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### What is a syllogism?

» A syllogism is a deductive argument comprising three categorical propositions: a major premise, a minor premise and the conclusion. Categorical propositions have four standard forms:

- » A = All S are P
- » E = No S are P
- » I = Some S are P
- » O = Some S are not P

### **BASIC CONCEPT**

**STATEMENT**:- Key words

**SOME** 

**SOME NOT** 

ALL

**Positive Statements** 

NO

**Negative Statements** 

### **QUANTIFIER**:-

- (i) UNIVERSEL:- All, No,....etc.
- (ii) PARTICULAR :- Some, Few, At least, .....etc.

## **BASIC CONCEPT**

<u>CONCLUSION</u>:- Key words.

At least some :- Definite

Can be :- Possibility

Can never be :- Definite

### TYPE OF STATEMENTS

Four Type :-(i) All A's are B's (ii) No A's are B's (iii) Some A's are B's

(iv) Some A's are not B's

## All A's are B's

All information about A

**Basic Diagram:** 

(i) A :- All possibility Zero.

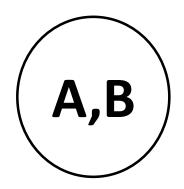


Some information about B

Possible Diagram:-

(i) Some B are not A is a possibility.

(ii) All B can be A.

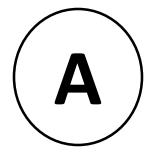


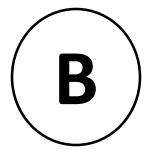
## No A's are B's

All information about A

**Basic Diagram** 

- (i) No A's are B's
- (ii) No B's are A's





All information about B

- (i) Some A are B being a possibility. [X]
- (ii) Some B are A being a possibility. [X]

# Some A's are B's

Meaning of Some :- Min = 1

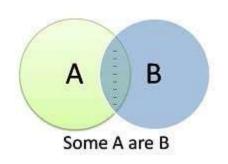
 $\mathsf{Max} = ( \to \infty )$ 

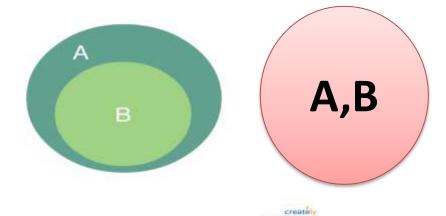
**Basic Diagram:** 

- (i) Some A are B. [T]
- (ii) Some B are A. [T]

Possible Diagram:-

- (i) All A are B being possibility. [T]
- (ii) No A are B [ F ]

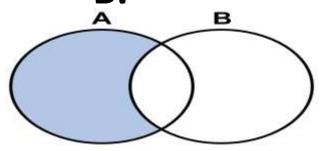


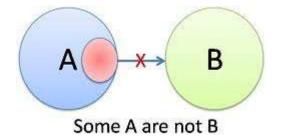


### Some A's are not B's

### **Basic Diagram**

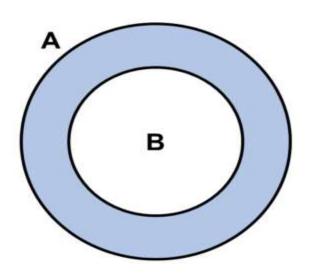
(i) Some A are not B.





### **Possible Diagram**

(i) Some A are not B being a possibility.



# QUESTION

### **STATEMENTS:-**

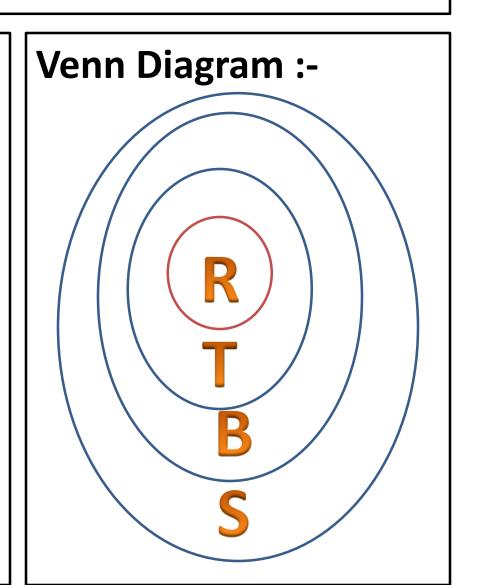
All road are Truck.

All Truck are Bus.

All Bus are Ship.

#### **CONCLUSION:-**

- (i) Some Truck are Ship.
- (ii) All bus are Road.
- (iii) Some Road are Ship.
- (iv) No Ship are Bus.



# QUESTION

### **STATEMENTS:-**

All students are Engineer.

All Engineer are jobless.

All jobless are advisor.

### **CONCLUSION:-**

- (i) Some jobless are students.
- (ii) All advisor are students.
- (iii) No advisor are students.
- (iv) Some engineer are not students.

#### **STATEMENTS:-**

All students are Engineer.

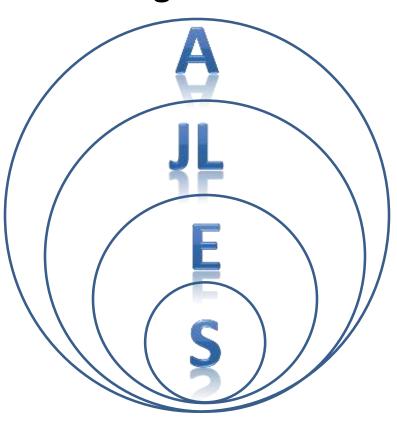
All Engineer are jobless.

All jobless are advisor.

#### **CONCLUSION:-**

- (i) Some jobless are students.[T]
- (ii) All advisor are students. [F]
- (iii) No advisor are students. [F]

### **Venn Diagram:-**



# QUESTION

### **STATEMENTS:-**

- (i) Some Pakistanis are honest.
- (ii) All honest are terrorist.

### **CONCLUSION:-**

- (i) Some Pakistanis are not terrorist.
- (ii) Some terrorist are not Pakistanis.

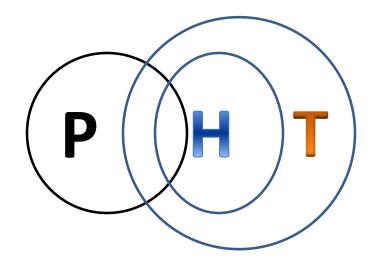
### **STATEMENTS:-**

- (i) Some Pakistanis are honest.
- (ii) All honest are terrorist.

#### **CONCLUSION:-**

- (i) Some Pakistanis are not terrorist. [F]
- (ii) Some terrorist are not Pakistanis. [F]

### **Venn Diagram:-**



# QUESTION

**STATEMENTS:-**

No boys is hardworking.

No intelligent is boys.

**CONCLUSION:-**

- (i) Some hardworking are intelligent.
- (ii) Some intelligent are hard working.

**STATEMENTS:-**

No boys is hardworking.

No intelligent is boys.

#### **CONCLUSION:-**

- (i) Some hardworking are intelligent. [F]
- (ii) Some intelligent are hard working. [F]

Statement are Negative.

**Conclusion are Positive.** 

# QUESTION

#### **STATEMENTS:-**

All Radio are Tape.

All Tape are Road.

All Road are Bus.

All Car are Bus.

#### **CONCLUSION:-**

- (i) All Road are Car.
- (ii) All Tape are Bus.
- (iii) No Bus are Road.
- (iv) Some Bus are Radio is a possibility.

#### **STATEMENTS:-**

All Radio are Tape.

All Tape are Road.

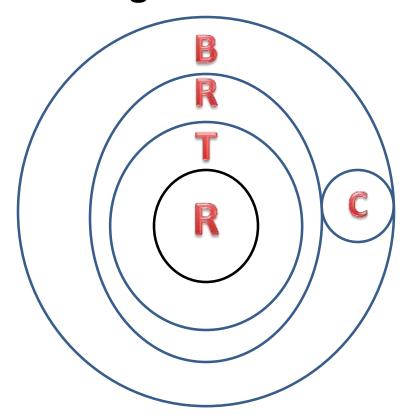
All Road are Bus.

All Car are Bus.

#### **CONCLUSION:-**

- (i) All Road are Car. [F]
- (ii) All Tape are Bus. [T]
- (iii) No Bus are Road. [F]
- (iv) Some Bus are Radio is a possibility. [F]

### Venn Diagram:-



# QUESTION

**STATEMENTS:-**

All Forces are Energy.

All Energy are Power.

No Power is Heat.

**CONCLUSION:-**

- (i) No Heat is Force.
- (ii) No Energy is Heat.

**STATEMENTS:-**

All Forces are Energy.

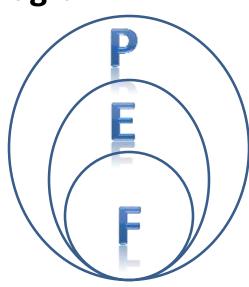
All Energy are Power.

No Power is Heat.

**CONCLUSION:-**

- (i) No Heat is Force. [T]
- (ii) No Energy is Heat. [T]

**Venn Diagram:** 





# QUESTION

**STATEMENTS:-**

All Forces are Energy.

All Energy are Power.

No Power is Heat.

**CONCLUSION:-**

- (i) No Heat is Force.
- (ii) No Energy is Heat.

**STATEMENTS:-**

All Forces are Energy.

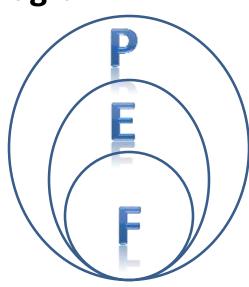
All Energy are Power.

No Power is Heat.

**CONCLUSION:-**

- (i) No Heat is Force. [T]
- (ii) No Energy is Heat. [T]

**Venn Diagram:** 





## **GATE-2014**

### Read the statement:

All women are entrepreneurs.

Some women are doctors.

Which of the following conclusions can be logically inferred from the above statements?

- (a) All women are doctors
- (b) All doctors are entrepreneurs
- (c) All entrepreneurs are women
- (d) Some entrepreneurs are doctors

#### Read the statement:

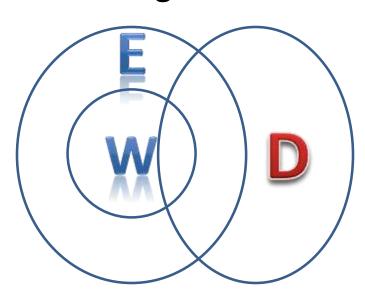
All women are entrepreneurs.

Some women are doctors.

Which of the following conclusions can be logically inferred from the above statements?

- (a) All women are doctors
- (b) All doctors are entrepreneurs
- (c) All entrepreneurs are women
- (d) Some entrepreneurs are doctors [T]

Venn Diagram :-



## **GATE-2014**

Q:- Given below are two statements followed by two conclusions. Assuming these statements to be true, decide which one logically follows.

#### Statement:

- i. All film stars are playback singers.
- ii. All film directors are film stars.

- i. All film directors are layback singers.
- ii. Some film stars are film directors
- (a) Only conclusion I follow
- (b) Only conclusion II follows
- (c) Neither conclusion I nor Ii follows
- (d) Both conclusions I and II follow

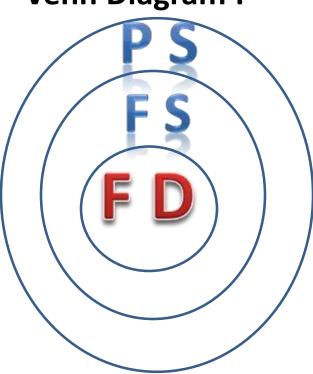
#### **Statement:**

- i. All film stars are playback singers.
- ii. All film directors are film stars.

#### **Conclusions**

- i. All film directors are playback singers.
- ii. Some film stars are film directors
- (a) Only conclusion I follow
- (b) Only conclusion II follows
- (c) Neither conclusion I nor Ii follows
- (d) Both conclusions I and II follow [T]

### Venn Diagram:-



## **GATE-2015**

Q:- Given below are two statements followed by two conclusions. Assuming these statements to be true, decide which one logically follows.

#### **Statements:**

- I. No manager is a leader
- II. All leaders are executive.

- I. No manager is a executive.
- II. All executive is a manager.
- (a) Only conclusion I follow
- (b) Only conclusion II follows.
- (c) Neither conclusion I nor II follows
- (d) Both conclusion I and II follow.

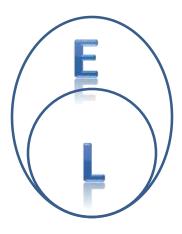
#### **Statements:**

- I. No manager is a leader
- II. All leaders are executive.

#### **Conclusions:**

- I. No manager is a executive.
- II. All executive is a manager.
- (a) Only conclusion I follow
- (b) Only conclusion II follows.
- (c) Neither conclusion I nor II follows [T]
- (d) Both conclusion I and II follow.

Venn Diagram:-





## **GATE-2015**

### **Statements:**

- I. Only Circle are Rectangle.
- II. No Circle is Square.
- III. All Square are Chart.

- I. All Chart can be Square.
- II. Some Circle are not Rectangle is a possibility.
- III. Some Square can be Chart.

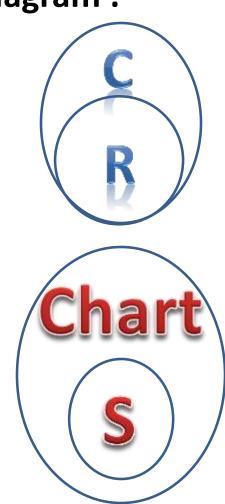
### **Statements:**

- I. Only Circle are Rectangle.
- (All Rectangle are Circle)
- II. No Circle is Square.
- III. All Square are Chart.

#### **Conclusions:**

- I. All Chart can be Square. [T]
- II. Some Square can be Chart.
- [ F ]

**Venn Diagram:** 



## SBI-PO

### **Statements:**

- I. Some Watch are Tie.
- II. Some Tie are Shirt.
- III. No Watch is Belt.

- I. Some Watch are Shirt is a possibility.
- II. Some Watch are not Shirt is a possibility.

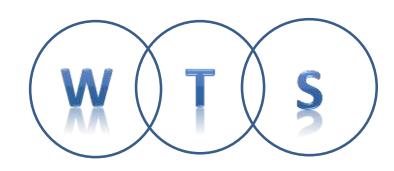
### **Statements:**

- I. Some Watch are Tie.
- II. Some Tie are Shirt.
- III. No Watch is Belt.

#### **Conclusions:**

- I. Some Watch are Shirt is a possibility. [T]
- II. Some Watch are not Shirt is a possibility. [T]

### Venn Diagram:-





## SBI-PO

### **Statements:**

- I. All A are B.
- II. All B are C.

- I. Some B are C is a possibility.
- II. Some A are not B is a possibility.

#### **Statements:**

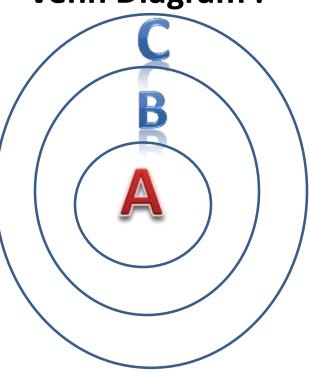
- I. All A are B.
- II. All B are C.

### **Conclusions:**

- I. Some B are C is a possibility. [F]
- II. Some A are not B is a possibility.

[F]

### **Venn Diagram:**



## INFOSYS

### **Statements:**

- (i) Some CNG are LPG.
- (ii) All LPG are Petrol.
- (iii) Some Petrol are Diesel.
- (iv) No Diesel is Fuel.

- (i) Some Petrol are CNG is a possibility.
- II. Some Fuel are not Petrol is a possibility.

#### **Statements:**

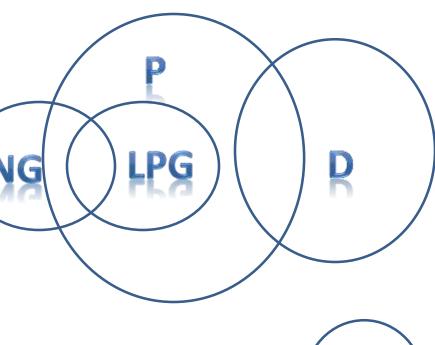
- (i) Some CNG are LPG.
- (ii) All LPG are Petrol.
- (iii) Some Petrol are Diesel.
- (iv) No Diesel is Fuel.

#### **Conclusions:**

- (i) Some Petrol are CNG is a possibility. [F]
- (ii) Some Fuel are not Petrol is a possibility. [
  T]

Note:- Fuel to Petrol no information given then all possibility correct.

**Venn Diagram:** 





## **INFOSYS**

### **Statements:**

- (i) No Water is Pani.
- (ii) Some Pani are Soil.
- (iii) All Soil are Air.
- (iv) Some Air are Sand.

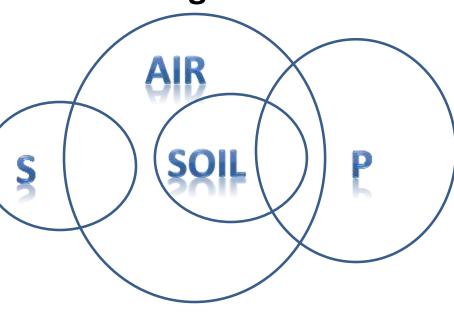
- (i) Some Soil are not Water is a possibility.
- (ii) Some Soil are not Air is a possibility.

#### **Statements:**

- (i) No Water is Pani.
- (ii) Some Pani are Soil.
- (iii) All Soil are Air.
- (iv) Some Air are Sand.

- (i) Some Soil are notWater is a possibility.[ T ]
- (ii) Some Soil are not Air is a possibility. [F]







## **INFOSYS**

### **Statements:**

- (i) No D is E.
- (ii) Some E are F.
- (iii) Some F are U.

- (i) Some F can be D.
- (ii) All F can be D is a possibility.

### **Statements:**

- (i) No D is E.
- (ii) Some E are F.
- (iii) Some F are U.

#### **Conclusions:**

- (i) Some F can be D. [T]
- (ii) All F can be D. [F]

### Venn Diagram :-

