

# CH 1 SYLLOGISM

## ANSWERS AND EXPLANATIONS

### EXERCISE 1

1. (a) Some hens are fish. (I-Type)



All fish are birds. (A - Type)

$I + A \Rightarrow I$  - type)

"Some hens are birds."

This is Conclusion I.

2. (c) Both the Premises are Particular Affirmative. No Conclusion follows from Particular Premises. Conclusions I and II form Complementary Pair. Therefore, either Conclusion I or II follows.

3. (e) All bats are boys. (A-Type)



All boy are gloves. (A-Type)

$A + A \Rightarrow A$  type Conclusion

"All bats are gloves."

This is Conclusion II.

Conclusion I is Converse of this Conclusion.

4. (b) Some doctors are nurses. (I-Type)



All nurses are patients. (A-Type)

$I + A \Rightarrow I$  -type Conclusion

"Some doctors are patients"

Conclusion II is Converse of this Conclusion.

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

6. (a)  $A + A = A$ ; i.e. All terrorists are human.  
7. (b) I does not follow. But II follows because it is conversion of the first statement.  
8. (a) Statements : All graduates are chairs.



All chairs are tables

Conclusion : All graduates are tables.

( $A + A = A$  Type)

Hence I follows.

Conclusion : Some tables are graduates.

(Conversion)

Hence II does not follows.

9. (e) Statements : Every minister is a student.



Every student is inexperienced.

Conclusion : Every minister is inexperienced.

( $A + A = A$  type)

Hence I follows.

Statement : Every student is inexperienced.

Conclusion : Some inexperienced are students. (Conversion)

Hence II follows.

10. (b) Statement : Some teachers are followers.

Conclusion : Some followers are teachers.

(Conversion)

Hence, II follows.

Since both given statements are I-type, therefore, given Conclusion I does not follow.

11. (d) Statement : Some dedicated souls are angles.

Conclusion : Some angels are dedicated souls.

(Conversion)



- Statement : All social workers are angels  
 Conclusion : Some social workers are angels.  
 (Implication)  
 Some angels are social workers.  
 (Conversion)  
 No mediate inference follows.  
 Hence, no given Conclusions follows.
12. (c) Conversion of statement (b) + Statement (a) gives conclusion III [  $\therefore I + A = I$  ].  
 Hence, III follows but conclusions I and II do not follow.
13. (e) Statement (a) + Statement (b) gives the conclusion "All rats are cars" [  $\therefore A + A = A$  ]  $\Rightarrow$  "Some cars are rats". Hence neither conclusion II nor conclusion III follows. Conclusion I does not follow from statement I since conversion of statement (a) will give the conclusion "Some bells are rats".
14. (e) Conversion of statement (a) gives conclusion II. Hence, conclusion II follows. Again statement (a) + statement (b) gives conclusion III [  $\therefore A + E = E$  ]. Hence, conclusion III follows. Conclusion I follows from conversion of conclusion III. Hence, All follow.
15. (d) Conclusion II follows from conversion of statement (a). Now, statement (b) + conversion of statement (a) gives no conclusion [  $\therefore A + I = \text{no conclusion}$  ]. Hence, conclusions I and III do not follow. But conclusion I and conclusion III make an IE-type complementary pair. Hence either conclusion I or conclusion III follows.
16. (d) Statement (a) + Statement (b) gives no conclusion [  $\therefore I + I = \text{no conclusion}$  ]. Therefore, conclusion I does not follow. Again conversion of statement (b) gives the conclusion "Some rods are lamps". Hence, conclusions II and III do not follow.
17. (b) Statement (a) + Statement (b) gives no conclusion. [  $\therefore A + I = \text{No conclusion}$  ].  
 Hence, conclusion I and conclusion III do not follow independently. But, conclusion I and conclusion III make a complementary pair (IE type). Hence, either I or III follows. Conclusion II does not follow because "All tables are boxes" gives only the following conclusions:
1. Some tables are boxes.  
 2. Some boxes are tables.
18. (e) Statement (a) + Statement (b) gives the conclusion "Some goats are not rooms" [  $\therefore E + A = 0^*$  ]. Thus, conclusions I and II do not follow. Conclusion III follows from statement (b).
19. (d) Statement (a) + Statement (b) gives no conclusion [  $\therefore I + I = \text{No conclusion}$  ]. Hence, conclusion II does not follow. Conclusion I follows from conversion of statement (a). On a similar basis, conclusion III also follows.
20. (c) Conversion of Statement (a) gives the conclusion "Some lions are men". Hence, conclusion II follows [say statement (c)]. Now, Statement (b) + Statement (c) gives no conclusion [  $\therefore A + I = \text{No conclusion}$  ]. Therefore, conclusion I does not follow. Conclusion III does not follow because an A-type statement gives I-type conclusions.
21. (a) Conclusion III follows because Statement (a) + Statement (b) gives the conclusion "All birds are trees" [  $\therefore A + A = A$  ]. "All birds are trees" implies "Some trees are birds". Hence, conclusion I follows. Conclusion II follows from statement (a).

## EXERCISE 2

1. (d) All shoes are pens. (A-type)  
 $\swarrow$   
 Some pens are razors. (I-type)  
 $A + I \Rightarrow \text{No Conclusion}$
2. (c) All the three Premises are Particular Affirmative (I-type).  
 No Conclusion follows from Particular Premises.  
 Conclusion I and II from Complementary Pair.  
 Therefore, either I or II follows
3. (e) All brushes are chocolates. (A-type)  
 $\swarrow$   
 All chocolates are mirrors. (A-type)



