Syllogism Questions, Answers & Explanation

EXERCISE

DIRECTIONS (Qs. I): In each of the questions below are given three statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem to be at variance with commonly know facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statement disregarding commonly known facts.

1. **Statements:**
Some boxes are trees.
Some trees are horses.
All horses are fruits.
Conclusions:
I. Some fruits are boxes.
II. Some fruits are trees.
III. Some horses are boxes
IV. No fruits are boxes.
(a) None follows
(b) Only either II or IV follows
(c) Only either I or IV and II follow
(d) Only either I or III and IV follow

1. **Statements:**
All flowers are buses.
Some buses are cats.
All cats are tigers.
Conclusions:
I. Some tigers are buses.
II. Some tigers are flowers.
III. Some cats are flowers.
IV. Some buses are tigers.
(a) None follows
(b) Only I and II follow
(c) Only III and IV follow
(d) Only I and IV follow

2. **Statements:**
No man is sky.
No sky is road.
Some men are roads.
Conclusions:
I. No road is man.
II. No road is sky.
II. Some skies are men.
IV. All roads are men.
(a) None follows
(b) Only I follows
(c) Only I and III follow
(d) None of these

1. **Statement:**
All windows are doors.
No door is a lock.
Some locks are keys.
Conclusions:
I. Some locks are doors.
II. Some locks are not doors.
III. Some keys are not doors.
IV. All doors are windows.
(a) All follow.
(b) Only either I or II flows
(c) Only either I or II and III follow
(d) None of these

2. **Statements:**
Some shirts are coats.
All coats are jackets.
Some jackets are trousers.
Conclusions:
I. Some shirts are jackets.
II. Some jackets are shirts.
III. All trousers are jackets.
IV. Some trousers are jackets.
(a) All follow
(b) Only I, II and III follow
(c) Only 1, II and IV follow
(d) Only II, III and IV follow

3. **Statements:**
All bikes are scooters.
All scooters are scooties

All scooties are mopeds.
Conclusions:
I. All mopeds are scooties.
II. All scooties'are scooters.
III. All scooters are bikes.
IV. All bikes are mopeds.
(a) None follows.
(b) All follow
(c) Only III and IV follow
(d) Only IV follows

4. **Statements:**
Some pots are buckets.
Some buckets are bags.
Some bags are purses.
Conclusions:
I. Some purses are buckets.
II. Some bags are pots.
III. Some purses are pots.
IV. Some pots are bags.
(a) All follow
(b) None follows
(c) Only I and III follow
(d) Only II and IV follow

5. **Statements:**
All biscuits are chocolates.
Some chocolates are breads.
All breads are pastries.
Conclusions:
I. Some biscuits are pastries.
II. Some pastries are chocolates.
III. Some biscuits are not pastries.
IV. All pastries are breads.
(a) Only I and II follow
(b) Only I, II and III follow
(c) Only either 1 or III and II follow
(d) Only either I or III and IV follow

6. **Statements:**
All birds are fruits.
Some fruits are towers.
All towers are windows.
Conclusions:
I. Some birds are towers,
II. Some windows are birds.
III. Some windows are fruits.
IV. Some towers are birds.
(a) None follows
(b) Only I and II follow
(c) Only II and III follow
(d) Only III follows

7. **Statements:**
Some buses are trains.
No train is a dog.
All dogs are parrots.
Conclusions:
I. No bus is a parrot.
II. Some parrots are trains.
III. Some parrots are buses.
IV. No dog is a bus.
(a) Only either I or III follows
(b) Only II follows
(c) Only IV follows
(d) Only I and III follow

8. **Statements:**
Some cups are flowers.
Some flowers are boxes.
All boxes are tigers.
Conclusions:
I. Some tigers are cups.
II. Some tigers are flowers.
III. Some boxes are cups.
IV. No tiger is a flower.
(a) None follows
(b) Only either II or IV follows
(c) Only III follows
(d) None of these

9. **Statements:**
All glasses are roads.
No road is a stick.
Some sticks are pens.
Conclusions:
I.Some glasses are sticks.
II. Some pens are sticks.
III. Some roads are sticks.
IV. No glass is a stick.
(a) None follows
(b) Only I or IV and II follow

(c) Only either I or III or II follows
(d) None of these

10. **Statements:**
All buses are trains.
All trains are rickshaws.
All rickshaws are cycles.
Conclusions:
I. All cycles are buses.
II. All rickshaws are buses.
III. All buses are rickshaws.
IV. All trains are cycles.
(a) All follow
(b) None follows
(c) Only I and II follow
(d) None of these

11. **Statements:**
Some candles are houses.
Some houses are trains.
Some trains are roads.
Conclusions:
I. Some roads are candles.
II. Some trains are candles.
III. Some roads are houses.
IV. Some candles are roads.
(a) None follows
(b) All follow
(c) Only I and II follow
(d) Only I and III follow

12. **Statements:**
No tree is fruit.
All fruits are stones.
All stones are rains.
Conclusions:
I. No stone is tree.
II. No rain is tree.
III. Some rains are fruits.
IV. Some rains are trees.
(a) None follows.
(b) Only either II or IV and III follow
(c) Only either II or III and 1 follow
(d) All follow

13. **Statements:**
All books are stars.
Some stars are windows.
All windows are hills.
Conclusions:
I. Some windows are books.
II. Some hills are stars.
III. Some hills are books.
IV. Some stars are books.
(a) None follows
(b) Only I and III follow
(c) All follows
(d) Only II and IV follow

14. **Statements:**
Some cats are rats.
All rats are bats.
Some bats are jungles.
Conclusions:
I. Some jungles are cats.
II. Some bats are cats.
III. Some jungles are rats.
IV. No jungles is cat.
(a) None follows
(b) Only III follows
(c) Only either I or IV and III follow
(d) Only either I or IV and II follow

15. **Statements:**
All flowers are clouds.
No cloud is sky.
All skies are tigers.
Conclusions:
I. Some clouds are flowers.
II. All clouds are flowers.
III. Some tigers are skies.
IV. All tigers are skies.
(a) Only II and IV follow
(b) Only either I or II follows
(c) Only either III or IV follows
(d) None of these

16. **Statements:**
Some spectacles are boxes.
No bat is a ball.
Some boxes are balls.
Conclusions:
I. Some boxes are not bats.

II. Some bats are spectacles.
III. No bat is a box.
IV No bail is a spectacle.
(a) Only I follows
(b) Only I and III follows
(c) Only II and III follow
(d) Only IV follows

17. **Statements:**
All fans are tubelights.
No pen is a bulb.
Some bulbs are fans.
Conclusions:
I. Some pens are tubelights.
II. No pens are tubelights.
III. Some tubelights are fans.
IV All tubelights are fans.
(a) Only I and II follow
(b) Only I, II and III follow
(c) Either I or II and III follow
(d) Only III and IV follow

18. **Statements:**
Some fruits are vegetables.
All liquids are drinks.
All drinks are fruits.
Conclusions:
I. Some drinks are vegetables.
II. Some fruits are liquids.
III. All liquids are fruits.
IV. No liquids are vegetables.
(a) Only I and II follow
(b)Only II and III follow
(c) Only III and IV follow
(d) Only I, II and III follow

19. **Statements:**
All shirts are trousers.
Some socks are shoes.
All shoes are shirts.
Conclusions:
I. Some socks are shirts.
II. Some socks are trousers.
III. All shoes are trousers.
IV All shoes are socks.
(a) Only I and II follow
(b)Only I or II or III follows
(c) Only II and IV follow
(d) None of these

20. **Statements:**
Some books are papers.
All plates are records.
Some records are books.
Conclusions:
I. Some places are books.
II. Some records are papers.
III. Some papers are plates.
IV. Some books are records.
(a) Only I follows
(b)Only II and III follow
(c) Only I and III follow
(d) Only IV follow

21. **Statements:**
Some bricks are trees.
All trees are pens.
All pens are boats.
Conclusions:
I. Some boats are bricks.
II. Some pens are bricks.
III. Some trees are bricks.
IV. Some bricks are boats.
(a) None follows
(b) All follow
(c) Only I and II follow
(d)Only III and IV follow

22. **Statements:**
All cups are tables.
No table is water.
Some waters are clothe
Conclusions:
I. No cloth is cup.
II. No cloth is table.
III. Some clothes are waters.
IV. Some waters are cups.
(a) None follows
(b) All follow
(c) Only III follows
(d)Only I and II follow

23. **Statements:**
Some flowers are rods.
Some rods are doors.
Some doors are houses.
Conclusions:
I. Some houses are flowers.
II. Some doors are flowers.
III. Some flowers are doors.
IV. No house is flower.
(a) Only I and IV follow
(b) Only II and III follow
(c) Only either I or II follows
(d) Only either I or IV follows

24. **Statements:**
All trucks are vans.
All vans are cars.
All cars are trains.
Conclusions:
I. All trains are trucks.
II. All cars are trucks.
III. All trucks are trains.
IV. All vans are trains.
(a) All follow
(b)Only I and II follow
(c) Only II and III follow
(d) None of these

25. **Statements:**
No table is fruit.
No fruit is window.
All windows are chairs.
Conclusions:
I. No window is table.
II. No chair is fruit.
III. No chair is table.
IV. All chairs are windows.
(a) None follows
(b) All follow
(c) Only I and II follow
(d) Only III and IV follow

26. **Statements:**
I. Some towers are windows.
II. All windows are houses.
III. Some houses are temples.
Conclusions:
I. Some towers are temples.
II. Some houses are towers.
(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both conclusions I & II follow.
(d) Neither conclusion 1 nor II follows.

27. **Statement:**
I. The rich must live more simply.
II. All poor people are simple.
Conclusions:
I. Rich people waste money.
II. Poor people save money.
(a) Only I follows.
(b) Only II follows.
(c) Neither I nor follow.
(d) Both I and II follow.

DIRECTIONS (Qs. 31-35): In each questions bellows are given two statements followed by two conclusions. 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 statements disregarding commonly know facts. Given Answer.
Give answer (a) If only conclusion I follows.
Give answer (b) if only conclusion II follows.
Give answer (c) if either I nor II follows.
Give answer (d) if neither I nor II follows.

28. **Statements:**
All leaders are good team workers.
All good team workers are good orators.
Conclusions:
I. Some good team workers are leaders.
II. All good orators are leaders.

29. **Statements:**
All terrorists are human.
All humans are bad.
Conclusions:
I. All terrorists are bad.
II. No human can be a terrorist.

30. **Statements:**
Some teachers are followers.

Some followers are famous.

Conclusions:

I. Some teachers-are famous.

II. Some followers are teachers.

31. **Statements:**

Some books are pens.

No pen is pencil.

Conclusions:

I. Some books are pencils,

II. No book is pencil.

32. **Statements:**

Some dedicated souls are angels.

All social workers are angels.

Conclusions:

I. Some dedicated souls are social workers.

II. Some social workers are dedicated souls.

33. (1) All roses in sita's garden are red.

(2) All marigold flowers in Sita's garden arc orange.

(3) All flowers in Sita's garden are either red or orange. If 1st two statements are true, the third is

(a) True (b) False

(c) Uncertain (d) Vague

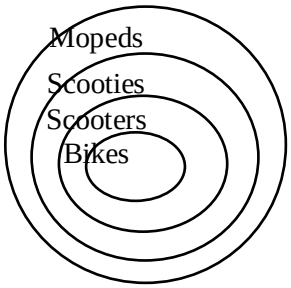
ANSWER KEY																	
1	(c)	5	(c)	9	(d)	13	(d)	17	(d)	21	(b)	25	(c)	29	(b)	33	(b)
2	(d)	6	(d)	10	(a)	14	(a)	18	(d)	22	(d)	26	(d)	30	(c)	34	(c)
3	(d)	7	(b)	11	(d)	15	(b)	19	(a)	23	(d)	27	(d)	31	(a)	35	(d)
4	(d)	8	(c)	12	(d)	16	(d)	20	(c)	24	(b)	28	(a)	32	(a)	36	(c)

HINTS & EXPLANATION

1. (c) Conclusion II follows from conversion of the conclusion obtained from statement (b) and statement (c) [∵ 1 + A -I]. Conclusion I, III and IV do not follow because statement (a) + statement (b) gives no conclusion. But the conclusion I and IV make a complementary pair IE-type. Hence, either of the two follows.
2. (d) Conclusion IV follows from statement (b) and statement (c). [∵I+A - 1], Conclusion 1 follows from conversion of conclusion IV. Statement (a) and statement (b) give no conclusion [∵ A + I = no conclusion]. Therefore, conclusion II and III do not follow.
3. (d) Only II follows. Statement (a) + statement (b) gives no conclusion [∵E + E = no conclusion]. Hence, I does not follow. Note that I does not follow from statement (c) either. Conclusion II follows from conversion of statement (b). Conclusion III does not follow from statement (a). Conclusion IV does not follow from statement (c).
4. (d) No door is a lock → on conversion → No lock is a door → implication → Some locks are not doors. Hence, II follows and 1 does not. No door is a lock + Some locks are keys = Some keys are not doors. Hence, III follows. IV does not follow from the first statement.
5. (c) First + second statement gives conclusion I. Conclusion II follows as conversion of conclusion I, Third statement, on conversion, gives conclusion IV but not conclusion III.
6. (d) I does not follow from the last statement, on conversion. II does not follow from the second statement, on conversion. III does not follow from the first statement, on conversion. 1st + 2nd + 3rd statement gives conclusion IV.

OR

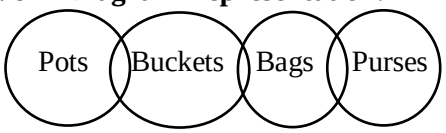
Venn-Diagram Representation:



Conclusions: I. False
II. False
III. False
IV. True

7. (b) As all the statements are I-type, no conclusion possible from their combinations. Hence, none follows.

Venn-Diagram Representation:



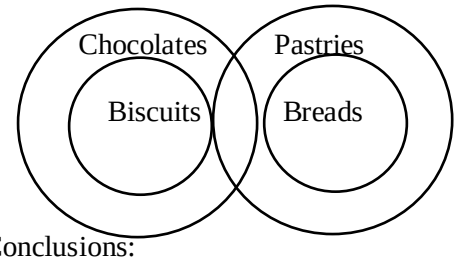
Conclusions:

I. False
II. False
III. False
IV. False

8. (c) Some chocolates are breads + All breads are pastries ⇒ Some chocolates are pastries → on conversion →Some pastries are chocolates. Hence, II follows. 1st statement + Some chocolates are pastries gives no conclusion. Hence, I and III do not follow but they make a complementary (I- O) pair. Hence, either I or III follows. IV does not follow from the last statement

OR

Venn-Diagram Representation:



Conclusions:

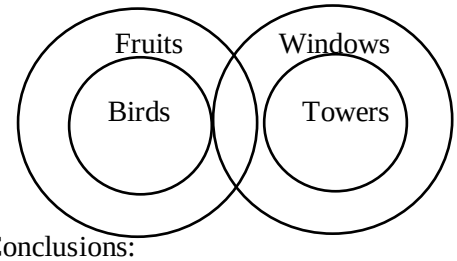
I False
II True
III False
IV False

—Either (Complementary pair) I-O type

9. (d) Some fruits are towers (I) + All towers are windows (A)⇒ Some fruits are windows (I) (∵I+A = I). Now, conversion of "Some fruits are windows" gives conclusion III.

OR

Venn-Diagram Representation:



Conclusions:

I – False
II – False
III – True
IV – False

10. (a) Conclusions I and III make a complementary pair. Hence, either I or III follows. Conclusion II does not follow since "No train is a dog" (E) + "All dogs are parrots" (A) gives the conclusion "Some parrots are not trains [∵ E + AO ⋆]. Conclusion IV does not follow because "Some buses are trains" + "No train is a dog" gives the conclusion "Some buses are not dogs" [∵I + E = O].

11. (d) "Some flowers are boxes" (1) + "All boxes are tigers" (A) gives conclusion "Some flowers are tigers" (I) [∵I + A = I], On conversion, we get "some tigers are flowers". Hence, conclusion II follows but IV does not follow. "Some cups are flowers" (I) + "Some flowers are boxes" (I) gives no conclusion [∵I + 1= No conclusion). Hence, III does not follow. No relation is given between tigers and cups and hence, I does not follow.

12. (d) Only II and IV follows:

13. (d) 1st + 2nd statements gives conclusion III. 2nd + 3rd statements gives conclusion-IV. I and II do not follow.

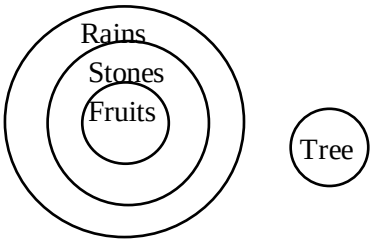
14. (a) Statement (a) + Statement (b) gives no conclusion[∴ I + I = no conclusion]. Hence, conclusion II does not follow. Conclusions I and IV do not follow because no conclusion can be obtained regarding candles and trains. Statement (b) + Statement (c) gives no conclusion

[∴ I + I = no conclusion). Hence, conclusion III does not follow.

15. (b) Statement (a) + Statement (b) gives the conclusion "Some stones are not trees." [∵E + A = O⋆). Hence, conclusion I does not follow. Statement (b) + Statement (c) gives the conclusion "All fruits are rains". On conversions it gives conclusion III. Now, statement (a) + "All fruits are rains" gives the conclusion "Some rains are not trees" [∵E + A = O★]. Conclusions II and IV do not follow but these two conclusions make a complementary pair (E1-type). Hence, either conclusion II or conclusion IV follows.

OR

Venn-Diagram Representation:



Conclusions:

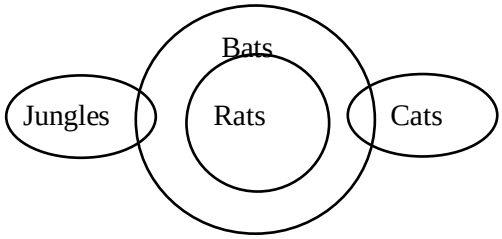
I False
II False
III True
IV False
— Either (Complementary pair) (EI- type)

16. (d) Statement (a) + Statement (b) gives no conclusion (∵ A + 1 = no conclusion]. Hence, conclusion 1 does not follow. Statement (b) + Statement (c) gives the conclusion "Some stars are hills" [∵ I + A = I], Conversion of "Some stars are hills" gives conclusion II. Conclusion III does not follow because statement (a) + statement (b) gives no conclusion. Conclusion IV follows from statement (a).

17. Statement (a) + Statement (b) gives the conclusion "Some cats are bats" [∵ I + A = I]. "Some cats are bats" → on conversion → "Some bats are cats". Hence, conclusion II follows. Conclusion III does not follow because statement (b) + Statement (c) gives no conclusion [∵ A + I = no conclusion]. Conclusions I and IV do not follow because statement (b) + statement (c) gives no conclusions. But conclusions I and IV make a complementary pair (1E-type). Hence, either I or II follows.

OR

Venn-Diagram Representation:



Conclusions:

I False
II True
III False
IV False
— Either (Complementary pair) (IE- type)

18. Only I and III follow. Conclusions I and III follow statement (a) and statement (c) respectively (conversion). But conclusions II and IV do not follow because A-type statement can't be converted into A- type.

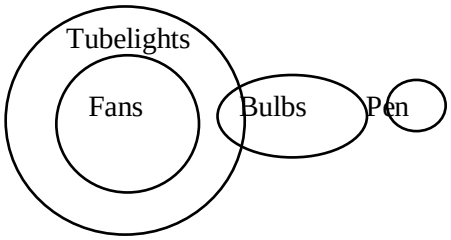
19. (a) Some boxes are balls + No ball is a bat (conversion of 2nd statement) =

Some boxes are not bats [I + E = O]. Hence, I follows and III does not. Now, some spectacles are boxes and conclusion I give no conclusion. Hence II and IV do not follow.

20. (c) Some bulbs are fans + All fans are tubelights = Some bulbs are tubelights... (a) [I + A = I). Now, statement (b) + (a) gives: Some tubelights are not pens. Hence, conclusions 1 and II can't be established. Ill follows from first statement on conversion. But IV does not But I and II make a complementary pair [I - Epair]. Hence, either I or II follows.

OR

Venn-Diagram Representation

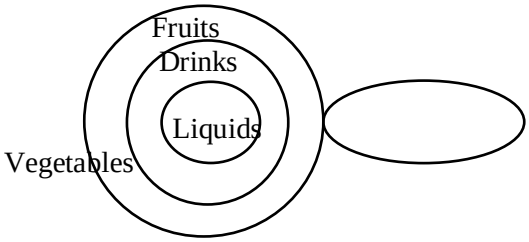


Conclusions:

I False
II True
III False
IV False

—Either (Complementary pair) (IE- pair)

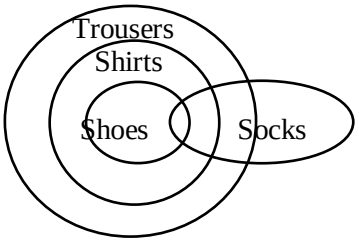
21. (b)



Conclusions:

I False
II True
III True
IV False

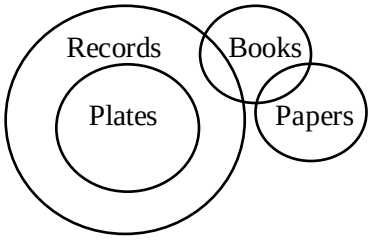
22. (d)



Conclusions:

I True
II False
III True
IV False

23. (d) Only IV follows from statement (c) on conversion.



Conclusions:-

I False
II False
III False
IV True. Conversion of III Statement

24. (b) III follows from the first statement, on conversion. 1st statement + 2nd statement gives: Some bricks are pens...(A) → on conversion → Some pens are bricks. Hence II follows. (A) + 3rd statement gives conclusion IV, which on conversion, give conclusion I.

25. (c) III follows from the last statement, on conversion. 1st statement + 2nd

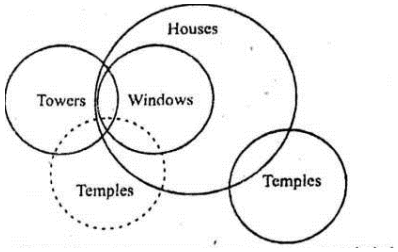
statement gives: No cup is water ... (A). Hence IV does not follow from A, on conversion. (A) + last statement gives: Some clothes are not cups. Hence, I does not follow. 2nd statement + last statement gives: Some clothes are not tables. Hence II does not follow.

26. (d) As all the statements are I-type, hence no conclusion follows from their combinations. But I and IV make a complementary pair, hence either I or IV follows.

27. (d) 1st statement + 2nd statement gives: All trucks are cars ... (A). Hence II does not follow, on conversion. (A) + last statement gives conclusion III. III, on conversion, gives: Some trains are trucks. Hence I does not follow. The last two statements gives conclusion IV.

28. (a) 1st + 2nd statement gives no conclusion. Hence I does not follow. 2nd + last statement gives: Some chairs are not fruits. Hence II does not follow. Ill does not follow from combining all. IV does not follow from the last statement, on conversion.

29. (b)

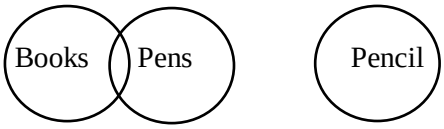


By looking at above venn diagram, we can concluded that only conclusions II follow.

30. (a) Conclusion I is the conversion of first statement, hence1 follows. But II does not follow because A + A = A i.e. All leaders are good orators but not vice versa.

31. (a) A + A = A; i.e. All terrorists are human.

32. (b) I does not follow. But II follows because it is conversion of the first statement.

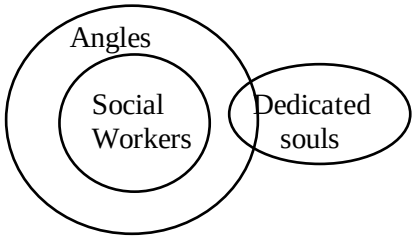


Conclusions:

I. False

II. False

33. (d)

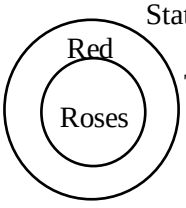


Conclusions:

I False
II False
] –Either (Complementary pair) (I-E- pair)

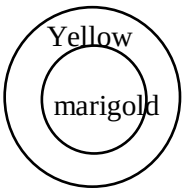
34. (c) Uncertain

Statement I:



True (√)

Statement II:



True (√)