Also, U > J ≥ T. So, U > T
Conclusions:
I. F ≤ U: it is FALSE
II. U > T: it is TRUE

10. Ans. A.
Only conclusion I is true.
Explanation:
Y > U ≤ H = Q; R ≤ U > M
From the statements we have,
R ≤ U ≤ H = Q. So, R ≤ Q
Also, M < U ≤ H = Q. So, Q > M
Conclusions:
I. R ≤ Q: It is TRUE
II. Q ≥ M: It is FALSE

11. Ans. D.
Neither conclusion I nor conclusion II is true
Explanation:
H < S = L ≥ F > G ≤ Q
From the statements we have,
H < L > G . So, relation between H and G cannot be established.
Also, L > G ≤ W. So, relation between L and W cannot be established.
Conclusions:
I. H > G: It is FALSE
II. W ≤ L: It is FALSE

12. Ans. B.
Statements: T > U ≥ V ≥ W; X < Y = W > Z
After combining both statements:
T > U ≥ V ≥ W=Y >X; W = Y > Z
Conclusions: I. Z > U (not true) {W>Z & W ⇒ U > Z}
II. W < T (true) {U> W & T>U ⇒ T>W}
Therefore only conclusion II is true.

13. Ans. B.
Given number - 8367284
As per the question - 2' is subtracted from each even digit and '1' is added to each odd digit

8 -2 = 6
3 + 1 =4
6 -2 = 4
7 + 1 = 8
2 - 2 = 0
8 - 2 = 6
4 - 2 = 2

New number formed - is 6448062

Only two digits appear twice in the new number thus formed which is 6 & 4.

14. Ans. D.
Before rearranging as descending order:935126
After rearranging as descending order: 965321
9, 5 and 2 are on the same place as before.
So, there are 3 digits

15. Ans. E.

1	2	3	4	5	6	7	8	9	10	11
S	P	O	N	T	A	N	E	O	U	S

Meaningful words = NEST, SENT, NETS, TENS

16. Ans. B.
The code for 'mind' is - dh

The codes are given below -

Intellectual - ga

bright - pa/la

and - la/pa

mind - dh

students - mt

Fresh - ni

Clear - mi

thoughts -pz/ma

in - ma/pz

17. Ans. C.

The code for 'bright and clear' - la pa mi

The codes are given below -

Intellectual - ga

bright - pa/la

and - la/pa

mind - dh

students - mt

Fresh - ni

Clear - mi

thoughts -pz/ma

in - ma/pz

18. Ans. A.

The code 'ni' stand for fresh

The codes are given below -

Intellectual - ga

bright - pa/la

and - la/pa

mind - dh

students - mt

Fresh - ni

Clear - mi

thoughts -pz/ma

in - ma/pz

19. Ans. D.

The code for 'thoughts' is either - pz/ma

The codes are given below -

Intellectual - ga

bright - pa/la

and - la/pa

mind - dh

students - mt

Fresh - ni

Clear - mi

thoughts -pz/ma

in - ma/pz

20. Ans. A.

The code 'ga' stand for - Intellectual

The codes are given below -

Intellectual - ga

bright - pa/la

and - la/pa

mind - dh

students - mt

Fresh - ni

Clear - mi

thoughts -pz/ma

in - ma/pz

21. Ans. B.

R bought car in August.

Case 1: If U bought car in June-

U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in October. Two persons bought cars between T and Q so Q bought car in July. P bought car one of the months before Q so this case gets rejected.

Month	Person
June(30)	U
July(31)	Q
August(31)	
September(30)	
October(31)	T
November(30)	
December(31)	

Case 2: If U bought car in November-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in July. Two persons bought cars between T and Q so Q bought car in October. Three persons bought cars between Q and P. Two persons bought cars between P and V so V bought car in September. S bought car one of the months after V so S bought car in December and R bought car in August.

Here is the final table:

Month	Person
June(30)	P
July(31)	T
August(31)	R
September(30)	V
October(31)	Q
November(30)	U
December(31)	S

22. Ans. D.
All the persons bought the car in a month which was having 31 days except P
Case 1: If U bought car in June-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in October. Two persons bought cars between T and Q so Q bought car in July. P bought car one of the months before Q so this case gets rejected.

Month	Person
June(30)	U
July(31)	Q
August(31)	
September(30)	
October(31)	T
November(30)	
December(31)	

Case 2: If U bought car in November-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in July. Two persons bought cars between T and Q so Q bought car in October. Three persons bought cars between Q and P. Two persons bought cars between P and V so V bought car in September. S bought car one of the months after V so S bought car in December and R bought car in August.

Here is the final table:

Month	Person
June(30)	P
July(31)	T
August(31)	R
September(30)	V
October(31)	Q
November(30)	U
December(31)	S

23. Ans. A.
Only one person bought car between P and R.
Case 1: If U bought car in June-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in October. Two persons bought cars between T and Q so Q bought car in July. P bought car one of the months before Q so this case gets rejected.

Month	Person
June(30)	U
July(31)	Q
August(31)	
September(30)	
October(31)	T
November(30)	
December(31)	

Case 2: If U bought car in November-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in July. Two persons bought cars between T and Q so Q bought car in October. Three persons bought cars between Q and P. Two persons bought cars between P and V so V bought car in September. S bought car one of the months after V so S bought car in December and R bought car in August.
Here is the final table:

Month	Person
June(30)	P
July(31)	T
August(31)	R
September(30)	V
October(31)	Q
November(30)	U
December(31)	S

24. Ans. E.
None is correct.
Case 1: If U bought car in June-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in October. Two persons bought cars between T and Q so Q bought car in July. P bought car one of the months before Q so this case gets rejected.

Month	Person
June(30)	U
July(31)	Q
August(31)	
September(30)	
October(31)	T
November(30)	
December(31)	

Case 2: If U bought car in November-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in July. Two persons bought cars between T and Q so Q bought car in October. Three persons bought cars between Q and P. Two persons bought cars between P and V so V bought car in September. S bought car one of the months after V so S bought car in December and R bought car in August.
Here is the final table:

Month	Person
June(30)	P
July(31)	T
August(31)	R
September(30)	V
October(31)	Q
November(30)	U
December(31)	S

25. Ans. B.
2 persons bought car after Q.
Case 1: If U bought car in June-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in October. Two persons bought cars between T and Q so Q bought car in July. P bought car one of the months before Q so this case gets rejected.

Month	Person
June(30)	U
July(31)	Q
August(31)	
September(30)	
October(31)	T
November(30)	
December(31)	

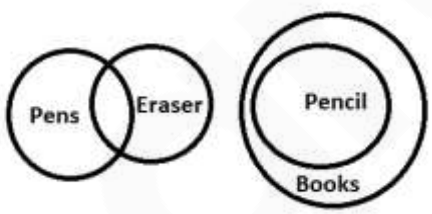
Case 2: If U bought car in November-
U bought a car in a month which was having 30 days but not in September. So U bought car either in June or November.

Three persons bought cars between U and T. So T bought car in July. Two persons bought cars between T and Q so Q bought car in October. Three persons bought cars between Q and P. Two persons bought cars between P and V so V bought car in September. S bought car one of the months after V so S bought car in December and R bought car in August.

Here is the final table:

Month	Person
June(30)	P
July(31)	T
August(31)	R
September(30)	V
October(31)	Q
November(30)	U
December(31)	S

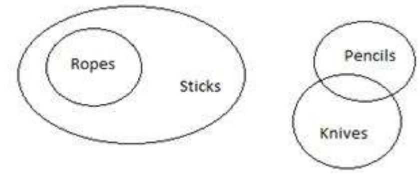
26. Ans. D.



Conclusion I is false

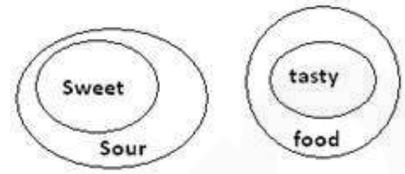
Conclusion II is false

27. Ans. D.

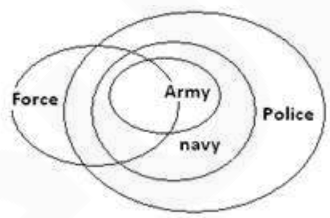


if neither Conclusion I nor II follows.

28. Ans. E.

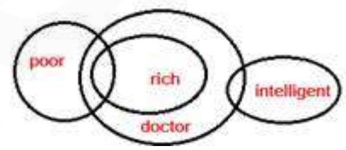


29. Ans. A.



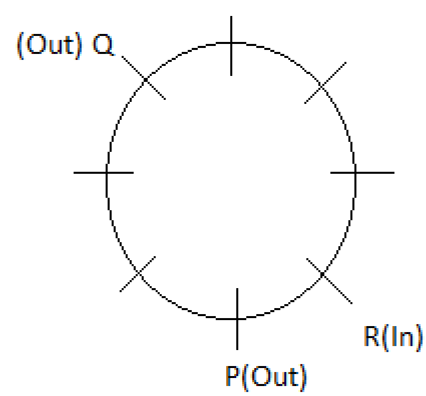
Only **Conclusion** I follows

30. Ans. E.



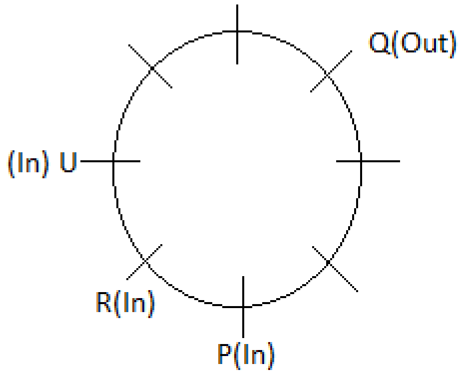
Some intelligent are doctor. So, All intelligent being doctors is a possibility.

31. Ans. C.
According to first clue, P is either facing inside or outside
Scenario I: P is facing outside

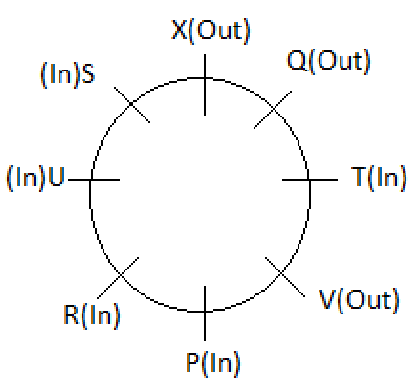


U sits immediate left of R which is not possible in this scenario.

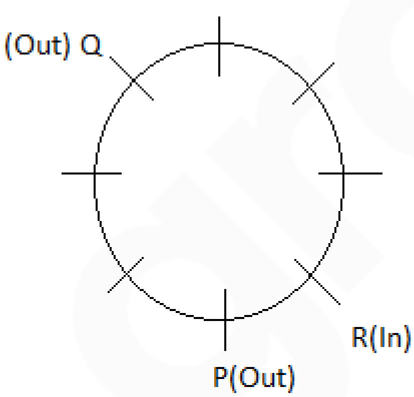
Scenario II: P is facing inside



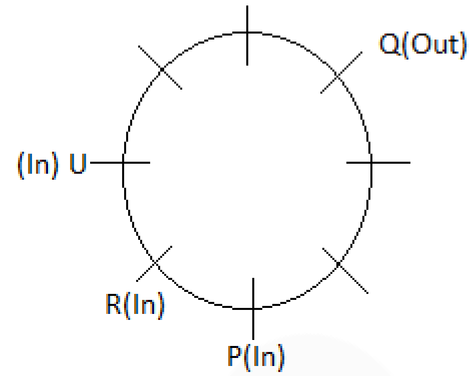
Using the other clues, we get



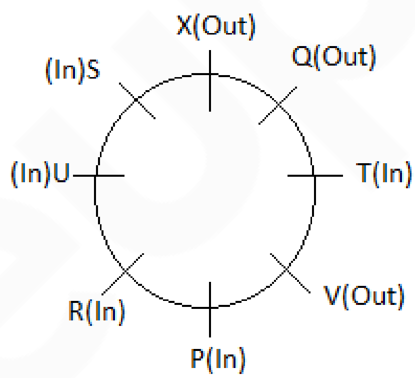
32. Ans. D.
According to first clue, P is either facing inside or outside
Scenario I: P is facing outside



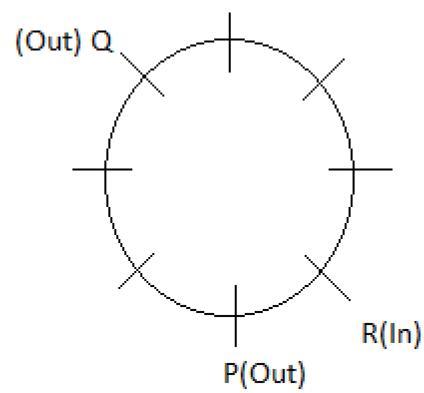
U sits immediate left of R which is not possible in this scenario.
Scenario II: P is facing inside



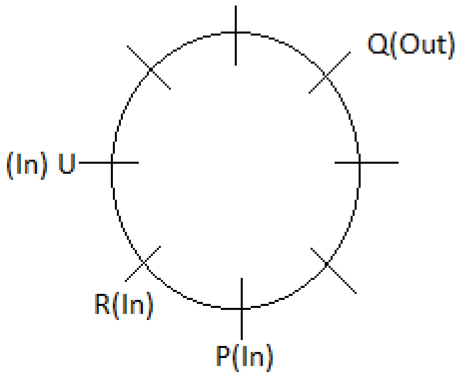
Using the other clues, we get



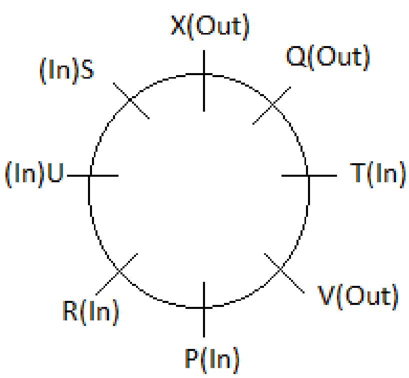
33. Ans. D.
According to first clue, P is either facing inside or outside
Scenario I: P is facing outside



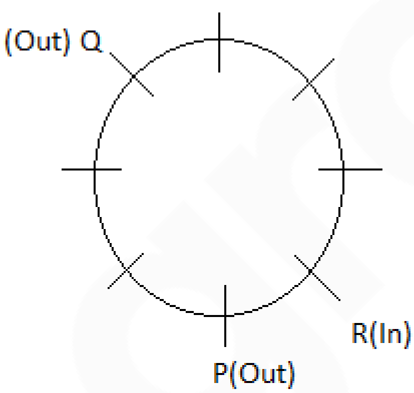
U sits immediate left of R which is not possible in this scenario.
Scenario II: P is facing inside



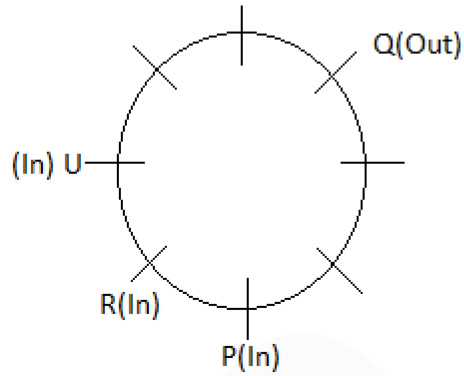
Using the other clues, we get



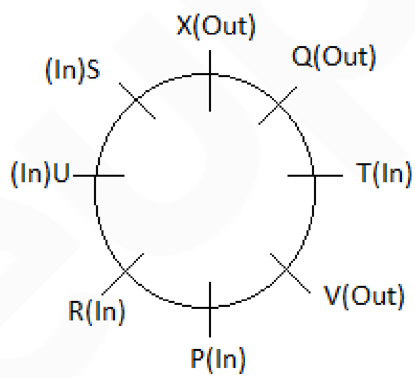
34. Ans. B.
According to first clue, P is either facing inside or outside
Scenario I: P is facing outside



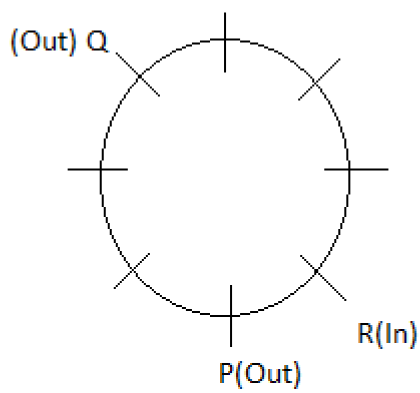
U sits immediate left of R which is not possible in this scenario.
Scenario II: P is facing inside



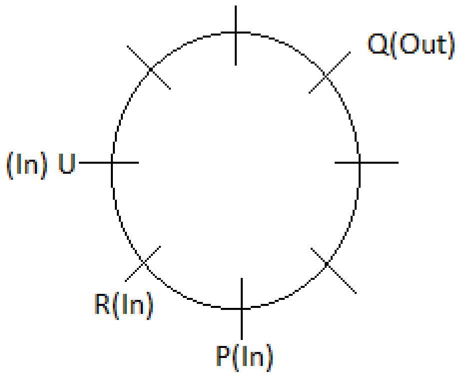
Using the other clues, we get

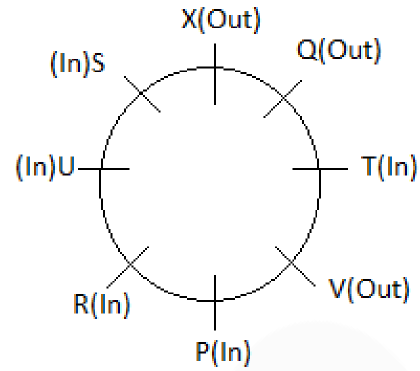


35. Ans. B.
According to first clue, P is either facing inside or outside
Scenario I: P is facing outside



U sits immediate left of R which is not possible in this scenario.
Scenario II: P is facing inside





Using the other clues, we get

36. Ans. C.

All the persons are at the end except B.

• Two persons are sitting between M and N. Neither of them is at corner. The one who is facing D is neighbor of N.

Case 1A:

Row 1		N			M	
Row 2	D					

Case 1B:

Row 1		N			M	
Row 2			D			

Case 2A:

Row 1		M			N	
Row 2						D

Case 2B:

Row 1		M			N	
Row 2				D		

Take case 1A:

O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	D					F

Take case 1B:

O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the left end. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	E		D			F

Take case 2A:

O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M it means 3 people are between them but from this cannot be possible so this case gets rejected.

Row 1	O	M	Q		N	
Row 2			F			D

Take case 2B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the right end. More than two people sit between C and B it means at least 3 people sit between C and B so either C or B at the left end. P is not at any corner so P is facing D and R must be at the end. The immediate neighbor of R is facing B it means N is facing B and C must be at the end and A is facing M.

Here is the final arrangement:

Row 1	O	M	Q	P	N	R
Row 2	C	A	F	D	B	E

37. Ans. D.
D is facing P.
• Two persons are sitting between M and N. Neither of them is at corner. The one who is facing D is neighbor of N.

Case 1A:

Row 1		N			M	
Row 2	D					

Case 1B:

Row 1		N			M	
Row 2			D			

Case 2A:

Row 1		M			N	
Row 2						D

Case 2B:

Row 1		M			N	
Row 2				D		

Take case 1A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	D					F

Take case 1B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the left end. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	E		D			F

Take case 2A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than

2 people sit between E and the one who is facing M it means 3 people are between them but from this cannot be possible so this case gets rejected.

Row 1	O	M	Q		N	
Row 2			F			D

Take case 2B:
O is 2^{nd} to the right of Q. O is not neighbor of N. The one who is facing O is 2^{nd} to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the right end. More than two people sit between C and B it means at least 3 people sit between C and B so either C or B at the left end. P is not at any corner so P is facing D and R must be at the end. The immediate neighbor of R is facing B it means N is facing B and C must be at the end and A is facing M.
Here is the final arrangement:

Row 1	O	M	Q	P	N	R
Row 2	C	A	F	D	B	E

38. Ans. D.
3 persons sit between O and N.
• Two persons are sitting between M and N. Neither of them is at corner. The one who is facing D is neighbor of N.
Case 1A:

Row 1		N			M	
Row 2	D					

Case 1B:

Row 1		N			M	
Row 2			D			

Case 2A:

Row 1		M			N	
Row 2						D

Case 2B:

Row 1		M			N	
Row 2				D		

Take case 1A:
O is 2^{nd} to the right of Q. O is not neighbor of N. The one who is facing O is 2^{nd} to the left of F. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	D					F

Take case 1B:
O is 2^{nd} to the right of Q. O is not neighbor of N. The one who is facing O is 2^{nd} to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the left end. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	E		D			F

Take case 2A:
O is 2^{nd} to the right of Q. O is not neighbor of N. The one who is facing O is 2^{nd} to the left of F. More than

2 people sit between E and the one who is facing M it means 3 people are between them but from this cannot be possible so this case gets rejected.

Row 1	O	M	Q		N	
Row 2			F			D

Take case 2B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the right end. More than two people sit between C and B it means at least 3 people sit between C and B so either C or B at the left end. P is not at any corner so P is facing D and R must be at the end. The immediate neighbor of R is facing B it means N is facing B and C must be at the end and A is facing M.
Here is the final arrangement:

Row 1	O	M	Q	P	N	R
Row 2	C	A	F	D	B	E

39. Ans. B.
R is 3rd to the left of Q.
• Two persons are sitting between M and N. Neither of them is at corner. The one who is facing D is neighbor of N.
Case 1A:

Row 1		N			M	
Row 2	D					

Case 1B:

Row 1		N			M	
Row 2			D			

Case 2A:

Row 1		M			N	
Row 2						D

Case 2B:

Row 1		M			N	
Row 2				D		

Take case 1A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	D					F

Take case 1B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the left end. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	E		D			F

Take case 2A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than

2 people sit between E and the one who is facing M it means 3 people are between them but from this cannot be possible so this case gets rejected.

Row 1	O	M	Q		N	
Row 2			F			D

Take case 2B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the right end. More than two people sit between C and B it means at least 3 people sit between C and B so either C or B at the left end. P is not at any corner so P is facing D and R must be at the end. The immediate neighbor of R is facing B it means N is facing B and C must be at the end and A is facing M.
Here is the final arrangement:

Row 1	O	M	Q	P	N	R
Row 2	C	A	F	D	B	E

40. Ans. C.
A and M are facing each other.
• Two persons are sitting between M and N. Neither of them is at corner. The one who is facing D is neighbor of N.
Case 1A:

Row 1		N			M	
Row 2	D					

Case 1B:

Row 1		N			M	
Row 2			D			

Case 2A:

Row 1		M			N	
Row 2						D

Case 2B:

Row 1		M			N	
Row 2				D		

Take case 1A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	D					F

Take case 1B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the left end. More than two people sit between C and B it means at least 3 people sit between C and B from this cannot be possible so this case gets rejected.

Row 1		N		O	M	Q
Row 2	E		D			F

Take case 2A:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than

2 people sit between E and the one who is facing M it means 3 people are between them but from this cannot be possible so this case gets rejected.

Row 1	O	M	Q		N	
Row 2			F			D

Take case 2B:
O is 2nd to the right of Q. O is not neighbor of N. The one who is facing O is 2nd to the left of F. More than 2 people sit between E and the one who is facing M so E must be at the right end. More than two people sit between C and B it means at least 3 people sit between C and B so either C or B at the left end. P is not at any corner so P is facing D and R must be at the end. The immediate neighbor of R is facing B it means N is facing B and C must be at the end and A is facing M.
Here is the final arrangement:

Row 1	O	M	Q	P	N	R
Row 2	C	A	F	D	B	E

Quantitative Aptitude Solutions

1. Ans. B.
$131 - 64 = 67$
$67 - 32 = 35$
$35 - 16 = 19$
$19 - 8 = 11$
$11 - 4 = 7$

2. Ans. C.
$25 + 3 = 28$
$28 - 6 = 22$
$22 + 9 = 31$
$31 - 12 = 19$
$19 + 15 = 34$

3. Ans. A.
$7 \times 0.5 + 1 = 4.5$
$4.5 \times 1 + 1.5 = 6$
$6 \times 1.5 + 2 = 11$
$11 \times 2 + 2.5 = 24.5$

4. Ans. B.
$1 + 3 = 4$
$4 + 5 = 9$
$9 + 9 = 18$
$18 + 17 = 35$
Again we have to check here -
$3 + 2 = 5$
$5 + 4 = 9$
$9 + 8 = 17$
$17 + 16 = 33$
We will add 33 in 35 = 68

5. Ans. D.
$3.5 \times 2 - 3 = 4$
$4 \times 3 - 4 = 8$
$8 \times 4 - 5 = 27$
$27 \times 5 - 6 = 129$
$129 \times 6 - 7 = 767$

6. Ans. E.
$2x^2 + 11x + 14 = 0$
$2x^2 + 4x + 7x + 14 = 0$
$2x(x+2) + 7(x+2) = 0$
$(x+2)(2x+7) = 0$
i.e. $x = -2$ or $-7/2$
$2y^2 + 13y + 21 = 0$
$2y^2 + 6y + 7y + 21 = 0$
$2y(y+3) + 7(y+3) = 0$
$(2y+7)(y+3) = 0$
i.e. $y = -3$ or $-7/2$
Thus, Relationship cannot be established.

7. Ans. B.
$x^2 - 9x + 20 = 0$
$x^2 - 5x - 4x - 20 = 0$
$(x-5)(x-4) = 0$
i.e. $x = 4$ or 5
$y^2 = 16$
$y = (16)1/2$
$y = 4$ or -4
Thus, $x >= y$

8. Ans. C.
$x^2 - 7x + 12 = 0$
$x^2 - 4x - 3x + 12 = 0$
$x(x-4) - 3(x-4) = 0$
i.e. $x = 3$ or 4
$y^2 - 11y + 30 = 0$
$y^2 - 5y - 6y + 30 = 0$
$y(y-5) - 6(y-5) = 0$
i.e. $y = 5$ or 6
Thus, $y > x$

9. Ans. C.
$x^2 - 8x + 15 = 0$
$x^2 - 5x - 3x + 15 = 0$
$x(x-5) - 3(x-5) = 0$

i.e. x = 5 or 3
y^2 - 12y + 36 = 0
y^2 – 6y – 6y + 36 = 0
y (y-6) -6 (y-6) = 0
i.e. y = 6
Thus, y > x

10. Ans. E.
$2x^2$ + 9x + 7 = 0
$2x^2$ + 7x + 2x + 7 = 0
x (2x+7) + 1 (2x+7) = 0
i.e. x = -1 or -7/2
y^2 + 4y + 4 = 0
y^2 + 2y + 2y + 4 = 0
y (y+2) + 2 (y+2) = 0
i.e. y = -2
Thus, Relationship cannot be established between X & Y.

11. Ans. A.
Required Average = (3750+3000+2500+3750+3500)/5 = 3300

12. Ans. B.
Total number of students (males and females together) in University P = (3000 + 3750) = 6750
Total number of students (males and females together) in University R = 2500+4250 = 6750
Ratio = 1:1

13. Ans. B.
Required ratio = (3750 + 3000) : (4250 + 2750) = 27 : 28

14. Ans. D.
Required percentage = [4000/(3750+3000+2500+3750+3500)]*100 = (4000/16500)*100 = 24% (approx)

15. Ans. C.
Required number = 2750 + 50% of 2750 + 3500 = 7625

16. Ans. A.
Number of teachers in physics subject = 1800 $\times \frac{17}{100}$
= 306
Number of female teachers in physics = 306$\times \frac{2}{9}$
= 68
Number of male teachers in physics = 306 – 68
= 238

Number of teachers in chemistry subject = 1800$\times \frac{23}{100}$
= 414

Required percentage = $\frac{238}{414}$
= 57 % (approx).

17. Ans. B.
Number of teachers in Chemistry subject = 1800 × 23%= 414
Number of teachers in English subject = 1800 × 27%= 486
Number of teachers in Biology subject = 1800 × 12% = 216
Required number = 414 + 486 + 216= 1116

18. Ans. B.
Total number of teachers English and Physics = 486 + 306= 792
Total number of teachers Mathematics and Biology = 234 + 216= 450
Required difference = 792 – 450= 342

19. Ans. E.
Number of teachers in Mathematics subject= 1800×13% = 234
Number of teachers in Hindi subject = 1800×8% = 144
Required ratio = 234 : 114
= 13 : 8

20. Ans. C.
Number of increased Mathematics teachers = 234 + 234×50% = 351
Number of decreased Hindi teachers = 144 – 144×25% = 108
Required total number = 351 + 108
= 459

21. Ans. A.
Average number of students, who appeared for Physics from the year, 2011 to 2015 = (650 + 250 + 350 + 600 + 350)/ 5 = 440

22. Ans. D.
Total number of students who appeared for Physics from 2013 to 2015 = (350 + 600 + 350) = 1300
Total number of students, who appeared for Chemistry from 2011 to 2013 = (800 + 630 + 550) = 1980
Required ratio = 1300 : 1980 = 65:99

23. Ans. B.
Students who did not pass in Physics in the year 2011 = 70/100 * 650 = 455
Students who did not pass in Physics in the year 2015 = 30/100 * 350 = 105
Average = (455 + 105)/2 = 280

24. Ans. D.
Total number of students, who passed in Chemistry in 2011 = 50/100 * 800 = 400
Total number of students who did not pass in Physics in 2015 = 30/100 * 350 = 105
Difference = 400 – 105 = 295

25. Ans. B.
Total number of students who did not pass Physics in 2013 = 50/100 * 350 = 175
Total number of students who did not pass Chemistry in 2013 = 80/100 * 550 = 440
Percentage = 175/440 * 100 = 39.77% = 40%

26. Ans. A.
Take nearest values
21.003 × 39.998 – 209.91 = 126 × ?
630 = 126 × ?
? = 5 (approx)

27. Ans. C.
$$\left(\frac{47}{100}\times 1442-\frac{36}{100}\times 1412\right)\div 63$$
= (677.74 – 508.32) ÷ 63 = 169.42/63 = 2.689 = 3 (Approx)
Hence option C is correct

28. Ans. D.
$$?=2418.065+88\div 14.2\times 6$$
$$?=2418.065+88\times\frac{1}{14.2}\times 6$$
? = 2418.065 + 6.197 × 6
? = 2418.065 + 37.18
? = 2455.25
? = 2455 (Approx.)

29. Ans. E.
1200 ÷ 15 x 20 + 400 = 80 x 20 + 400
= 1600 + 400 = 2000 (Approx)
Hence option E is correct

30. Ans. E.
$$?=726\times\frac{15.2}{100}\times 643\times\frac{12.8}{100}$$
= 110.352 × 82.304
= 9082.41
≈ 9082 (approx)

31. Ans. A.
Third Number = (128 × 5) - (118 × 2) - (126 × 2) = 152

32. Ans. A.
Let present age of Anita= 'x' years
And present age of Bablu= 'y' years
Now, $\dfrac{\frac{x-4}{2}}{4(y-4)}=5/12$
$$12x-48=40y-160$$
$3x-10y+28=0$ ....(i)
And,
$$\frac{1}{2}(x+8)=(y+8)-2$$
$$x+8=2y+12$$
$x-2y=4$ ....(ii)
Now, from eqn. (i) & (ii)
Bablu present age, Y=10 years

33. Ans. B.
Let 100 (CP)
80 (SP) 110 (SP)
Diff. 30
30 units → 24
1 unit → $\frac{24}{30}$
100 units → $\frac{24}{30}\times 100$ = Rs. 80
CP = Rs. 80

34. Ans. A.
A started a business with investing Rs. 8000 and after some months, B joined with investing Rs. 5000.
Equivalent capital of A
= Rs. 8000 × 12
= Rs. 96000
Let B joined after x months.
So, equivalent capital of B
= Rs. 5000 × (12 – x)
= Rs. 60000 – 5000x
Total profit after one year = Rs. 4250
Share of A = Rs. 3000. Then, the share of B = Rs. 4250 – 3000 = Rs. 1250
So, the ratio of their share;
A : B = 3000 : 1250 = 12 : 5
Now, we can write,
96000/(60000 – 5000x) = 12/5
⇒ 60000 – 5000x = 96000 × (5/12)
⇒ 60000 – 5000x = 8000 × 5
⇒ 5000x = 60000 – 40000
⇒ x = 20000/5000 ⇒ x = 4
∴ After 4 months, B joined in the business.

35. Ans. D.
Let the length of train P and Q are 5a and 4a.
speed of train P = 5a/6
therefore,
(5a/6 + 21)*4 = 5a/3 + 4a
-5a/3 + 4a = 84
a = 36
speed of train P = 36*5/6 = 30m/s

36. Ans. D.
Total no of balls = 8 + 7 + 6 = 21
Let, E be the event where the ball can be selected which is neither yellow nor black
Number of events where the ball can be selected which is neither yellow nor black = 7
P(E) = 7/ 21 = 1/3

37. Ans. D.
Ratio of days of B and C = 2:1

$\frac{1}{A}+\frac{1}{B}=\frac{1}{60}$.....1)

$\frac{1}{A}+\frac{1}{C}=\frac{1}{45}$......2)

$\frac{1}{A}+\frac{2}{B}=\frac{1}{45}$.....3)

1) *and* 2)

$\frac{1}{B}=\frac{1}{180} \Rightarrow B = 180\ days$

From equation 1) A =90 days, and C = 90 days
One day work of A, B and C

$= \frac{1}{90}+\frac{1}{90}+\frac{1}{180}=\frac{2+2+1}{180}=\frac{1}{36}$

Days = 36 days.

38. Ans. B.
First and second varieties of pulses are mixed in equal proportions
∴Their average price = INR (32+45)/2 = INR 38.5/kg
Let the price of third variety pulse be INR x/kg
The mixture is formed by mixing two varieties becomes one at INR 38.5/kg
By the rule of allegation:

Cost of 1 kg of 1st + 2nd variety
INR 38.5

Cost of 1 kg of 3rd variety
INR x

Mean price INR 88

(x – 88)

49.5

$\therefore \frac{x-88}{49.5}=\frac{1}{1}$

⇒ x – 88 = 49.50
⇒ x = 137.50
Hence, the price of the third variety per kg will be INR 137.50/kg

39. Ans. D.
The time required to travel a certain distance upstream is five times than that of downstream for the same distance.
Let the speed of the boat in upstream be x km/hr. and in downstream be 5x km/hr.
We know that if the speed of the downstream is x km/hr and the speed of the upstream is y km/hr, then the speed in still water = 1/2 × (x + y) km/hr.
So, the speed of the boat in still water
= 1/2 × (x + 5x) km/hr.
= 1/2 × 6x km/hr.
= 3x km/hr.
Given, the speed of a boat in still water is (27/4) km/hr.
So, we can write now,
3x = 27/4
⇒ x = 9/4
So, the speed of the boat in upstream = 9/4 km/hr.
And the speed of the boat in downstream = 5 × (9/4) km/hr. = 45/4 km/hr.
Again, we know that if the speed of the downstream is x km/hr and the speed of the upstream is y km/hr, then the speed of the stream = 1/2 × (x – y) km/hr.
∴ The speed of the stream = 1/2 × [(45/4) – (9/4)] km/hr.
= 1/2 × 9 km/hr.
= 9/2 km/hr.
= 4.5 km/hr.

40. Ans. C.
Curved Surface Area of Cylinder = 2πrh
Total Surface Area of Cylinder = 2πr (h+r)
According to question, 2πrh : 2πr (h+r) = 3:5
i.e. h/ (h+r) = 3/5
i.e., 2h = 3r – (a)
Also, Curved surface area of the cylinder = 1848 metre square
i.e. 2πrh = 1848
From (a), 2π (2/3h) * h = 1848
On solving the above equation, h = 21m