1. Explain the general characteristics of dilemma. Discuss the methods used for avoiding dilemma.

A dilemma or "double proposition" is defined a problem offering two unrelated possibilities, neither of which is unambiguously acceptable or preferable. It consists of three prepositions of which two are premises and the third is a conclusion. One of the premises is a conjunction of two hypothetical preposition and the other is disjunctive. The dilemma is a common form of argument in ordinary language.

In many cases, dilemmatic arguments are based on assumptions which are not correct. Hence, the use of dilemma is restricted. In case of facing a dilemma, it is better to avoid, rather than refute. Refuting would be an avoiding tendency.

1. Escaping between the horns:

We refutes a given dilemma by showing that the alternatives given in the minor premise are not exhaustive and there is a third alternative which goes in favour of the opponent. It could be inability to decide which of two things to do because either could have bad results.

1. Taking the dilemma by horns: Attempts are to be made to contradict the hypothetical prepositions, which are conjoined in this method. It is pointed out that either one or both consequent or both the consequents do not follow from their antecedents. The hypothetical proposition is contradicted when antecedent and negation of consequent are accepted. Hence, the dilemma is wrong and the conclusion cannot be established. Since the major premise is a conjunction of two hypothetical propositions, the method of refutation is more complex.
2. Rebuttal of dilemma: It appears to be the contradiction of dilemma. But, actually, it is not. In all these cases, the dilemma becomes a potent weapon to mislead the opponent in debate. Therefore none of these methods amounts to the contradiction of opponent’s view. Dilemma can be rebutted by constructing another counter dilemma whose conclusion is opposed to the original conclusion.

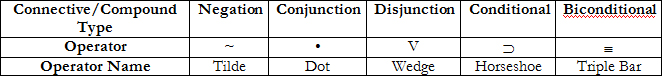
2. Give a detailed account of Negation, Conjunction, and Disjunction form of compound propositions with sufficient examples.

Several classes of proposition constitute arguments. There are no boundaries to the complexity of arguments. Propositional logic is the study of how complex statements are assembled and disassembled, as well as how we can replace one statement with another that is logically equivalent to it. Modern Login realises three kinds of proposition; Simple, Compound and General.

Simple sentences are equivalent to the ones as simple in grammar. A simple statement does not contain another statement as a component. A simple statement contains one clause only and singular term in place of subject.

Eg: Tea is good

Compound sentences contain two or more components. The components of compound sentences may be simple or may themselves be compound. The multiple components of compound sentences are connected through a sentential connectives, or logical notations. These logical notations are negation, conjunction, and disjunction, conditional (or implication) and bi conditional.

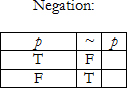


Propositions are replaced by lower case letters like p, q, r, etc. or simply p1, p2, p3, etc.

NEGATION:

Negation is a compound preposition in a unique case, as it is quite simple only. This refers to the negativity of a sentence. Negation tells us, “It is **not** the case that…”. It is a pointer to the exact meaning as well as the sense of being compound. A statement and its negation have opposite truth values.

Truth Table



The rule of negation is that a negation is true if what is negated is false, and is false if what is negated is true.

Examples of Negation

Cricket is not a sport.

A Rupee does not have hundred paisa.

Thousand Rupee notes are not valid.

She did not do her homework.

Summation of two negatives is not positive.

Connection: To help us remember this definition, think of a light bulb, which is either on or off, but not both.

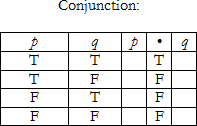
CONJUNCTION:

When compound statements are joined by “and” they are conjunctions. It is a statement on two logical values, typically the values of two propositions, that produces a value of true if and only if both of its operands are true. The sentences which are combined are called conjuncts. As an exception, prepositions may be misleading sometimes.

Eg : Sachin is talented and hard working.

As a rule of inference, conjunction introduction is a classically valid, simple argument form. The argument form has two premises, p1 and p2. Intuitively, it permits the inference of their conjunction.

Truth table



DISJUNCTION