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SNS COLLEGE OF TECHNOLOGY

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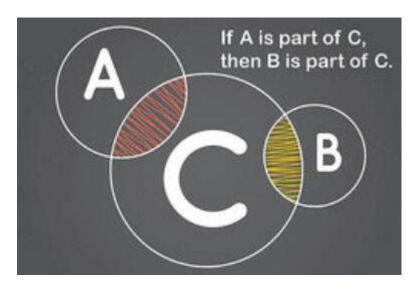
DEPARTMENT OF MECHANICAL ENGINEERING

QUANTITATIVE ABILITY III

syllogisms

Syllogism

Syllogism is a form of deductive reasoning where you arrive at a specific conclusion by examining two other premises or ideas. Syllogism derives from the Greek word *syllogismos*, meaning conclusion or inference



Some syllogisms contain three components:

- Major Premise
- Minor Premise
- Conclusion

For example, all roses are flowers (major premise). This is a rose (minor premise). Therefore, I am holding a flower (conclusion).

Examples

Two statements are given below followed by two conclusions numbered as I and II respectively. Consider the given statements as true even if they seem to be not. After reading all the conclusions conform which of the given conclusions logically follows, disregarding commonly known facts.

Q 1 - Statements:

- I. Some pigs are bachelors.
- II. All bachelors are blessed.

Conclusions:

- I. Some pigs are blessed.
- II. At least some blessed are bachelors.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: E

Explanation

Some pigs are bachelors (I) + all bachelors are blessed (A) = I + A = I = some pigs are blessed. Hence conclusion I follows. Again all bachelors are blessed - conversion - some blessed are bachelors. Hence conclusion II also follows.

Q 2 - Statements:

- I. Some pictures are beds.
- II. All beds are trees.

Conclusions:

- I. Some pictures are trees.
- II. At least some trees are beds.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: E

Explanation

Some pictures are beds (I) + all beds are trees (A) = I + A = I = some pictures are trees. Hence conclusion I follows. Again all beds are trees - conversion - some trees are beds. Hence conclusion II also follows.

Q 3 - Statements:

- I. Some ninjas are dogs.
- II. No dogs is a liar.

Conclusions:

- I. No ninja is a liar.
- II. At least some ninjas are liars.

- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: C

Explanation

Some ninjas are dogs (I) + no dog is a liar (E) = I + E = O = some ninjas are not liars. But conclusion I and II make a complementary pair (I - E). Hence either I or II follows. So option C is correct.

Q 4 - Statements:

- I. Some necklace are diagrams.
- II. No diagram is a lollipop.

Conclusions:

- I. No necklace is a lollipop.
- II. At least some necklaces are letters.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: C

Explanation

Some necklaces are diagrams (I) + no diagram is a lollipop (E) = I + E = O = some necklace are not lollipop. But conclusion I and II make a complementary pair (I - E). Hence either I or II follows. So option C.

Q 5 - Statements:

- I. Some mangos are brinjals.
- II. Some carrots are brinjals.

Conclusions:

- I. All mangos are carrots.
- II. At least some brinjals are not carrots.
- A If only conclusion I follows.
- B If only conclusion II follows.

- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: D

Explanation

Some mangos are brinjals (I) + (some carrots are brinjals (I) - conversion -) some brinjals are carrots (I) = I + I = no conclusion. Hence conclusion I and II do not follow.

Q 6 - Statements:

- I. Some rifles are bombs.
- II. Some cigars are bombs.

Conclusions:

- I. All rifles are cigars.
- II. At least some bombs are not cigars.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: D

Explanation

Some rifles are bombs (I) + (some cigars are bombs (I) - conversion -) some bombs are cigars (I) = I + I = no conclusion. Hence conclusion I and II do not follow.

Q 7 - Statements:

- I. No cake is a ginger.
- II. Some gingers are garlic.

Conclusions:

- I. No cake is a garlic.
- II. Some garlics are not cakes.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: B

Explanation

No cake is a ginger (E) + some gingers are garlics (I) = E + I = O * = some garlics are not cakes. Hence conclusion II only follows, but I does not follow.

Q 8 - Statements:

- I. No cash is a flash.
- II. Some flashes are bears.

Conclusions:

- I. No cash is a bear.
- II. Some bears are not cash.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I nor II follows.
- E If both conclusion I and II follows.

Answer: B

Explanation

No cash is a flash (E) + some flashes are bears (I) = E + I = O * = some bears are not cash. Hence conclusion II only follows, but conclusion I does not follow.

Q 9 - Statements:

- I. No pizza is a burger.
- II. No chautney is a burger.

Conclusions:

- I. Some pizzas are not chautneys.
- II. Some burgers are chautneys.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I or II follows.
- E If both conclusion I and II follows.

Answer: D

Explanation

No pizza is a burger (E) + (no chautney is burger-conversion -) no burger is a chautney (E) = E + E = no conclusion. Hence conclusion I does not follow. Again, no chautney is a burger - conversion - no burger is a chautney. Hence conclusion II also does not follow.

- Q 10 Statements:
- I. All fingers are levers.
- II. Some levers are fringe.

Conclusions:

- I. Some fringe are levers.
- II. No fingers is a fringe.
- A If only conclusion I follows.
- B If only conclusion II follows.
- C If either conclusion I or II follows.
- D If neither conclusion I or II follows.
- E If both conclusion I and II follows.

Answer: A

Explanation

All fingers are levers (A) + some levers are fringe (I) = A + I = no conclusion. Hence conclusion II does not follow. Again, some levers are fringe (I) - conversion - some fringe are levers (I). Hence conclusion I follows.