Study Questions for Chapter 10

~ Describe the origins of intelligence testing in the French school system, noting the contributions of Alfred Binet and Theodore Simon to the development of the *ratio IQ* and explaining how the *deviation IQ* was eventually adopted.

~ Discuss the logic of hypothesis testing and state what an intelligence test is actually measuring.

~ Summarize the research evidence showing that intelligence test scores predict a range of outcomes, such as educational level, job performance, political and religious attitudes, and life experiences, such as divorce, incarceration, or unemployment.

~ Describe the evidence that led Charles Spearman to conclude that a *two-factor theory of intelligence* was appropriate for describing the nature of intellectual performance.

~ Describe the evidence that led Louis Thurstone to conclude that a multiple-factor theory of intelligence was appropriate for describing the nature of intellectual performance.

~ Discuss how a three-level hierarchy offers the most compelling account of intelligence test data.

~ Contrast the *data-based* and *theory-based approaches* to determining the middle-level intellectual abilities.

~ Give a brief description of the eight independent middle-level intellectual abilities developed in the data-based approach taken by John Carroll, including *fluid intelligence* and *crystallized intelligence*.

~ Discuss the three factors of *analytic intelligence, creative intelligence,* and *practical intelligence* identified by Robert Sternberg's theory-based approach to intellectual performance.

~ Discuss the eight factors identified by Howard Gardner's theory-based approach to intellectual performance; distinguish between *prodigies* and *savants,* and discuss how the concept of intelligence differs across cultures.

~ Define *emotional intelligence* and give some characteristics of emotionally intelligent people.

~ Distinguish between *identical twins* and *fraternal twins* on the basis of their

respective genetic makeups; from twin-studies, discuss how intelligence is related to genes.

~ Explain what a *heritability coefficient* is and discuss how it contributes to our understanding of the genetic basis of intelligence.

~ Contrast the *shared environment* and the *nonshared environment,* and comment on how this distinction relates to understanding the role of heritability in intelligence.

~ Distinguish between *relative* and *absolute intelligence;* describe how absolute intelligence changes with age and across generations (the *Flynn Effect*).

~ Discuss how economics, breastfeeding, birth-order, and education influence intelligence.

~ Provide an example illustrating how genetic and environmental factors interact in complicated ways to determine intelligence.

~ Distinguish between group differences in intelligence test scores and group differences in intelligence; discuss why differences in test scores may not necessarily indicate differences in underlying intellectual ability, and discuss why group differences in intelligence may not be the result of genetics.

~ Describe the current state of research on drugs to enhance intelligence.