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Psychology Short Answers

1. What are the clear definitions of inductive and deductive reasoning? Give Examples

    a. The definition of inductive reasoning is when empirical observations lead to new ideas. The definition of deductive reasoning however is when ideas are tested against the empirical world. So a deductive reasoning process would start off with a question to which we would look for the answers for. Reminds me of a lot of science fair projects in elementary school where my project would be called, "Can a Plant Only Survive with Water?". In this project when I was 8, I would have three separate plants and give one water, another soda, and another milk for a week and see how they would do. Inductive reasoning takes the opposite approach however. Using the same project idea with inductive reasoning, all my life I have only seen plants being watered and nothing else. So I would assume that water is the only liquid that they can drink.

2. What are three safeguards to ensure that animal research is conducted ethically? Do you agree or disagree? Why or why not?

    a. One safeguard to ensure that animal research is conducted ethically is that the design of the experiment must be done in a way to minimize any pain or distress that might be experienced. Another safeguard is that no experiment is allowed to be conducted without the permission of the Institutional Animal Care and Use Committee. The third safeguard is that the same committee must conduct semi-annual inspections of all the places of these animal facilities. I think I agree with how it all is conducted. I agree because we are following as many ethical

protocols as we can, and in doing so we are also helping our knowledge grow in many different subjects.

3. What is the difference between a hypothesis and a theory? Give examples.

    a. A theory is an idea a scientist might have that is just too big to figure out all at once. So often someone will make a hypothesis on a part of a theory to eventually reach a conclusion one step at a time. An example I can think of would be the day someone wanted to go to space. The theory would be "We can travel to Space". The hypothesis would be questioning "How many people need to pilot it?", "Can someone survive in space?", "How do we bring oxygen with us?", and what do we need to build to get us there?".

4. From a scientific perspective, what is the major criticism of Freud's theories? Do you agree? Why or why not?

    a. "A major criticism of Freud's theories is that many of his ideas are not falsifiable". I disagree and don't quite understand why a hypothesis has to be proven wrong. Aren't all hypotheses that are found to be correct not falsifiable? Then they are no longer hypotheses but now factual. Is that not the end goal anyone has for a hypothesis, to make it no longer a hypothesis?

5. What is the difference between a positive correlation and a negative correlation? Give examples.

    a. When variables move in the same direction, it is a positive correlation. However when those variables move in opposite directions, it is known as a negative correlation. An example of positive correlation would be the amount of people who are diagnosed with depression as social media becomes more popular. An

example of negative correlation would be perhaps the amount of effort someone might put into the job versus the amount of time someone has worked there.

6. What is the difference between genotype and phenotype? Give examples.

   a. A person's genotype is the genetic makeup of that individual. However a Phenotype is , refers to the individual's inherited physical characteristics, which are a combination of genetic and environmental influences.An example of genotype would be the color of someone's eye. Both my parents have brown eyes and dark hair so I also have brown eyes and dark hair. An example of phenotype might mean how someone reacts to something that might anger them. They may have similar traits of being calm or angry from their parents however they could have also been taught how to deal with those situations themselves.

7. Using one or two sentences, describe Charles Darwin's theory of evolution by natural selection. Do you agree or disagree? Why or why not?

   a. Charles Darwin's theory of evolution by natural selection is, if an animal or being is not suited for the environment it's in it would eventually die off. Whether the animal is too short or the coat of their fur isn't good camouflage it can be the cause of their extinction and cause mutations of itself that would better suit the environment. I do not fully believe in Charles Darwin's theory. I think it's very possible that a small change could have been made from the dawn of time till now. However I don't think enough time has passed for those theories to even be true.

8. Describe the relationship between chromosomes, DNA, and genes.

a. Chromosomes, DNA, and genes are all directly related to each other and are made up of one another. Chromosomes are long strands of DNA, and a sequence of DNA makes up a gene.

9. What are glial cells? Why are they important? What are the functions of glial cells?

a. "Glial cells provide scaffolding on which the nervous system is built, help neurons line up closely with each other to allow neuronal communication, provide insulation to neurons, transport nutrients and waste products, and mediate immune responses". They are important because it allows the body to communicate and function with all its parts. For one system to talk and let the other know an issue, the Glial cell aids the process. Without it we would perhaps not have pain to let us know something is hurting us, or be able to digest food properly.

10. What is the corpus callosum? What is its function? Explain.

a. The corpus callosum is a thick line of 200 million axons that hold both halves or "hemispheres" of our brain together. Without it both hemispheres would not be able to communicate with one another. Whatever one half of the brain processes and understands it is able to communicate it to the other half through the corpus callosum.