BRIEF INTRO…….

Dear students.

This lecture is the base of logical studies. In our very first lecture we discussed argument, premises and conclusion with the help of different examples. In logic, the making of an argument, the exact number of premises and deductive conclusion is actually syllogism. And syllogism is what you will learn in this lesson. It is basically somewhat detailed analysis of a deductive argument, **from nature, linguistic and structural perspectives**. By nature of logic we mean, what it appears to be generally or how it can be differentiated from other kinds of arguments. The linguistic perspective indicate the grammatical categories constituting premises and the structural analysis is more concerned with the constituent parts gelling to form an argument. From linguistic perspective we divide syllogism into **UNIVERSAL SYLLOGISM and PARTICULAR SYLLOGISM.** The lecture also discusses syllogistic fallacies. So give the slides a read. They are pretty simply arranged for your convenience and elaborated with examples. Try to solve the quiz and share your answers with me.

I’ll entertain all your questions, queries, objections, suggestions and comments through all available means. So, feel free to interact.

SYLLOGISM

* Syllogism - a deductive argument composed of exactly two premises and one conclusion. (truth of the premises guarantees the truth of the conclusion)
* OR
* Categorical Syllogism - a syllogism composed of categorical (clear-cut) propositions (thoughts) with exactly three distinct terms.

**The Parts of a Categorical Syllogism** –

* A. The Major Term - the predicate term of the conclusion
* B. The Minor Term - the subject term of the conclusion

**Definitions:**

Categorical Syllogism - a syllogism composed of categorical propositions with exactly three distinct terms.

* P1) - All mammals are animals with hearts.
* P2 - All dogs are mammals.
* C) - All dogs are animals with hearts. minor term major term
* A syllogism is a three-part logical argument, based on deductive reasoning, in which two premises are combined to arrive at a conclusion. So long as the premises of the syllogism are true and the syllogism is correctly structured, the conclusion will be true. An example of a syllogism is "All mammals are animals. All elephants are mammals. Therefore, all elephants are animals." In a syllogism, the more general premise is called the **major premise**("All mammals are animals"). The more specific premise is called the **minor premise**("All elephants are mammals"). The conclusion joins the logic of the two premises ("Therefore, all elephants are animals").

BACKGROUND

* First described by Aristotle in *Prior Analytics*, syllogisms have been studied throughout history and have become one of the most basic tools of logical reasoning and argumentation.
* Sometimes the word syllogism is used to refer generally to *any* argument that uses deductive reasoning.

Although syllogisms *can* have more than three parts (and use more than two premises), it's much more common for them to have three parts (two premises and a conclusion).

STRUCTURE OF SYLLOGISM

* Syllogisms can be represented using the following three-line structure, in which A, B, and C stand for the different terms:
* All A are B.
* All C are A.
* Therefore, all C are B.

Another way of saying the same thing is as follows:

* If A = B
* and C = A
* then C = B

Notice how the "A" functions as a kind of "middle" for the other terms. You could, for instance, write the syllogism as: C = A = B, therefore C = B.

* + Major premise: All mortals die.
  + Minor premise: All men are mortals.
  + Conclusion: All men die.

UNIVERSAL SYLLOGISM

* Universal syllogisms are called "universal" because they use words that apply completely and totally, such as "no" and "none" or "all" and "only." The two most common forms of universal syllogisms are:

**"All A are B, and all C are A, so all C are B."**(This is the most common type of syllogism.)

* + All mammals are animals.
  + All elephants are mammals.
  + Therefore, all elephants are animals.

**"No A are B, and all C are A, so no C are B."**

* + No mammals are frogs.
  + All elephants are mammals.
  + Therefore, no elephants are frogs.

PARTICULAR SYLLOGISM

* Particular syllogisms use words like "some" or "most" instead of "all" or "none." Within this category, there are two main types:

**"All A are B, and some C are A, therefore some C are B."**

* + All elephants have big ears.
  + Some animals are elephants.
  + Therefore, some animals have big ears.

**"No A are B, and some C are A, therefore some C are not B."**

* + No doctors are children.
  + Some immature people are doctors.
  + Therefore, some immature people are not children.

SYLLOGISTIC FALLACIES

* A "fallacy" is the name for a mistake in logic. Syllogisms often seem like very simple statements, but you may be surprised how often people make logical mistakes when trying to put together simple syllogisms. For example, it may seem logical to make a statement like "Some A are B, and some C are A, therefore some C are B," such as:
* Some nice people are teachers.
* Some people with red hair are nice.
* Therefore, some teachers have red hair.

Each of these categorical propositions is, after all, true—but in fact the final proposition, while true in itself, is *not* the logical conclusion of the two preceding premises. In other words, the first two propositions, when combined, don't actually *prove* that the conclusion is true. So even though each statement is *independently* true, the "syllogism" above is actually a logical fallacy.

* Another example can be…….

1. Some trees are tall things.
2. Some tall things are buildings.
3. Therefore, some trees are buildings.

The error in both of the above examples is called the "fallacy of the undistributed middle," since in each example the A is not "distributed" across the B and C in such a way that the B and C terms actually overlap.

Other types of syllogistic fallacies exist, but this is by far the most common logical error people make with syllogisms.