

Chapter 2: The Scientific Method and Sociology

Multiple-Choice Questions:

1. The goal of science is to:
 - a. explain why phenomena exist and how they operate*
 - b. change the world
 - c. challenge religion
 - d. develop knowledge for political goals
 - e. none of the above

2. Which is not a characteristic of scientific theory?
 - a. abstractness
 - b. testability
 - c. explanation
 - d. evaluation*
 - e. All are characteristics of science.

3. Which is least true of scientific theory?
 - a. It is abstract.
 - b. It is general.
 - c. It is formal.
 - d. It is a method*.

4. Ideology and religion are similar in which sense?
 - a. Both are empirical.
 - b. Both are evaluative*.
 - c. Both are non-empirical.
 - d. both a and b

5. What type of knowledge would be empirical but not evaluative?
 - a. logic
 - b. ideology
 - c. religion
 - d. science*
 - e. a and d above

6. Science is a belief system that seeks to be:
 - a. evaluative and empirical
 - b. non-empirical and non-evaluative
 - c. empirical and non-evaluative*
 - d. non-empirical and evaluative

7. Which is (are) a step(s) in the scientific method?
 - a. statement of research problem
 - b. formulation of a hypothesis
 - c. construction of research design
 - d. gathering of data
 - e. all of the above*

8. Which sociological method is least likely to use statistics?
 - a. surveys
 - b. observations*
 - c. experiments
 - d. all of the above
 - e. none of the above

9. Key principles of data collection using the scientific method include:
 - a. objectivity
 - b. replicability
 - c. functionality
 - d. a and b above*
 - e. none of the above

10. A control group in an experiment is:
 - a. the group that receives the stimulus
 - b. the group that does not receive the stimulus*
 - c. the group that is eliminated from the study
 - d. the group that is used for a follow-up study

11. Surveys involve which elements?
 - a. sampling of a population
 - b. asking of questions from a questionnaire
 - c. answering of questions by members of the sample
 - d. all of the above*

12. Which is a method employed by sociologists?
 - a. experiments
 - b. surveys
 - c. observations
 - d. histories
 - e. all of the above*

13. Applied sociology is:
 - a. an effort to use sociological knowledge to deal with problems*
 - b. an effort to change public opinion
 - c. an effort to influence political decision-makers
 - d. b and c
 - e. none of the above

14. An experimental design tries to:
- a. control the effects of extraneous influences
 - b. isolate the effect of some specific stimulus
 - c. gain information about past causal effects
 - d. a and b above*
 - e. b and c above
15. Historical research tries to:
- a. gather data on past events*
 - b. conduct experiments on past events
 - c. use observations on the present to interpret the past
 - d. ask questions to gain perspective on the past
 - e. none of the above
16. A hypothesis is:
- a. a statement on what was found in the data
 - b. a statement on how to collect data
 - c. a statement on what one expects to find in the data*
 - d. a statement on the sample to be used
 - e. none of the above

True-False Questions:

17. Science seeks to tell us how we should behave.
- a. true
 - b. false*
18. Science is rarely influenced by politics and money.
- a. true
 - b. false*
19. Science attempts to explain how and why the world operates.
- a. true*
 - b. false
20. The scientific method is designed to assure the accurate collection of data.
- a. true*
 - b. false
21. Science always seeks to be evaluative.
- a. true
 - b. false*

22. The vehicle for understanding the world is theory.
- true*
 - false
23. Science precludes the use of knowledge for humanitarian purposes.
- true
 - false*
24. Science is supposed to be empirical and non-evaluative.
- true*
 - false
25. An experimental design always uses a control group.
- true*
 - false
26. Historical research generally employs a questionnaire.
- true
 - false*
27. A hypothesis is almost always correct because it is derived from the data.
- true
 - false*
28. Science has never been influenced by religion.
- true
 - false*
29. In observational studies, the researcher never participates with the subjects being observed.
- true
 - false*
30. In science, theories are always highly speculative ideas.
- true
 - false*
31. In surveys, a control group is always necessary to assure accuracy of the data.
- true
 - false*
32. The term “practice” is often used to denote sociological knowledge used for practical purposes.
- true*
 - false

33. Applied research and sociological practice have little in common.
a. true
b. false*
34. In participant-observation, the researcher tries to remain uninvolved in the activities of those being studied.
a. true
b. false*
35. Galileo was able to convince the Inquisition that the sun was the center of the solar system.
a. true
b. false*
36. Theories must always be stated abstractly.
a. true*
b. false
37. In science, all theories are designed to be tested.
a. true*
b. false
38. When a theory is not supported by data, it must be rejected or revised.
a. true*
b. false

Fill-in-the-Blank Questions:

39. For each concept, label, or idea listed below, answer the questions by putting the appropriate letter on the answer sheet.
- a. science
 - b. control group
 - c. survey
 - d. belief system
 - e. abstract

Science is a _____ about how to understand the world. (d)

Theories in science are generally _____. (e)

The most common methodology and measuring instrument used by sociologists is the _____. (c)

Experimental designs almost always use a _____. (b)

_____ seeks to explain how the universe operates in an objective manner.
(a)

40. For each concept, label, or idea listed below, answer the questions by putting the appropriate letter on the answer sheet.

- a. hypothesis
- b. theory
- c. research design
- d. applied sociology
- e. historical

Oftentimes, researchers develop a _____ to predict what they expect to find in collecting data. (a)

Often, a _____ is derived from a theory and guides research. (a)

When considering how to collect data, it is first necessary to have a _____. (c)

_____ seeks to address social and public problems. (d)

When sociologists collect data on the past, they often use _____ research methodologies. (e)

The vehicle by which science explains the universe is _____. (b)

A _____ is generally abstract. (b)