Childrens Thinking Cognitive Development and Individual Differences 6th edition Bjorklund Test Bank

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Chapter 2: Biological Bases of Cognitive Development

Test Bank

Multiple Choice

1. Processing that involves staying on task, resisting interference, and planning is known as
A. executive function.
B. innate function.
C. psychological well-being.
D. comprehension functionality.
Ans: A
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Biological Bases of Cognitive Development
Difficulty Level: Easy

2. According to the text, the major principle of Darwin's theory is reproductive fitness, which refers to
A. the unlikelihood that an individual will become a parent and grandparent.
B. the likelihood that same-sex siblings will never be reproduced.
C. the likelihood that an individual will become a parent and grandparent.
D. the chance that mates will eventually find themselves a fit for each other.
Ans: C
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Evolutionary Theory
Difficulty Level: Medium

3. According to Cosmoses and Toolby (1987), solving real-world problems such as, "How do I tell friend from foe?" and "When do I fight, and when do I flee?" are examples of what phenomenon?
A. natural selection operating in the intimate level
B. natural selection operating in the cognitive level
C. goodness of fit
D. survival of the fittest
Ans: B
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Hard

4. What are the three general types of constraints specified by Elman and his colleagues (1996) which helps articulate the ways that cognitive developmentalists consider biology to constrain psychological development?
A. parental, peer-influenced, and social
B. militaristic, socialistic, and democratic
C. architectural, reality-based, and chronotopic
D. architectural, chronotopic, and representational
Ans: D
Learning Objective:

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Cognitive Domain: Knowledge
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Medium

5. Architectural constraints refer to
A. ways in which the architecture of the brain is organized at birth.
B. the development of the mental ability after birth.
C. the planting of seeds of knowledge to mature the brain.
D. the ability of the organized brain to overcome deficits.
Ans: A
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Medium

6. Which of the following is not an example of an architectural constraint?
A. Some neurons are excitatory and others are inhibitory.
B. At a higher level neurons in a particular area of the brain.
C. At birth all neurons appear to be inhibitory.
D. At a higher level, different areas of the brain are connected with other areas of the brain, affecting the global organization of the brain.
Ans: C
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Medium

7. Chronotopic constraints refer to
A. varied life events timing.
B. limitations on the development timing of events.
C. limitations on mature developmental abilities.
D. limitations discovered since the beginning of humankind.
Ans: B
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Easy

8. Which of the following is not an example of a chronotopic constraint?
A. Certain areas of the brain might develop before others.
B. Some areas of the brain might be most receptive to certain types of experiences.
C. All areas of the brain develop at the same time at the same rate.
D. Early developing areas would have different processing areas.
Ans: C
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Medium

9. Representational constraints refer to:
A. a limited pictorial representation of the brain.

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B. a limited graphical representation of the brain.
C. a full brain atlas representative of the child's brain.
D. representations that are hardwired into the brain so that some types of "knowledge" are innate.
Ans: D
Learning objective:
Cognitive Domain: Knowledge
Answer Location: Evolutionary Developmental Psychology
Difficulty Level: Easy

10. According to Bjorklund, et.al. (2007), the concept of evolved probabilistic cognitive mechanisms are
A. information-processing mechanisms that have evolved to solve recurrent problems faced by ancestral populations.
B. data-enhanced mechanisms that have evolved to ensure a working brain.
C. data-driven-reinforced mechanisms evolving only in certain species.
D. another approach to understanding Piagetian concepts and theories.
Ans: A
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolved Probabilistic Cognitive Mechanisms
Difficulty Level: Medium

11. Which of the following is not a concept of the evolved probabilistic mechanism?
A. They are expressed in a probabilistic fashion in each individual in a generation.
B. They are based on the continuous and bidirectional interaction over time.
C. They are universal.
D. They have evolved to ensure the survival of the species.
Ans: D
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Evolved Probabilistic Cognitive Mechanisms
Difficulty Level: Medium

12. Which one of the following is not a biologically primary ability according to Geary (1995)?
A. Children are intrinsically motivated to exercise biologically primary abilities and do so spontaneously.
B. Most children attain "expert" level of proficiency.
C. Are acquired by children in all environments.
D. Are acquired universally.
Ans: C
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Structure of the Mind
Difficulty Level: Medium

13. Which of the following is not a biologically secondary ability according to Geary (1995)?
A. Are culturally dependent, reflecting the cognitive skills that are important in a particular culture.
B. Do not have an evolutionary history but are built on biologically primary abilities.

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C. Children are not intrinsically motivated to exercise them and must often be pressured by adults to acquire these skills.
D. Tedious practice is not necessary to master biologically secondary abilities.
Ans: D
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Structure of the Mind
Difficulty Level: Medium

14. The proposal that humans beginning in infancy have substantial learning capabilities and a strong capacity for probabilistic reasoning that interact with "expected" environments to produce specie-typical patterns of cognitive development is known as:
A. neuroconstructivism.
B. neuroscience.
C. cognitive neuroscience.
D. neurolearning.
Ans: A
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Biologically Primary and Biologically Secondary Abilities
Difficulty Level: Easy

15. All self-respecting developmentalists believe that development is
A. a basic process of two components: brain ad body.
B. the result of an interaction between genetic/biological factors and environmental/experiential factors.
C. the result of a slow process ending in death.
D. a combination consisting only of biology and maturation.
Ans: B
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Models of Gene-Environment Interaction
Difficulty Level: Medium

16. According to Gottlieb (1991a) what is not a component of epigenesis?
A. reflects a bidirectional relationship between all levels of biological and experiential variables
B. genetic activity both influences and is influenced by structural maturation
C. reflects a circular relationship among maturational processes
D. bidirectionally related to function and activity
Ans: C
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Concept of Epigenesis
Difficulty Level: Hard

17. What did the findings of Fraga and colleagues (2015) reveal?
A. As genetically identical individuals develop, their individual experiences can affect them at the cellular level.
B. When genetically dissimilar individuals develop, nothing can affect this experience.
C. Genetically identical individuals and genetically dissimilar individuals will eventually develop the same.

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D. A circular relationship of cellular development can occur throughout development.
Ans: A
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Concept of Epigenesis
Difficulty Level: Hard

18. In the developmental systems approach,
A. the timing of a particular event will not impact development.
B. the timing of a particular event can influence substantially what effect that event will have on development.
C. only comedians fully understand timing.
D. development will not impact timing.
Ans: B
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Developmental Timing
Difficulty Level: Medium

19. Which of the following is not an example of the genotype → environment effect according to Scar and McCartney's model?
A. Biological parents provide both gene and environment for child; passive effects decrease with age.
B. Temperamental characteristics of child evoke responses from others; evocative effects remain constant with age.
C. Children seek out environments consistent with their genotypes; active effects increase with age.
D. Children seek out environments consistent with their phenotypes; passive effects increase with age.
Ans: D
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Genotype → Environment Effects
Difficulty Level: Medium

20. What is the correct order of the three stages of neuronal development?
A. proliferation, migration, differentiation
B. migration, proliferation, differentiation
C. differentiation, migration, proliferation
D. proliferations, differentiation, migration
Ans: A
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Proliferation, Migration, and Differentiation
Difficulty Level: Easy

True/False

1. The first stage of neuronal development is referred to as proliferation which is the production of new neurons through the process of cell division by mitosis.

Ans: T

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Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Proliferation, Migration, and Differentiation
Difficulty Level: Medium

2. The process of synapse formation, or synaptogenesis, is slow and gradual during the early years of life when the brain is first becoming organized.
Ans: F
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Synaptogenesis and Selective Cell Death
Difficulty Level: Medium

3. Synaptic pruning is the concept whereby the number of synapses per neuron is greatest between 4 and 8 months of life and decreases with age.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Rises and Declines in Neural Development
Difficulty Level: Medium

4. Most developmental neuroscientists believe that brain development involves an extended process that is greatly influenced by postnatal experience.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: How Do Young Brains Get Hooked Up?
Difficulty Level: Medium

5. The neocortex, or cerebral cortex, is a multilayered sheet of neurons, only 8–10 millimeters thick that surrounds the rest of the brain.
Ans: F
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Development of the Neocortex
Difficulty Level: Medium

6. Contemporary research indicates that new synaptic connections can be formed throughout life.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Neuronal Plasticity
Difficulty Level: Medium

7. Children tend to recover from the effects of concussions faster than adolescents and adults do.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Recovery of Function From Brain Damage

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Difficulty Level: Medium

8. Partly because of the extent of myelination and partly because of a paucity of experience, young children process information more slowly than older children do.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Slow Growth and Plasticity
Difficulty Level: Medium

9. According to the textbook, when the course of a young child's or you animal's life changes drastically, patterns of development as we know it will cease or be seriously hampered negatively.
Ans: F
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Slow Growth and Plasticity
Difficulty Level: Medium

10. Language is a good example of a biologically primary ability, whereas reading is a good example of a biologically secondary ability.
Ans: T
Learning Objective:
Cognitive Domain: Knowledge
Answer Location: Biologically Primary and Biologically Secondary Abilities
Difficulty Level: Medium

Essay

1. In what ways are evolutionary theory the backbone of modern biology and psychology?
Ans: Discussion should center around Darwin's ideas of from his text on the origin of species to include natural selection, reproductive fitness. Discussion should also center around the theorists of today like Gould and the ideas of adaptation.
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolutionary Theory
Difficulty Level: Hard

2. Discuss the concept of evolved probabilistic cognitive mechanisms and provide examples.
Ans: Discussion should center around the definitions proposed by Bjorklund, Ellis, and Rosenberg (2007) and include the examples of monkeys and the fear of snakes as well as human infants and snakes.
Learning Objective:
Cognitive Domain: Analysis
Answer Location: Evolved Probabilistic Cognitive Mechanisms
Difficulty Level: Hard

3. Explain the concept of Epigenesis?
Ans: Individual development is characterized by an increase in novelty and compete of organization over time—the sequential emergence of new structural and functional properties and competencies—at all levels of analysis as a consequence of horizontal and vertical coalitions among its parts, including organism–environment coactions.

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Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Concept of Epigenesis
Difficulty Level: Medium

4. Briefly describe the sensitive period as the concept most central to the issue of the timing of development.
Ans: The sensitive period for a specific skill or ability is the time in development when it is most easily acquired. If a requisite experience occurs outside of this sensitive period, the target skill will not be readily acquired—or possibly not acquired at all. Although the organism is most sensitive to a particular event at a particular time, similar or perhaps more intense experiences later in life can still have considerable influence on development.
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Developmental Timing
Difficulty Level: Easy

5. Discuss Scarr and McCartney's (1983) genotype → environment theory with respect to cognitive development.
Ans: One's genotype influences which environments one encounters and the type of experiences one has. Their basic contention is that genes drive experience. One's genetic makeup determines how one organizes one's world. Thus, environment does play a significant role in shaping intellect, but a person's inherited characteristics largely determine what those experiences are and how they are perceived.
Learning Objective:
Cognitive Domain: Comprehension
Answer Location: Genotype → Environment Effects
Difficulty Level: Easy

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