



NAME: SHEHLA KHATTAK

ID: 13981

SEMESTER: 6TH

SUBJECT: LOGIC AND CRITICAL THINKING

SUBMITTED TO: MEHBOOB ALAM

DATED: 6/27/2020

Q1: Determine whether each of the following arguments is valid. If an argument is invalid, explain why.

1. All mammals have fur. Lassie is a mammal. Therefore, Lassie has fur.

A: This is a valid argument and is known as deductive argument which states that ‘An argument in which the truth of a premises absolutely guarantees the truth of the conclusion.’

"All mammals have fur" is proportional to "If something is a mammal, then it has fur." We would now be able to see that this contention is a case

2. Molly is a cow. Molly has horns and wears a cowbell. Cowbells are used to keep track of cows. Molly’s cowbell is loud. Therefore, Molly wears a cowbell.

A: If the premises are assumed to be true, then the conclusion must be true. In this question, the only basis that shows the true value of the conclusion is base 2. If we think that this property is true, the conclusion must be true because it entails the same thing that the second conjunction of the base of the two assertions. Therefore, the argument must be valid.

3. All fish can swim and have gills. A salmon is a fish. Salmon can swim and have gills.

A: The argument is valid and all premises are true. The argument is valid, because when we take all the premises as fact, the results must be true. As we have seen, we can rewrite the first paragraph, "If something is a fish, it can swim and kills." We can see that this is an example of the general form of valid assumption, modus bonus. So the argument is valid. Also, both premises related to fish are true, so the argument meets the definition of soundness.

4. Maryam dyes her hair blond or Maryam dyes her hair green. Maryam dyes her hair blond. Therefore, Maryam does not dye her hair green.

A: The argument is false and therefore unfounded. By the definition of deviation, if both segments are false, the first prototype is true. So consider the case:

Maryam dyed her hair. True

Maryam dyes her hair green. True

In this case, both premises are true and the conclusion false. Therefore, the argument is false.

Q.2: Briefly discuss the use of each symbol in symbolic logic.

1. Dot (.):

The dot just means "such that". This is often avoided.

The common language definition of the dot is:

The compound propositions that make up a link are true only when the two propositions in it are true. One way of expressing this definition is through fact tables.

2. Wedge (^):

The wedge (\wedge) is a symbol that corresponds to a line (\wedge). It can be used to refer to various functions. The opposite symbol (\vee) is called a well or sometimes (descending) wedge. The English or (English code name wedge) (mathematics, logic) co-operator, generates a Boolean value function, usually with two arguments, which returns true only if all of its arguments are true.

USAGE:

The wedge is used to denote various functions:

- Logical connection in proposal logic.
 - Meet at Lattice Theory.
 - External product or wedge product in a different geometry.
-

Q.3: Some premises do support conclusion, others do not. Premises also support conclusions directly or indirectly. Discuss in the light of deductive and inductive conclusions with self-articulated examples.

A: **DEDUCTIVE ARGUMENT:** A deductive argument is a statement of what is deemed to be true or true to the conclusion that necessarily follows from those statements. Deductive reasoning is thought to have been known to infer facts about similar related conclusions.

For instance, the reason "Each An is B" could be trailed by another reason, "This C is A." Those announcements would prompt the end "This C is B." Syllogisms are viewed as a decent method to test deductive thinking to ensure the contention is substantial.

EXAMPLES:

1. All of the students at University eat pizza. Ali is a student at University. So, Ali eats pizza.
2. All athletes work in the gym. Cristiano Ronaldo is an athlete. So, Cristiano Ronaldo works out at the gym.

3. All young people use social platforms. Fahad is a young man. So, he uses social platforms.
4. All dogs are mammals. All mammals have kidneys. Therefore, all dogs have kidneys.
5. Every single living thing is composed of cells. Human beings are creatures. Therefore, humans are made up of cells.

INDUCTIVE ARGUMENT:

An inductive argument is an argument that the plaintiff must consider sufficient, and if the premises are true, it is unlikely that the decision is false. Thus, the success or strength of a persuasive argument is a matter of degree, unlike deduction arguments.

It is likewise portrayed as a technique where one's encounters and perceptions, including what is found out from others, are orchestrated to concoct a general truth. A case of the inducing reason is, "The silver I pulled from the packet is a penny.

Consequently, all the coins clinched are pennies." Even if the entirety of the premises is valid in an announcement, inductive thinking considers the end to be bogus.

EXAMPLES:

1. Every quiz has been easy. So, the test will be easy.
2. The teacher used the projector in the last classes. So, the teacher will use the projector tomorrow.
3. Every Sunday we go to the Park. Therefore, this Sunday we will go to the Park again.
4. The sun rises every day from the east. So tomorrow is the sunrise from the east.
5. In every research textbook reviewed, there is a chapter on the sample. Therefore, all research textbooks have a chapter on sampling.

Q.4: Explain the different functions of language. Also highlight emotively neutral language.

A: LANGUAGE:

In general, logic contains a formal or informal language with an exclusionary method and / or a model-theoretical semantics. Language has similar elements to a part of the natural language, such as English or Greek. Formal language is a set of repeatedly defined strings in a standard alphabet.

The importance of language is also important in logic because it deals with the most subtle arguments. Therefore, language is a vehicle for communicating our ideas to others. The importance of language is also important in logic because it deals with the most subtle arguments.

FUNCTIONS OF LANGUAGE:

INFORMATIVE LANGUAGE:

The language of communication is often found in analytical statements, explanations, arguments, and everyday speech. Most communications applications of the language are notification statements. For example, a person uses informational language when providing information or publishing a statement that emphasizes known information.

Examples:

1. The sky is blue.
2. Logic is the study of perfect rationality.
3. Polar bears have hot blood.
4. The earth is circular.
5. There are seven days in a week.

EXPRESSIVE LANGUAGE:

Expressive language is the ability to demand objects, make choices, ask questions, answer and describe events. Speaking, gesturing (waving, pointing), writing (texting, emailing), facial expressions (crying, smiling), and voices (crying, yelling).

Examples:

1. I am happy today.
2. He is aggressive.
3. William is excited because of his birthday.
4. I am afraid.

DIRECTIVE LANGUAGE:

Directive language is used to guide the response or action from another person. It is a form of language that leads to commands and questions. For example, a mother uses guided language when she tells her son to 'close the door.'

The meaning of order is something identified with the executives or control of activity. On the off chance that your manager places you in control or dealing with a venture, this is a case of when you are in an order job.

Examples:

1. Close the window.
2. Bring that book here.
3. Wash the clothes.
4. Could you please close the door?
5. Let's go for a walk.

AESTHETIC LANGUAGE:

Aesthetic language involves the artistic use of words, as well as the use of paint to create something colorful / memorable / memorable. Writers do not focus on what they want to say, but rather on how they say it.

Aesthetic function describes the conceptual object rather than the affective object. Any art that is valued as real is associated with this activity.

Examples: Poetry, lyrics, novels, dramas, etc.

PHATIC LANGUAGE:

In linguistics, a phatic expression serves a social function, such as social sweets, which do not seek or provide information of intrinsic value, but may indicate a willingness to adhere to the usual local expectations.

Examples:

1. How are you?
2. Good afternoon.
3. How is the weather?
4. How is the work going?
5. What are your plans for vacation?

EMOTIVELY NEUTRAL LANGUAGE:

Emotively neutral language is desirable when trying to get the facts or follow an argument, because our emotions often cloud our reasoning. When resolving disputes or disagreements between individuals, it is advisable to try to reconstruct disagreement in a neutral language.

Emotionally neutral language is desirable when trying to get the facts or follow an argument, because our emotions often cloud our reasoning. It is considered fair, accurate and objective.

1. Our purpose is to communicate clearly (i.e., communicative use of language) and then, if we want to avoid being misunderstood, the language with usually less emotional impact is more effective.
2. When resolving conflicts or disagreements between persons, it is advisable to try to reconstruct the disagreement in a neutral language. In essence, as we shall see later, we distinguish between the belief (i.e., factual reference) and attitude ("emotional" reference) expressed by a given speaker or author.

