5 Syllogism

In the previous chapter we have studied the meaning of Mediate inference. We already know that Syllogism is an mediate inference. In this chapter we will deal with Categorical Syllogism.

Categorical Syllogism in general is a deductive argument, in which the conclusion cannot assert more than what is asserted in the premises.

Let us have two categorical propositions as premises.

Some Indians are Honest.

No Indians are fools.

Which conclusion given below is the correct one, that follows from the above two premises?

1. Some Indians are fools.
2. Some honest persons are not fools.

5.1 Categorical Syllogism

The theory of Categorical Syllogism was put forward by Aristotle.

Categorical syllogism is defined as a deductive argument consisting of three categorical propositions that together contain exactly three terms, each of which occurs in only two of the constituent propositions.

According to Aristotle, Categorical Syllogism is an argument in which the middle term stands in a certain relation to the other two terms. i.e. the Subject term and the Predicate term.

It is a mediate inference in which the conclusion is deduced from two given propositions.

For example :

All fruits are ripe.

All apples are fruits.

Therefore all apples are ripe.

In the above syllogism the first two propositions are the premises and the third proposition is the conclusion.

As a mediate inference, syllogism differs from immediate inference. Unlike eductions and opposition of propositions, the conclusion of syllogism is deduced from the two premises taken jointly. It is not deducted from each of the premises, separately.

5.2 Structure of Categorical Syllogism :

In a Categorical syllogism, the constituent propositions are analysed into terms. The predicate term of the conclusion is called **the major term**. It is represented by **'P'** and the Subject term of the conclusion is called the **minor term**. It is represented by **'S'**. The term which occurs in both the premises, but not in the conclusion is called the **middle term**. It is represented by **'M'**.

The premise in which the major term occurs is called **major premise** and the premise in which the minor term occurs is called **minor premise**. Middle term relates the major and minor terms. The relation between the middle term and the other two terms is either of affirmation or negation.

Categorical Syllogism is a formal inference. Its validity does not depend on the content of, either the premise or the conclusion. Hence syllogistic argument can be represented symbolically, and its validity is decided on the basis of formal relation between the premises and the conclusion. **If the premises imply the conclusion, the inference is valid and if they do not imply the conclusion, the inference is invalid.**

The validity of Categorical syllogism does not depend on the order of the constituent propositions in an given argument. But when the syllogism is reduced to its logical form the constituent propositions are expressed in certain order as follows :

Major Premise

Minor Premise

Conclusion

5.3 Figures of Categorical Syllogism

Categorical Syllogisms differ from each other depending upon the position of the middle term in the premises. The middle term may stand as the subject or the predicate in the premises. There are three kinds of syllogism depending on the position of middle term in the premises. They are called figures. Galen has added the fourth figure to the syllogism. Thus there are four figures of syllogism. **Figures of syllogism is the form of syllogism as determined by the position of the middle term in the premises.**

The figures of Categorical syllogism are as follows :

***Figure - I* :** It is the form of Categorical syllogism in which the middle term stands as the subject of major premise and predicate of minor premise.

M P
S M

∴ S P

***Figure - II* :** It is the form of Categorical syllogism in which the middle term stands as the predicate in both the premises i.e. major and minor premise.

P M
S M

∴ S P

***Figure - III* :** It is the form of Categorical syllogism in which the middle term stands as the subject in both the premises, i.e. major and minor premise.

M P
M S

∴ S P

***Figure - IV* :** It is the form of Categorical syllogism in which the middle term stands as the predicate in the major premise and as a subject in minor premise.

P M
M S

∴ S P

5.4 Rules of Categorical Syllogism

Traditional logicians observed that one can test the validity of syllogistic arguments by applying certain rules. A Categorical syllogism whose conclusion is drawn in accordance with these rules would be valid. If the Categorical syllogism violates any of these rules, it would be invalid. A violation of any one rule is a mistake, of specific kind. So when a Categorical syllogism is invalid, it is said to commit a fallacy. It is a mistake in the form of an argument, so it is called as formal fallacy. Each of these formal fallacies has a traditional name, explained below:

Rule : 1 Rules of structure :

(1) Syllogism in general must contain three and only three propositions.

Syllogism is defined as a kind of mediate inference, consisting of two premises which together determine the truth of the conclusion. This definition shows that a syllogism has two premises and one conclusion. i.e. it has, in total only three propositions. **If the number of premises are more than two, then its ceases to be a syllogism.**

For Example :

All men are mortal.

All men are animals.

All animals are living beings.

Therefore all living beings are mortal.

The above argument has three premises and a conclusion. i.e. total four propositions so the argument is fallacious and such fallacy is called as **Argument of Sorites.**

(2) There must be three and only three terms in a Categorical syllogism

Every valid categorical syllogism must involve three terms - no more and no less. If more than three terms are involved, the Categorical syllogism is invalid. The fallacy thus committed is called the fallacy of four terms. This happens especially when one of the terms is ambiguous. i.e. it is used in two different senses. Actually speaking the word is ambiguous, not the term. A term has definite and fixed meaning. A word becomes a term when it stands as subject or predicate in a proposition. When the word becomes a term, it cannot have more than one meaning. **When the term is used ambiguously it is called the fallacy of Equivocation.**

For example :

Any bell **rings**.

Some **rings** are beautiful.

Therefore Some bells are beautiful.

In the above example the Middle term 'Rings' is ambiguous, it means 'sound' in the Major premise and 'ornament in the Minor premise.

The fallacy of equivocation may be committed with regard to any of the three terms. These are called fallacy of : (1) Ambiguous major, (2) Ambiguous middle and (3) Ambiguous minor.

Distribution of terms in Categorical propositions:

Categorical Propositions	Subject term	Predicate term
A	Distributed	Undistributed
E	Distributed	Distributed
I	Undistributed	Undistributed
O	Undistributed	Distributed

Rule : 2 Rules of Distribution of Terms :

(1) The middle term must be distributed atleast once in the premises.

The function of middle term in a Categorical syllogism is to unite the major term and the minor term. The middle term cannot perform this function, unless it is distributed atleast once in the premises. A term is distributed when it refers to the whole class and is undistributed when it refers to the part of the class.

The violation of this rule commits the fallacy of **Undistributed middle.**

For Example :

(i) All metals are **heavy**.

All stones are **heavy**.

Therefore All stones are metals.

In the above argument the middle term, i.e. 'heavy' stands as the predicate of 'A' proposition, in both the premises. So in both the premises the middle term 'heavy' is undistributed. Since the middle term is not distributed, it is possible that the part of the middle term which is related to the major premise may not be the part which is related to the minor premise. That is why the middle term is not able to perform its function of relating two terms. So the fallacy of Undistributed middle is committed.

(2) No term can be distributed in the conclusion, unless it is distributed in the premise.

When a term is distributed in the conclusion but not distributed in the premises, means that the conclusion has gone beyond the evidence in

its premises and the argument being deductive is therefore invalid. This mistake is called **the fallacy of illicit process of terms.**

There are two terms in the conclusion. These are the minor term and the major term.

Accordingly the two types of fallacies that arise are :

(1) Fallacy of illicit minor,

(2) Fallacy of illicit major.

1. Fallacy of illicit minor :

For example :

(i) No cowards are brave. (Major Premise)

All cowards are **unreliable**. (Minor Premise)

Therefore no **unreliable** people are brave.

The minor term 'unreliable' is undistributed in the minor premise since it is the predicate of 'A' proposition, but it is distributed in the conclusion, being the subject of 'E' proposition. Hence the Fallacy of illicit Minor is committed.

2. Fallacy of illicit Major :

When the major term is distributed in the conclusion but not distributed in the major premise, the fallacy of illicit major is committed.

For example :

(i) All mammals are **animals** (Major Premise)

No mammals are birds (Minor Premise)

Therefore no birds are **animals**.

In the above argument the major term 'animals is undistributed in the Major premise.' but it is distributed in the conclusion. Hence the **fallacy of illicit major is committed.**

State which formal fallacy is committed in the Syllogistic argument, given below? Why?

No men are quadruped.

Some men are tall.

Therefore no tall beings are quadruped.

_____

_____

Rule : 3 Rules of Quality :

(1) No conclusion can be drawn from two negative premises.

Any negative proposition i.e. 'E' and 'O' denies the class inclusion. It asserts that all/ some members of one class are excluded from the other class. i.e. the subject or predicate of the conclusion is wholly or partially excluded from the class of Middle term in negative premises. **Two premises asserting exclusion cannot justify the relation between the premises and the conclusion** and therefore the argument is invalid. This fallacy is as named as **fallacy of Negative premises** (or Exclusive premises.)

For example :

(i) No Lotus are roses. (Negative)

Some flowers are not roses. (Negative)

Therefore some flowers are not Lotus.

Since in the above argument conclusion is drawn from two negative premises so the rule is violated and the fallecy of Negative Premises is committed.

(2) When either of the premises is negative, the conclusion must be negative and vice versa.

In the negative propositions, one of the two classes, S or P, is wholly or partly excluded from each other. Whereas in affirmative propositions, one of the two classes S or P, is wholly or partly included in the other. Affirmative proposition

can be inferred only if the premises asserts the existence of a third class which includes the first class, that has the second class already included in it. This is possible only when both the premises are affirmative propositions.

When the above rule is violated then the **fallacy of drawing an affirmative conclusion from a negative premise is committed.**

For example :

No artists are hardworking. (Negative)

Some potters are artists

Therefore some potters are hardworking. (Affirmative)

Since in the above argument the major premise is negative, but the conclusion is affirmative so the argument is Invalid, fallacy of an affirmative conclusion from a negative premise is committed.

(3) When both the premises are affirmative then the Conclusion must be affirmative & vice versa.

For example :

All men are animals.

All animals are mortal.

Therefore all men are mortal.

State which formal fallacy is committed in the Syllogistic argument, given below? Why?

All Indians are Asians.

No Asians are American.

Therefore all Americans are Indians.

_____

_____

5.5 Aristotelian Syllogism and Indian Nyaya Syllogism

In Indian logic, Inference is called Anumana and is defined as that cognition which presupposes some other cognition. It is knowledge (mana) which arises after (anu) other knowledge. Indian logicians generally make distinction between inference for one self (Swartha) and inference for others (Parartha) i.e. inference used for demonstrating truth for other people. In inference for oneself we do not require any formal presentation of the different propositions of an inference. It is a psychological process. Inference for others is a syllogism. For Nyaya school of Indian philosophy inference consists of five propositions/members (Avayavas) and is for demonstrating truth for others, The five propositions of Nyaya syllogism are -

1. Statement of the proposition to be proved. (Pratijna)
2. Statement of the reason. (Hetu)
3. Statement of the universal proposition called Vyapti along with an example. (Udaharan)
4. Statement of the presence of the mark/ hetu i.e. reason in the case in question. (Upanaya)
5. Conclusion proved. (Nigaman)

The following is a typical example of Nyaya syllogism -

1. This hill has fire. (Pratijna)
2. Because it has smoke. (Hetu)
3. Wherever there is smoke there is fire as in the kitchen. (Udaharan)
4. This hill has smoke which is invariably associated with fire. (Upanaya)
5. Therefore this hill has fire. (Nigaman)

Like Aristotelian syllogism, the Nyaya syllogism also has three terms. The major term is called sadhya, the minor term is called paksha and the middle term is called ling or hetu. In the above example, hill is the minor term, fire is the major term and smoke is the middle term. From the presence of smoke in the hill as qualified by the knowledge that wherever there is smoke there is fire, one proceeds to infer the presence

of fire on the hill. The knowledge of universal concomitance i.e. invariable association of smoke with fire is known as vyapti.

Aristotelian syllogism and Nyaya syllogism both have three terms, however, they differ in number of propositions it contains. Aristotelian syllogism has three propositions whereas Nyaya syllogism has five propositions. According to many Indian as well as western logician this difference is a nominal difference and both the syllogisms are fundamentally similar. The difference lies more in the form than in the essence. Out of five propositions is Nyaya syllogism, two appear redundant. One can reduce the Nyaya syllogism to three propositions either by removing first two or last two propositions as given below.

(A)

1. Wherever there is smoke there is fire as in the kitchen. (Udaharan) - Major premise
2. This hill has smoke which is invariably associated with fire. (Upanaya) - Minor premise
3. Therefore this hill has fire. (Nigaman) - Conclusion

(B)

1. This hill has fire. (Pratijna) - Conclusion
2. Because it has smoke. (Hetu) - Minor premise
3. Wherever there is smoke there is fire as in the kitchen. (Udaharan) - Major premise.

The first syllogism (A) resembles the Aristotelian syllogism in the first figure.

Apart from the similarities there are also some differences between Aristotelian and Nyaya Syllogism. These are as given below.

(1) Aristotelian syllogism is deductive and formal. Nyaya syllogism is deductive - inductive and formal and material at the same time. For Nyaya thinkers deduction and induction are two aspects of the same process and cannot be separated. Inference according to Nyaya, is neither from the universal to the particular nor from the particular to the universal, but from the particular to the particular through the universal.

The udaharan or example (...as in the kitchen) in the third proposition is a unique feature of Nyaya syllogism which illustrates the truth that, the universal major premise is the result of a real induction based on the law of causation. The udaharan shows how deduction and induction are inseparable in Nyaya syllogism and also how it is both formal and material.

Udaharan is also a very strong point as Dr. Radhakrishnan says, against the argument that the Nyaya syllogism is influenced by the Greek thought. Secondly we find development of the Nyaya inference before Aristotle. The similarities between the two are due to parallel development of thought.

(2) In the Aristotelian syllogism, though connected by the middle term, the major and the minor terms stand apart in the premises. In the Nyaya syllogism all the three terms stand synthesized in the upanaya i.e. fourth proposition.

(3) Propositions of Aristotelian syllogism are nothing more than the absolutely necessary constituent parts of an inference. Propositions of Nyaya syllogism on the other hand constitute a fully reasoned out argument whose parts follow one after another in their natural sequence.

(4) The Nyaya syllogism is expository and rhetorical. It is the actual method followed in debate and therefore more useful in discovering the conclusion. The Aristotelian syllogism on the other hand is analytical and better fitted to test validity of inference.

Summary :

The theory of Categorical syllogism was put forward by Aristotle Syllogism is a mediate inferenc It contains three propositions.

In syllogistic argument the conclusion is drawn from two premises taken jontly.

Categorical syllogism has three terms. Minor term i.e. subject, Major term i.e. Predicate and the Middle term. The function of middle term is to connect major and minor term.

Syllogistic argument is a deductive infernece, and has formal validity.

Galen added fourth figure to Categorical syllogism.

Therefore there are four figures of Categorical syllogism :-

Figure - I

M P
S M

∴ S P

Figure - II

P M
S M

∴ S P

Figure - III

M P
M S

∴ S P

Figure - IV

P M
M S

∴ S P

Rules of Categorical syllogisms :

There are four rules of Categorical syllogism given by Aristotle.

Rule - 1 Rules of structure :

(1) Syllogism must contain three and only three propositions.

(2) There must be three and only three terms in a syllogism.

Rule - 2 Rules of Distribution of terms :

(1) The middle term must be distributed atleast once in the premises.

(2) No term can be distributed in the conclusion, unless it is distributed in the Premise. i.e. [Subject term or Predicate term]

Rule - 3 Rules of Quality :

(1) No conclusion can be drawn from two negative premises.

(2) When one of the premise is negative, the conclusion must be negative and vice versa.

(3) when both the premises are Affirmative the conclusion must be affirmative vice versa.

If the syllogistic argument violates any of these rules, then it commits the formal fallacy.

Seven Formal fallacies in Categorical Syllogism are as follows :

(1) Fallacy of Argument of Sorites

(2) Fallacy of Four terms. (Equivocation).

(3) Fallacy of undistributed Middle.

(4) Fallacy of illicit Minor

(5) Fallacy of illicit Major

(6) Fallacy of Negative Premises (Exclusive) Premises.

(7) Fallacy of Drawing an Affirmative conclusion from a Neagtive premise.

Aristotalian Logic and Nyaya Logic :

In Indian logic, Inference is called Anumana and is defined as that cognition which presupposes some other cognition. It is knowledge (mana) which arises after (anu) other knowledge.

For Nyaya school of Indian phiolsophy inference consists of five propositions/members (Avayavas) and is for demonstrating truth for others, The five propositions of Nyaya syllogism are -

(1) Statement of the proposition to be proved. (Pratijna)

(2) Statement of the reason. (Hetu)

(3) Statement of the universal proposition called Vyapti along with an example. (Udaharan)

(4) Statement of the presence of the mark/hetu i.e. reason in the case in question. (Upanaya)

(5) Conclusion proved. (Nigaman)

Both Nyaya and Aristotelian Syllogism has three terms unlike Aristotelian, Nyaya has five propositions but both are essentially similar.

One can reduce the Nyaya syllogism to three propositions either by removing first two or last two propositions.

Apart from the similarities there are also some differences between Aristotelian and Nyaya Syllogism. These are as given below.

1. Aristotelian syllogism is deductive and formal. Nyaya syllogism is deductive - inductive and formal and material at the same time.

2. In the Aristotelian syllogism, though connected by the middle term, the major and the minor terms stand apart in the premises. In the Nyaya syllogism all the three terms stand synthesized in the upanaya i.e. fourth proposition.

3. Propositions of Aristotelian syllogism are nothing more than the absolutly necessary constituent parts of an inference, but Nyaya Syllogism constitute of fully reasoned out argument in natural sequence.

4. The Aristotelian syllogism is good for testing the validity of inference, where as Nyaya syllogism being an actual method followed in debate, is more useful in discovering the conclusion.

Complete the following :

Sr. No.	Basic Rules of Categorial Syllogism	Rules of categorical syllogism when violated	Formal Fallacies committed
1	Rule of Structure	(1) It must contain three and only three propositions	
		(2)	Fallacy of Four terms (Equivocation)
2	Rule of Distribution of terms	(1) The middle term must be distributed atleast once in the premises	
		(2)	Fallacy of illicit Minor
		(3) The predicate term is not distributed in the conclusion, Unless it is distributed in the major premise.	
3	Rule of Quality	(1)	Fallacy of Negative Premises
		(2) When either of the premise is negative, the conclusion must be neagtive.	

Write all possible combinations of following propositions, where the fallacy of illicit Major, illicit Minor and Undistributed Middle is committed.

Hard-workers are successful.

Ambitious persons are hard-workers.

Therefore ambitious persons are successful.

Exercises

Q. 1. Fill in the blanks with suitable words from those given in the brackets :

(1) Syllogism is a ..... infernece. *(Mediate / Immediate)*

(2) Syllogism has ..... terms. *(Two / Three)*

(3) ..... of the conclusion is called the major term in syllogism. *(Subject / Predicate)*

(4) ..... term occurs in both premises and does not occur in the conclusion. *(Subject / Middle)*

(5) The first premise of syllogistic argument, when reduced to logical form is ..... premise. *(Major / Minor)*

(6) ..... contains both subject term and predicate term in categorical syllogism. *(Premise / Conclusion)*

(7) When any rule of syllogism is violated, the argument commits ..... fallacy. *(Non-formal / Formal)*

(8) Fallacy of ..... is committed, when one of the term is used in two different senses. *(Equivocation / illicit process)*

(9) When the subject term is undistributed in the premise but is distributed in the conclusion, fallacy of ..... is committed. *(illicit Major / illicit Minor)*

(10) In the third figure of syllogism, the middle term stands as the ..... in both the premises. *(Subject / Predicate)*

(11) An argument with four propositions is called ..... . *(Argument of Sorites / Fallacy of Equivocation)*

(12) For Nyaya school of Indian philosophy inference consists of ..... propositions. *(five / three)*

(13) Aristotelian syllogism and Nyaya syllogism both have ..... term. *(five / three)*

(14) Statement of the proposition to be proved is called ..... by Nyaya logicians. *(Prtijna / Hetu)*

(15) Statement of the reason is called ..... by Nyaya logicians. *(Hetu / Upanaya)*

(16) ..... syllogism is better fitted to test validity of inference *(Nyaya / Aristotelian)*

Q. 2. State whether the following statements are True or False :

(1) The validity of syllogism depends upon the order in which the three constituent propositions are expressed.

(2) The conclusion in syllogistic argument depends upon the manner in which the terms are related in the premises.

(3) The AAA combination of proposition in figure - I commits the fallacy of undistributed middle.

(4) Validity of syllogism depends upon the content of an argument.

(5) In a valid syllogism the premises imply the conclusion.

(6) The rule of syllogism states that when only one premise is affirmative, the conclusion must be affirmative.

(7) In a valid syllogism the middle term must be distributed atleast once in the premise.

(8) The premise in which the predicate occurs is called the major premise.

(9) In a syllogism constituent propositions are analysed into terms.

(10) The relation between the middle term and the other two terms is negative in 'A' and 'I' Propositions.

(11) Indian logicians make distinction between inference for one self (Swartha) and inference for others (Parartha)

(12) Statement of the universal proposition along with an example is called Upanaya.

(13) Statement of the presence of the mark/hetu i.e. reason in the case in question is called Udaharan.

(14) Conclusion proved in Nyaya syllogism is called Nigaman.

(15) Statement of the universal proposition called Vyapti.

Q. 3. Match the columns :

	(A)	**(B)**
(1)	The major term	(a) Hetu
(2)	The minor term	(b) Sadhya
(3)	The middle term	(c) Paksha

Q. 4. Give logical terms for the following

(1) An argument in which the middle term stands in a certain relation to the other two terms.

(2) A formal fallacy committed, due to ambiguous term.

(3) The predicate term of the conclusion in Categorical syllogism.

(4) The subject term of conclusion in Categorical syllogism.

(5) The term which occurs in both the premises, but not in the conclusion.

(6) The premise in which the predicate term occurs.

(7) The premise in which the subject term occurs.

(8) That cognition which presupposes some other cognition.

(9) Inference used for demonstrating truth for other people.

(10) Statement of the proposition to be proved.

(11) Statement of the reason.

(12) Statement of the universal proposition along with an example.

(13) Statementr of the presence of the mark/ hetu i.e. reason in the case in question.

(14) Conclusion proved in Nyaya syllogism.

(15) The major term in Nyaya syllogism.

(16) The minor term in Nyaya syllogism.

(17) The middle term in Nyaya syllogism.

Q. 5. Give reason for the following :

(1) Middle term must be distributed atleast once in the premises.

(2) No conclusion can be drawn from two negative premises.

(3) A term cannot be distributed in the conclusion unless it is distributed in the premise.

(4) Out of five propositions in Nyaya syllogism, two appear redundant.

(5) The udaharan or example in the third proposition is a unique feature of Nyaya syllogism.

Q. 6. Explain the following :

(1) The Rule of structure in syllogism.

(2) The fallacy of Undistributed Middle.

(3) The fallacy of illicit Process in syllogism.

(4) Figures of Syllogism.

(5) Resemblance between Aristotelian and Nyaya syllogism.

(6) Distinction between Aristotelian and Nyaya syllogism.

Q. 7. Recognize with reasons the formal fallacies committed in the following Categorical syllogisms :

(1) All Indians are reformers
All reformers are brave
Therefore all brave men are Indians.

(2) Some wrong things are not worth studying
All calculations are wrong
So No calculations are worth studying.

(3) Some TV channels give informative news.
No Magazines give informative news.
Therefore No magazine is a TV channel.

(4) No athletes are trained hard.
Some film stars are not athletes.
Therefore some film stars not trianed hard.

(5) Water is a liquid.
Ice is water.
Therefore ice is a liquid.

(6) All sportsmen are well Groomed.
No lazy men are sportsmen.
Therefore some lazy men are not well groomed.

(7) Some grapes are not sweet.
No Mangoes are sweet.
Some mangoes are not grapes.

(8) Some animals are tall.
No men are tall.
Therefore Some men are not animals.

(9) All wooden things are painted.
Some boxes are wooden.
Therefore All boxes are painted.

(10) All mammals are warmblooded
No fish are mammals
Therefore Some fish are warmblooded

(11) Some birds are not ugly.
No birds are colourful.
Therefore No colourful things are ugly.

(12) Some enthusiasts show poor judgement
All those who show poor judgement make frequent mistakes.
None who make frequent mistakes deserves.
Therefore some enthusiasts do not deserve.

(13) No potters are accountants.
Some artists are potters.
Therefore some artists are Accountants.

(14) All circles are geometrical Figures.
All Triangles are geometrical figures.
Therefore all circles are Triangles.

(15) The end of life is perfection of life.
Death is the end of life.
Therefore death is perfect of life.

(16) No Europeans are black.
Some Europeans are not short.
Therefore some black people are not short.

(17) All Indians are generous.
All rich people are not Generous.
Therefore all rich people are Indians.

(18) All Philosophers are wise.
No ordinary men are Philosophers.
Therefore No ordinary men are wise.

(19) All fishes are marine animals.
All fishes swim.
Therefore all those which swim are marine animals.

(20) Some oranges are sour.
Some ornages are not ripe.
Therefore No ripe things are sour.

(21) Some reporters give correct news.
All reporters are impartial.
No impartial persons give correct news.
Therefore some reporters are not impartial.

(22) All cats are wild.
No dogs are wild.
Hence all cats are dogs.

(23) All games are interesting.
Some games are not enjoyable.
Therefore some enjoyable things are not interesting.

(24) Some games are not Interesting.
Some games are challenging.
Therefore No challenging things are interesting.

(25) All men are rational.
No Idiot is rational.
Some animals are rational.
Therefore some men are animals.

(26) All hardworkers are paid.
Some employees are not paid.
Therefore no employees are hardworkers.

(27) No Indians are Americans.
No Americans are Russians.
Therefore No Indians are Russians.

(28) All Indians are brain workers.
Some Indians are not software engineers.
Therefore All software engineers are brain workers.

(29) No illiterates are graduates.
Some graduates are not teachers.
Therefore some teachers are not illiterates.

(30) All men are rational beings.
All rational beings are mortal.
All mortals have life.
Therefore all men have life.