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### Preview:

## Final Exam Notes

### Chapter 1

Behaviourism: a philosophical perspective that argues that a scientific psychology should base its theories only on observable events.

Causation: bringing about change in a phenomenon.

Description: identifying and observing phenomena and carefully recording their details. One of the goals of research.

Experimentation: manipulating the independent variable to observe its effects on the dependent variable.

Explanation: using scientific understanding to develop a statement of the mechanisms of how certain factors can change other factors. One of the goals of science.

Functionalism: a philosophical perspective that stresses the need to study how the mind functions and adapts to the environment. Often contrasted with structuralism.

Gestalt psychology: a philosophical perspective on perception that rests on the concept that the whole is greater than the sum of its parts.

Logic: set of operations that can be applied to statements, and the conclusions drawn from these statements, to determine the internal accuracy of the conclusions.

Prediction: making a statement about what will happen to one factor if we know (or control) what happens with another factor.

Prepared mind: a disciplined curiosity that makes scientists sharply alert to the possibility of unanticipated discoveries.

Process of inquiry: the perspective that views research as a dynamic process of formulating questions and answering those questions through research.

Pseudoscience: popular distortions of scientific knowledge and procedures, which appear on the surface to be scientific, but lack critical scientific procedures.

Psychology: scientific study of the behaviour of organisms.

Psychophysics: involves the presentation of precise stimuli under controlled conditions and the recording of the participant's responses.

Scientific Research: research based on a combination of rationalism and empiricism.

Serendipity: the process of experiencing unanticipated scientific discoveries.

Skeptic: a person who characteristically applies scepticism.

Structuralism: a philosophical perspective, popularised by Wundt, in which scientists seek to identify the structure of mechanisms that control behaviour.

Theology: the philosophical tenets and/or study of religion.

*Empiricisms:*

Empiricism: system of knowing that is based solely on observation of events.

Naïve empiricism: extreme dependence on personal experience in order to accept events as facts.

Sophisticated empiricism: accepting indirect evidence for a phenomenon.

*Ways of Knowing Information:*

Authority: a way of acquiring knowledge. New ideas are accepted as valid because some respected authority has declared the ideas to be true.

Intuition: way of acquiring knowledge without intellectual effort or sensory processes.

Tenacity: way of knowing based on accepting an idea as true because it has been accepted as true for a long time.

Rationalism: a way of knowing that relies on logic and a set of premises from which logical inferences are made.

Science: way of knowing that combines rationalism and empiricism.

- The essence of science is its way of thinking, which combines rationalism and empiricism.
- Science is a way of thinking, and it is possible to think scientifically anywhere.
- A prepared mind refers to the ability to recognise and react to unexpected findings because the person has a sufficient background in, and understanding of, the phenomena under study.
- Scientists are pervasive skeptics who challenge accepted wisdom, are intellectually excited by questions, and are willing to tolerate uncertainty.
- Scientists and artists share curiosity, creativity, scepticism, tolerance for ambiguity, commitment to hard work, and systematic thinking.
- The common methods of acquiring knowledge are tenacity, intuition, authority, rationalism, empiricism, and science.
- Science combines empiricism and rationalism.
- Naïve empiricism insists on experiencing evidence directly through the senses. In contrast, sophisticated empiricism allows indirect evidence of phenomena, such as the effects of gravity on falling objects.
- The limitation of rationalism is that the premises must be correct for the conclusions to be correct. The limitation of empiricism is that, by itself, it does little more than collect facts; it needs rational processes to organise these facts.
- Facts are empirically observed events.
- The early practical skills of artisans illustrated the advantage of abstract information in solving everyday problems, thus justifying the kind of scientific study that seeks to systematically develop such information.
- Thales, considered the father of science, rejected mysticism and studied natural phenomena using empirical observation and rational thought.
- During the middle ages, science was used to support theological ideas.
- Modern technology is the practical application of scientific discoveries, whereas modern science is a way of thinking about, and studying phenomena.
- The orderliness belief is the idea that the universe operates in a lawful manner. Without this belief, it would make no sense to engage in scientific investigation, because there would be no general principles to discover.