Reasoning And Logical Deduction

DIRECTIONS (Q. Nos. 31-32) *A statement is followed by two conclusions* I *and* II. *Decide which of the conclusions follows from the statement.*

Mark answers as

(a) if only conclusion I follows
(b) if only conclusion II follows
(c) if neither conclusions I nor II follows
(d) if both conclusions I and II follow

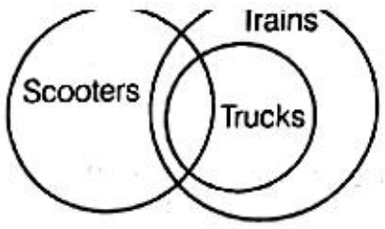
31. Statements

I. Some scooters are trucks.
II. All trucks are trains.

Conclusions

I. Some scooters are trains.
II. No truck is a scooter.

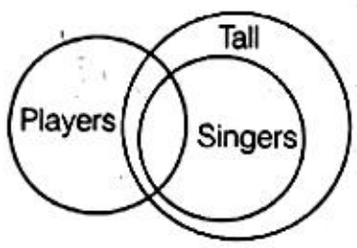
Sol. *(a)*



Conclusions : I. (✔)
II. (✘)
Hence, only conclusion I follows.

52. Statements
I. Some players are singers.
II. All singers are tall.
Conclusions
I. Some players are tall.
II. All players are tall.

Sol. *(a)*



Conclusions : I. (✔)
II. (✘)
Hence, only conclusion I follows.

DIRECTIONS (Q. Nos. 33-34) In each of the following uestions, two statements numbered I *and* II *are given. There ay be cause and effect relationship between the two atements. These two statements may be the effect of the same use or independent causes. These statements may be dependent causes without having any relationship. Read both e statements in each question and mark your answer as*

(a) if statement I is the cause and statement II is its effect.
(b) if statement II is the cause and statement I is its effect.
(c) if both the statements I and II are effects of independent causes.
(d) if both the statements I and II are effects of some common cause.

33. Statement I There is sharp decline in the production of oil seeds this year.
Statement II The Government has decided to increase the import quantum of edible oil.

Sol. *(a)* A sharp decline in oilseed production is bound to reduce oil supply and import of oil is the only means to restore the essential supply.

34. Statement I The Reserve Bank of India has recently put restrictions on few small banks in the country.
Statement II The small banks in the private and co-operative sector in India are not in a position to withstand the competitions of the bigger banks in the public sector.

Sol. *(b)* The inability of the small banks to compete with bigger banks shall not ensure security and good servi to the customers, which is an essential concomitant that has to be looked into by the Reserve Bank.

DIRECTIONS (Q. Nos. 35-37) *Read the following information carefully to answer these questions.*

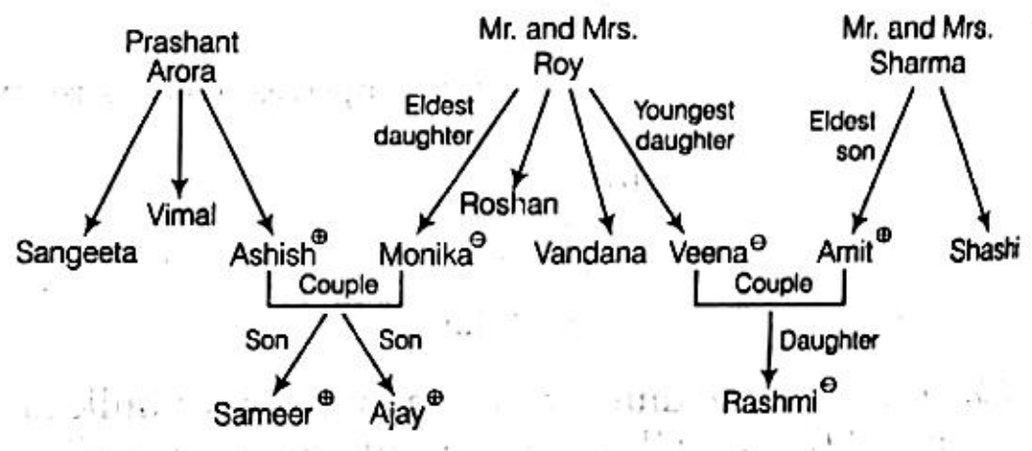
Prashant Arora has three children - Sangeeta, Vimal and Ashish. Ashish married Monika, the eldest daughter of Mr. and Mrs. Roy. The Roys married their youngest daughter to the eldest son of Mr. and Mrs. Sharma, and they had two children named Amit and Shashi. The Roys have two more children, Roshan and Vandana, both elder to Veena. Sameer and Ajay are sons of Ashish and Monika. Rashmi is the daughter of Amit.

35. How is Sameer related to Monika's father?
(a) Grandson (b) Son
(c) Cousin (d) Son-in-law

36. What is the surname of Sameer?
(a) Roy (b) Sharma
(c) Arora (d) None of these

37. How is Mrs. Roy related to Ashish?
(a) Aunt (b) Mother-in-law
(c) Mother (d) Sister-in-law

Sol. (Q. Nos. 53–37) According to information,



35. *(a)* Sameer is the grandson of Monika's father.
36. *(c)* Sameer' surname is Arora.
37. *(b)* Mrs. Roy is the mother-in-law of Ashish.

DIRECTIONS (Q. Nos. 38-40) *Study the following information carefully to answer these questions.*

A Business School with six Professors L, M, N, O, P and Q, has decided to implement a new scheme of course management. Each Professor has to coordinate one course and support another course. This semester, O's support course is Finance, while three others have it in coordinator's role. P and Q have Marketing as one of their subjects. Q coordinates Operations, which is a support course for both N and P. Finance and IT are L's subjects. Both L and O have same subjects. Strategy is a support course for only one of the Professors.

38. Who coordinates the IT course?
(a) L (b) N
(c) O (d) None of these

39. Which course is supported by M?
(a) Operations (b) IT
(c) Finance (d) Strategy

40. Who among the following are coordinating the Finance course?
(a) L, M and N
(b) L and N
(c) N and O
(d) M, N and O

Sol. (Q. Nos. 38-39) According to information,

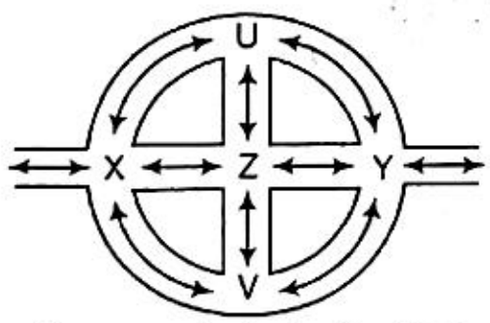
	Support	Coordinate
L	IT	Finance
M	Strategy	Finance
N	Operations	Finance
O	Finance	IT
P	Operations	Marketing
Q	Marketing	Operations

38. *(c)* O coordinates the IT course.

39. *(d)* Strategy is supported by M.

40. *(a)* L, M and N are coordinating the finance course.

DIRECTIONS (Q. Nos. 41-42) *Examine the route diagram given below to answer these questions.*



The arrows indicate directions of possible movement.

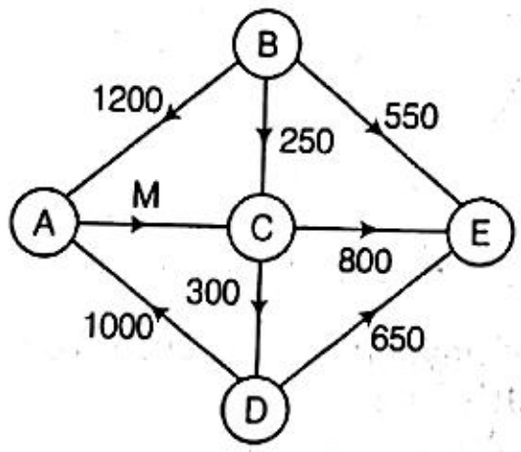
41. Which is the most crowded junction, assuming that each arrow denotes equal traffic?
(a) U (b) X
(c) Y (d) Z

Sol. *(d)* Z is the most crowded junction with traffic coming from four directions.

42. What is the maximum number of bus routes possible from X to Y such that the bus does not come to one junction more than once in a route?
(a) 4 (b) 6
(c) 8 (d) 9

Sol. *(b)* There are 6 possible routes from X to Y.

DIRECTIONS (Q. Nos. 43-44) *The following figure represents the flow of natural gas through pipelines across major cities A, B, C, D and E. Assume that supply equals demand.*



43. If the number of units demanded in C is 225, what is the value of M?
(a) 775 (b) 850
(c) 875 (d) 1075

Sol. *(b)* Since, supply equals demand.

$$\therefore \quad 250 + M = 800 + 300$$
$$\Rightarrow \quad M = 1100 - 250$$
$$= 850$$

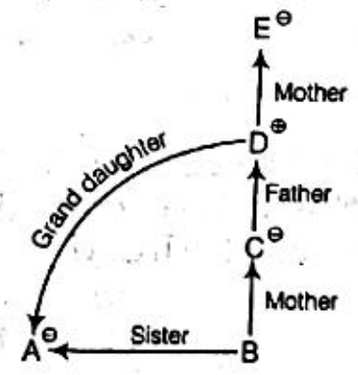
44. If the total demand in E is 80% of the demand in A, what is the demand in A?
(a) 2400 (b) 2500
(c) 4500 (d) None of these

Sol. *(b)* Total demand in E = 550 + 800 + 650
= 2000

$$\therefore \text{Demand in A} = 2000 \times \frac{100}{80}$$
$$= 2500$$

45. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?
(a) Grandfather (b) Grandmother
(c) Daughter (d) Granddaughter

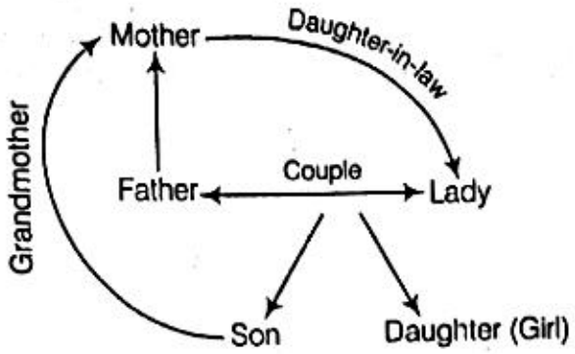
Sol. *(d)*



A is granddaughter of D.

46. Pointing out to a lady, a girl said, "She is the daughter-in-law of the grandmother of my father's only son." How is the lady related to the girl?
(a) Sister-in-law (b) Mother
(c) Aunt (d) Can't be determined

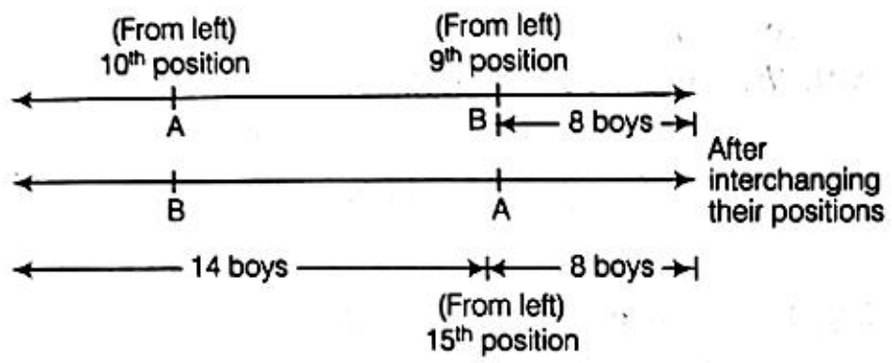
Sol. *(b)*



Lady is the mother of the girl.

47. In a row of boys, A who is 10th from the left and B who is 9th from the right interchange their positions, A becomes 15th from the left. How many boys are there in the row?
(a) 23 (b) 31 (c) 27 (d) 28

Sol. *(a)*



∴ Total Number of boys in the row = 14 + 1 + 8 = 23

48. In a certain code language, '134' means 'good and tasty'; '478' means 'see good pictures' and '729' means 'pictures are faint'. Which of the following digits stands for 'see'?
(a) 9 (b) 2 (c) 1 (d) 8

Sol. *(d)*

good and tasty	1 3 4	...(i)
See good pictures	4 7 8	...(ii)
Pictures are faint	7 2 9	...(iii)

From Eqs. (i) and (ii), good ⟶ 4
From Eqs. (ii) and (iii), pictures ⟶ 7
From Eqs. (ii) see ⟶ 8
∴ '8' digit stands for 'see'.

49. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH?
(a) 246173 (b) 214673
(c) 214763 (d) 216473

Sol. *(b)*

R	O	S	E		C	H	A	I	R		P	R	E	A	C	H
↓	↓	↓	↓		↓	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓
6	8	2	1		7	3	4	5	6		9	6	1	4	7	3

From the above codes, we get

S	E	A	R	C	H
↓	↓	↓	↓	↓	↓
2	1	4	6	7	3

Code for SEARCH is 214673.

50. A man has a certain number of small boxes to pack into parcels. If he packs 3, 4, 5 or 6 in a parcel, he is left with one over; if he packs 7 in a parcel, none is left over. What is the number of boxes, he may have to pack?
(a) 106 (b) 301 (c) 309 (d) 400

Sol. *(b)* LCM of 3, 4, 5 and 6 = 2 × 2 × 3 × 5 = 60

2	3,	4,	5,	6,
2	3,	2,	5,	3,
3	3,	1,	5,	3,
5	1,	1,	5,	1,
	1,	1,	1,	1,

Multiple of 60 = 60, 120, 180, 240, 300, 360 .....

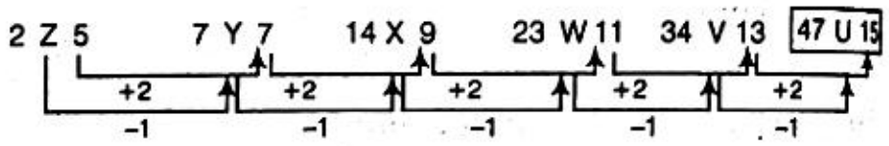
$$\text{Total number of boxes} = \underbrace{(\text{Multiple of 60}) + 1}_{\text{Divisible by 7}}$$

Hence, total number of boxes = 300 + 1 = 301

DIRECTIONS (Q. Nos. 51-53) *Complete the series.*

51. 2Z5, 7Y7, 14X9, 23W11, 34V13, '?'
(a) 47U15 (b) 47V14 (c) 45U15 (d) 27U24

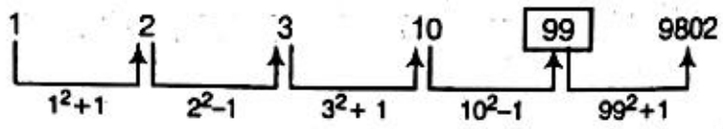
Sol. *(a)*



Also, 2 + 5 = 7 23 + 11 = 34
7 + 7 = 14 34 + 13 = 47
14 + 9 = 23
∴ ? = 47U15

52. 1,2,3, 10, '?', 9802
(a) 99 (b) 199 (c) 299 (d) 999

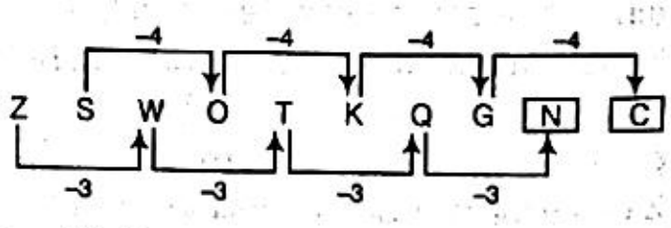
Sol. *(a)*



∴ ? = 99

53. Z, S, W, O, T, K, Q, G, '?', '?'
(a) N, D (b) N,C (c) O,D (d) O,C

Sol. *(b)*



∴ ?, ? = N, C.

DIRECTIONS (Q. Nos. 54-56) *Choose the odd one out.*

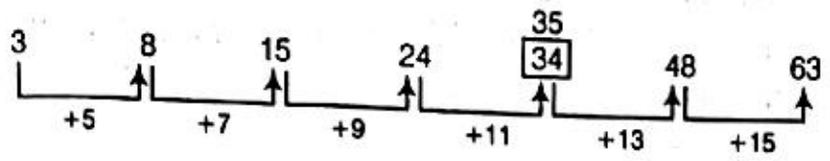
54. 2, 5, 10, 50, 500, 5000
(a) 5000 (b) 500
(c) 10 (d) 50

Sol. *(a)* Each term of the sequence is the product of preceeding two terms. So, 5000 is wrong and must be replaced by 500 × 50 = 25000.

55. 3, 8, 15, 24, 34, 48, 63

(a) 15 (b) 24 (c) 34 (d) 48

Sol. *(c)*

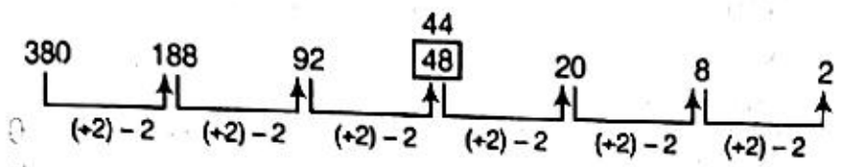


∴ 34 is the odd one out.

56. 380, 188, 92, 48, 20, 8, 2

(a) 20 (b) 48 (c) 92 (d) 2

Sol. *(a)*



∴ 48 is the odd one out.

DIRECTIONS (Q. Nos. 57-58) *The questions given below have a statement followed by two assumptions* I *and* II. *Decide which of the assumptions is implicit from the statement.*

Mark answer as

(a) if only assumption I is implicit

(b) if only assumption II is implicit

(c) if neither assumption I nor II is implicit

(d) if both assumptions I and II are implicit

57. Statement Most people who stop smoking gain weight.

Assumptions

I. If one stops smoking, one will gain weight.

II. If one does not stop smoking, one will not gain weight.

Sol. *(a)* Only assumption (I) is implicit as smoke quitting will lead to gain weight but it cannot be assumed that those who do not quit smoking will not gain weight.

58. Statement Postal rates have been increased to meet the deficit.

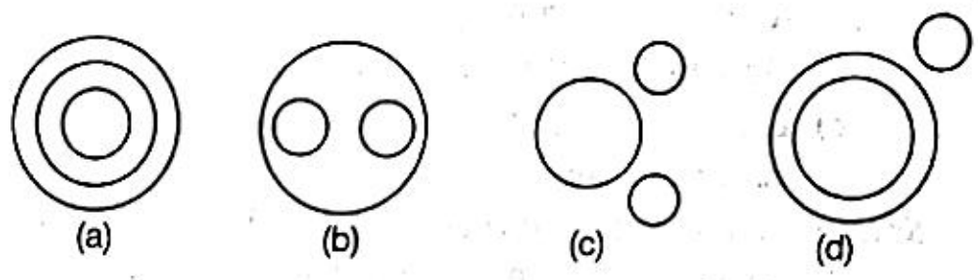
Assumptions

I. The present rates are very low.

II. If the rates are not increased, the deficit cannot be met.

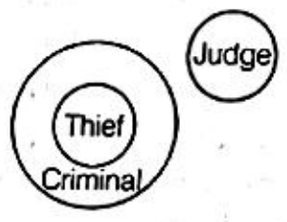
Sol. *(c)* Neither of the two assumptions is implicit as it is not certain that present rates are very low. Also, we can't say that increasing rates is the only way to meet deficit.

DIRECTIONS (Q. Nos. 59-60) *From the four logical diagrams, select the one which best illustrates the relationship among the three given classes in the questions.*



59. Judge, Thief, Criminal

Sol. *(d)* A thief is a criminal but a judge cannot be a criminal or a thief.



60. Square, Rectangle, Polygon

Sol. *(a)* All squares are rectangles and all rectangles are polygons.