Syllogism Question PDF

Given below are a few examples of types of syllogism questions asked in bank and government exams.

Example 1:
Major premise: All Actors are right-handed.
Minor premise: All right-handed are Artists.

The conclusion is: Some Artists are Actors.
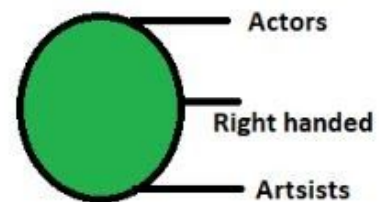
A. Correct
B. Incorrect

Solution:

Case 1:
The Venn diagram of actors is inside right-handed and which in turn is inside the Venn of artists. According to the diagram, the portion of the red Venn diagram overlapping with green indicates that some actors artist are actors. Hence the conclusion is correct according to this diagram, but can not be concluded as the final answer until the second case is checked.

Case 2: Since all the Venn diagrams are overlapping with each other, according to the diagram all the artists are actors or all the actors are artists. Hence the conclusion is " some artists are actors" is wrong. Since the conclusion is wrong according to the second Venn diagram. The correct answer will be option B incorrect.
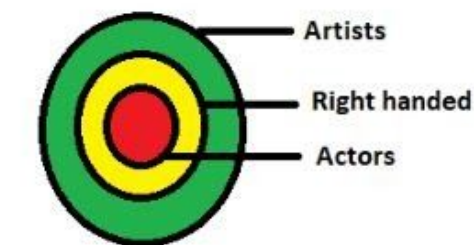
Case 1: Non overlapping   Case 2: Overlapping

Instructions: Observe the following premises and select if the conclusion is Correct/ Incorrect

Example 2:
Major premise: No pencil is cloth.

Minor premise: No sweaters are pencils.

The conclusion is: All sweaters are cloth
A. Correct
B. Incorrect

Solution:

In this case, as it can be seen there are three possible scenarios.
Since " No pencil is cloth" The diagram of pencil and cloth do not have any overlapping and hence they are just touching each other(the diagram can also be represented by keeping them apart, but that will not affect the logical conclusion). According to the minor premise, since no sweaters are pencils the diagrams of sweaters and pencil do not overlap.

Case 1: If no sweaters are pencil, one possibility is there can be no sweater which is no cloth also.

Case 2: There can be a sweater which is also cloth. Hence a part of sweater and cloth overlap with each other.

Case 3; All clothes can be a sweater, as there is not any promise which says this combination is not possible.
The conclusion "all sweaters are cloths" is correct only according to 3rd case but not with respect to the 1st and 2nd case. Hence the conclusion is incorrect.
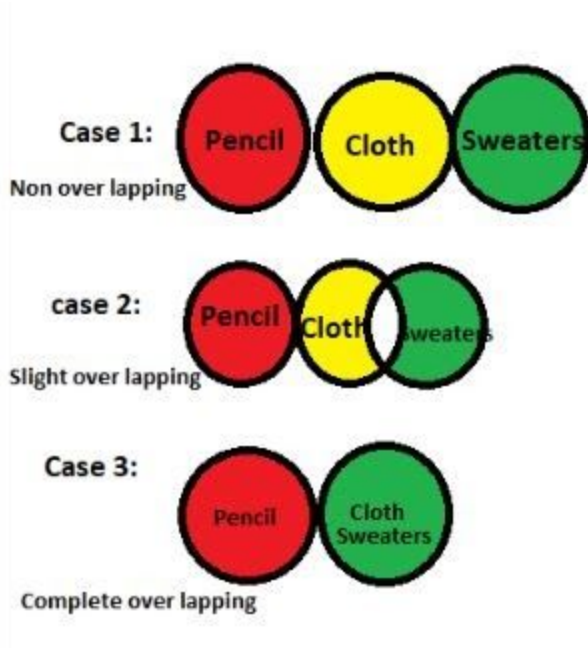
Type 2 questions of syllogisms. Observe the following premises and select the correct conclusion.
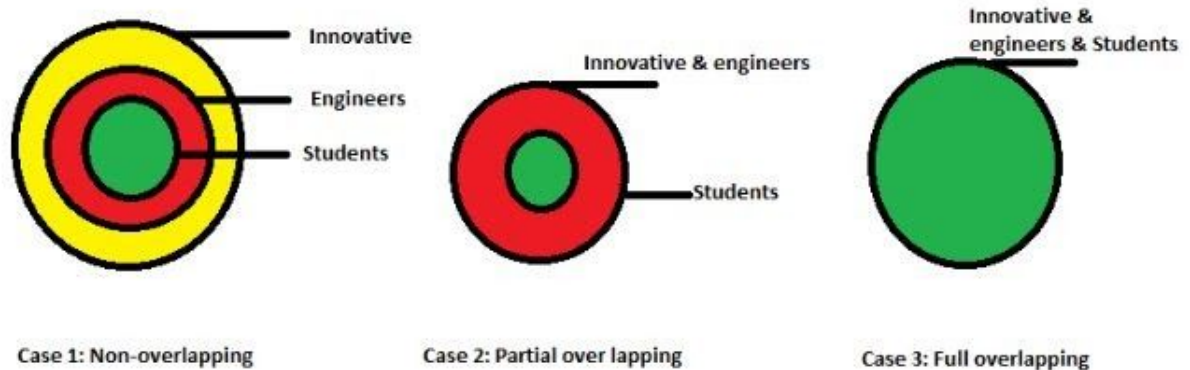
Example 3:
Major premise: All engineers are innovative.
Minor premise: All students are engineers.

Conclusions:
1. All innovative are students
2. All students are innovative
3. No innovative are students
4. No engineers are students

Solution:

Case 1: Non-overlapping   Case 2: Partial over lapping   Case 3: Full overlapping

Explanation:

The first conclusion " All innovative are students" is wrong according to case 1 and case 2. The sceond conclusion is correct in all three cases. Conclusion 3 and 4 are not correct according to all the three cases. Hence the correct answer is option B.
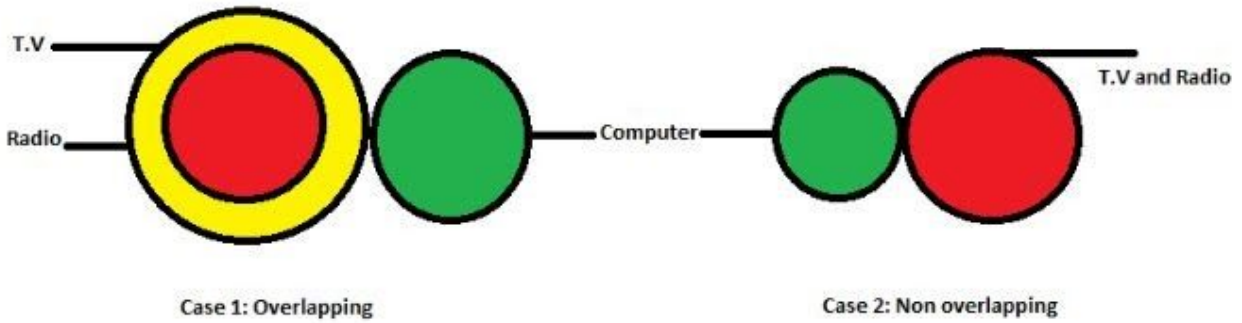
Example 4:
Major premise:No computers are televisions.
Minor premise:All radios are televisions.

Conclusions:
1. All radios are computers
2. No radios are computers
3. All computers are radio
4. None of the above

Case 1: Overlapping   Case 2: Non overlapping

Explanation:
The conclusion " All radios are computers" is not true according to both the Venn diagrams. The second conclusion is true according to both the diagrams as both the Venn diagrams do not overlap with each other anywhere. The conclusion " All computers are radio" is also wrong according to both the diagrams. Hence the correct answer is option B.

**Type 3 questions of syllogisms.**

Example 5:
Statements:
1. All Stones are Hammers
2. No Hammer is Ring
3. Some rings are doors
4. All doors are windows

Conclusions:
1. Some hammers are stones
2. Some windows are rings
3. Only (1) conclusion follows
4. Only (2) conclusion follows
5. Either(1) or (2) follows
6. Neither(1) nor (2) follows
7. Both (1) and (2) follow

Solution:

Case 1
Case 2
Case 3
Case 4
Case 5
Case 6
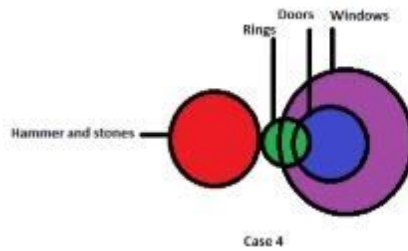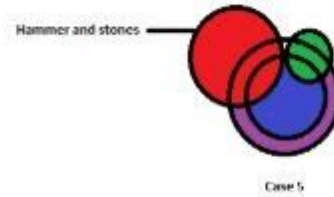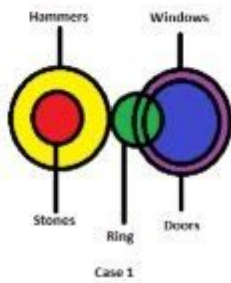
Explanation:

The first conclusion "Some hammers are stones" is not true according to case 5, where all the shammers are stones. The second conclusion" Some windows are rings " is true in all the three cases. Hence the correct answer option is B.
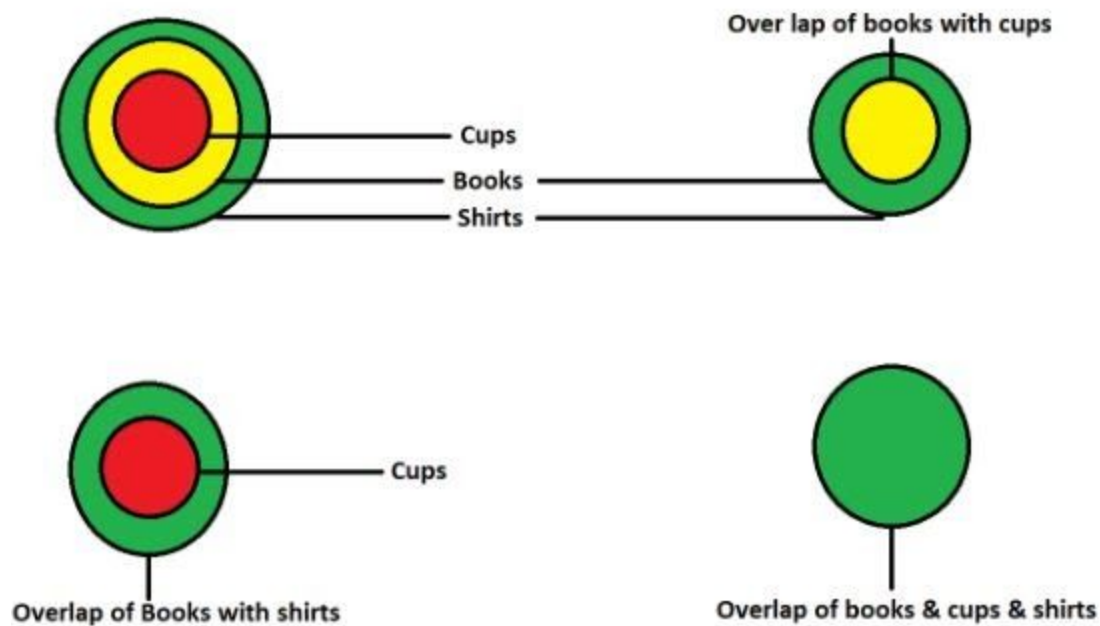
Example 6:
Statements:
All cups are books.
All books are shirts.

Conclusions:
i. Some cups are not shirts.
ii. Some shirts are cups.

1. Only (1) conclusion follows
2. Only (2) conclusion follows
3. Either(1) or (2) follows
4. Neither(1) nor (2) follows
5. Both (1) and (2) follow

Solution:

Over lap of books with cups

Cups

Books

Shirts

Overlap of Books with shirts

Cups

Overlap of books & cups & shirts

Explanation:

Four combinations of Venn diagrams are possible according to the two premises. The first conclusion "some cups are not shirts" is not true in all the three cases, as all the cups are shirts in every case. The second conclusion " some shorts are cups" is true only in the first three cases, whereas in the last case it's not true(all the shirts are cups). Hence neither conclusion 1 nor 2 is correct. Hence the correct answer is option D.