CHAPTER 2—BIRTH TO THIRTY-SIX MONTHS: PHYSICAL AND COGNITIVE/LANGUAGE DEVELOPMENTAL PATTERNS

True/False

1.The two types of stimuli provided to infants are called experience-expectant and experience-dependent.

ANS: T

2.At birth, the brain is packed with an estimated 100 billion neurons, many of which die due to lack of stimulation.

ANS: T

3.At birth, the brain weighs about 25 percent of an adult's brain and triples in size by the age of 24 months, being about 75 percent that of an adult's brain.

ANS: T

4.Insulin is a substance that protects, coats, and insulates neurons, helping connect impulses from one neuron to another.

ANS: F

5.You, as the caregiver, do ultimately affect a child's neurological growth through activities and interactions with the child.

ANS: T

6.The gestation period for a human being is actually not long enough because other species can walk soon after birth takes place.

ANS: T

7.Newborns never sleep more than 10 hours each day.

ANS: F

8.As long as a baby is awake, belly lying should be encouraged to develop chest muscles that are important in normal development.

ANS: T

Multiple Choice

1. 1. Some theorists contend that child development is the result of heredity and natural biological processes or development mostly depends on learning. This is better known as_____
    a. a. nuture vs nature
    b. b. parents vs environment
    c. c. nature vs nuture
    d. d. time vs space

e.

ANS: C

2.The nervous system is made up of the following:

a.	the brain, the skull, and the spinal cord
b.	the brain, the eyes, and the ears
c.	the brain, the stem, and the spinal cord
d.	the stem, the spine, and the bones

ANS: C

3._____ influences affect a child's development.

a.	Social	c.	Environmental
b.	Cultural	d.	All of the above

ANS: D

4. Which system of the body is called the "command center"?

a.	the brain	c.	the nervous system
b.	the cerebral cortex	d.	none of the above

ANS: C

5. What is initially responsible for the basic wiring in the brain?

a. genes c. food
b. environment d. sleep

ANS: A

6. At birth the brain is packed with an estimated_____neurons, whose job is to store and transmit information.

a. 100 c.100 million
b. 100 thousand d. 100 billion

ANS: D

7.Neuron pathways that seem to wait for new experience to be activated are called

a.	experience-expectant.	c.	the command center.
b.	experience-dependent.	d.	milestones.

ANS: B

8.Vygotsky hypothesized that higher cognitive processes develop from verbal and nonverbal social interactions. This is accomplished when more mature individuals instruct less mature individuals within

a.	their comfort zone.	c.	their safety zone.
b.	the zone of proximal development.	d.	none of the above.

ANS: B

9.Growth spurts and plateaus are normal for development of height, weight, and activity; therefore, the caregiver should keep careful records and consult with _____ and _____ regarding body development.

a.	parents, health professionals	c.	parents, grandparents
b.	aunts, uncles	d.	friends, neighbors

ANS: A

10.This Piaget theory of cognitive development involves the infant understanding his or her body and how it relates to other things in the environment.

a.	sensorimotor	c.	operational
b.	preoperational	d.	formal

ANS: A

11.Grasping and pointing are examples of which group of movement milestones?

a.	crawling	c.	gross
b.	standing	d.	fine

ANS: D

12.According to milestones for progressive motor development, children can sit alone and begin to crawl between the ages of

a.	8 to 10 weeks	c.	13 to 16 months
b.	10 to 12 weeks	d.	6 to 8 months

ANS: D

13.A condition where breathing momentarily stops during REM periods of sleep is called

a.	sleep deprivation.	c.	sleep apnea.
b.	a neural system.	d.	SIDS.

ANS: C

14.Research suggests that sleep apnea is related to the baby's brain being not big enough so that periods of instability in breathing can tragically lead to

a.	mental retardation.	c.	AIDS.

b.	sudden infant death syndrome.	d.	none of the above

ANS: B

15.Regarding toilet training in toddlers, which of the following statements is *not* true?

a.	Heap lots of positive attention on success and take as much attention away from mistakes as possible.
b.	The less attention brought to accidents, the better.
c.	Take note of any 24-hour periods of no bowel movements or signs of diarrhea.
d.	Shame the child into getting it perfect.

ANS: D

16._____ involves changing schemes to better fit the requirements of a task or new information.

a.	Adaptation	c.	Assimilation
b.	Accommodation	d.	Equilibrium

ANS: B

17.The cerebral cortex receives stimuli primarily in this form.

a.	sensory information	c.	by touch
b.	visual	d.	all of the above

ANS: A

18._____ involves using schemes that have direct interaction with the environment; for example, grasping and dropping an object over and over again).

a.	Adaptation	c.	Assimilation
b.	Accommodation	d.	Equilibrium

ANS: A

19.Babies can focus well at a distance of 12 inches, which is the normal distance of

a.	breast-feeding.	c.	a baby mobile.
b.	their toes.	d.	their fingers.

ANS: A

20.Adults who are responsive to an infant's needs tend to

a.	provide proper nutrition.	c.	soothe infants in distress.
b.	protect infants from harm.	d.	all of the above

ANS: D

21.Piaget's theory introduced the concept of _____, which involves changes in behavior to help children within their environment.

a.	anxiety	c.	adaptation
b.	application	d.	approval

ANS: C

22.Caregivers should provide a rich variety of visual stimulation and experience for infants and toddlers because

a.	it is part of their job.
b.	these stimuli produce geniuses.
c.	these stimuli develop the essential perceptual skills that are prerequisite to a child performing higher cognitive and academic tasks.
d.	these stimuli are fun but have no significant development benefits.

ANS: C

23.Infants who are placed _____ tend to have lower incidences of SIDS-related deaths.

a.	on their bellies	c.	on their sides
b.	on their backs	d.	snuggled near a blanket

ANS: B

24.When one part of the brain is damaged another takes over. This is known as

a.	pruning.	c.	stimulation .
b.	plasticity.	d.	development.

ANS: B

25. 25. Often thought to be the most important part of the brain, it is the slowest growing and largest part.

a. a. the cerebral cortex c. hindbrain
b. b. midbrain d. cerebrum

COMPLETION

1.The nervous system is made up of the brain, the spinal cord, and _____ (nerve cells), which store and transmit information.

ANS: neurons

1. 2. The _____ is the cumulative sequences and patterns that represent progressive, refined changes that move a child from simple to more complex physical, cognitive, language, social, and emotional growth and maturity.

ANS: Development

3.The _____ coating protects the transfer of information from one neuron to another.

ANS: myelin

4.At birth, the baby's head is not fused but has _____ _____ in front and back. The back one closes after a few months, but the front one stays soft for almost two years.

ANS: soft spots

5.Physical development progresses from large muscle activity, or _____ motor control, to small muscle, or _____ motor control.

ANS: gross, fine

6.Six organized patterns of physical responses that relate to levels of arousal are known as _____ and are quiet sleep, active sleep, drowsiness, quiet alert, active alert, and crying.

ANS: states

7.The incidence of _____ is very low, with only two infants per thousand deaths between one week and one year of age.

ANS: SIDS

8._____ is the basic sounds of language and how they combine to make words.

ANS: Phonology

9.Blending babble with real words is known as _____.

ANS: jargon

10. This concept refers to the process of adaptation; when one part of the brain is damaged, another part of the brain takes over the functions of the damaged area.

ANS: brain plasticity

11. The _____is comprised of complex systems that interact with each other and with other parts of the body to create all thoughts, feelings, actions, and reactions

ANS: brain

Short Answer

1.What are the differences between development and learning?

ANS: Development is the cumulative sequence and patterns that represent progressive, refined changes that move a child from simple to more complex physical, cognitive, language, social and emotional growth and maturity. Learning is the acquisition of knowledge and skills through systemic study, instruction, practice and/or experiences.

2.Provide an example of a language rich environment that stimulates brain development in babies.

ANS: The use of American Sign and the introduction to "Baby Signs".

3.List the three areas of the brain and define their functions.

ANS: Hindbrain: regulating automatic functions, such as breathing, digestion, alertness, balance and movement. Midbrain: connect the hindbrain to the forebrain, send messages. Forebrain: produces complex thoughts, emotional responses, decision making, reasoning and communication.

4.Why might it be difficult to diagnose an infant's hearing loss?

ANS: Both hearing and deaf infants go through the natural stages of cooing and babbling. A hearing child tends to increase their activity while a deaf or hard of hearing child tends to decrease their vocal activity. Therefore hearing problems often are not able to be detected until a child is seven months old.

5.What is the difference between overt and internal learning?

ANS: Changes in a response to a stimulus either can be observable to another person (overt) or can occur internally without obvious change in observable behavior (internal).

6. List the five senses that newborns use to process the world around them.

ANS: listening, seeing, tasting, touching, and Smelling

Essay

1.Describe the four basic components of language development.

ANS: The four basic components of language development for young children include (1) phonology: the basic sounds of the language and how they combine to make sounds, (2) semantics: what words mean, (3) syntax: how to combine words into understandable phrases and sentences, (4) pragmatics: how to engage in communication with others that is socially acceptable and effective.

2.Provide an overview of Jean Piaget's six substages of the sensorimotor stage of cognitive development.

ANS: The sensorimotor stage of cognitive development occurs from birth to about age two. Piaget identified six substages. Reflex (Substage 1): reflex actions become more organized. Differentiation (Substage 2): repeats owns actions, begins to coordinate actions, such as hearing and looking. Reproduction (Substage 3): intentionally repeats interesting actions. Coordination (Substage 4): intentionally acts as a means to an end and develops concepts of object permanence. Experimentation (Substage 5): experiments through trial and error. Representation (Substage 6): carriers out mental trial and error and develops symbols.

1. 3. Name the major milestones for motor development from birth to three years of age.

   ANS: (1) stability, (2) locomotion, and (3) manipulation
   At around six weeks, infants begin to hold their heads steady and erect. By two months, they lift their upper bodies by their arms and can roll from side to back. From three to four months, babies begin grasping palm-size objects and can roll from back to side. From six to eight months, they can sit alone and begin to crawl. Between eight and ten months, babies pull up to stand and perhaps play patty cake. At this time they begin to stand alone, and then begin to walk. From 13 to 16 months, children can build a tower of two cubes, vigorously scribble with a large crayon, and begin to walk up stairs with help. At around 20 to 24 months, toddlers begin to jump in place and kick objects. By 26 to 30 months, children begin to climb, stand on one foot, and have some interest in toilet learning. Usually at around 36 months, the child can jump and independently use the toilet.

1. 4. Describe three of the twelve levels exploratory play.
   ANS:
   1. Mouthing: Indiscriminate mouthing of materials
   2. Simple manipulation: Visually guided manipulation at least 5 seconds in duration that cannot be coded in any
   other category .
   3. Functional: Visually guided manipulation that is particularly appropriate for a certain object and involves the intentional extraction of some unique piece of information
   4. Relational: Bringing together and integrating two or more materials in an inappropriate manner, that is, in a manner not initially intended by the manufacturer
   5. Functional-relational: Bringing together and integrating two objects in an appropriate manner, that is, in a manner intended by the manufacturer
   6. Enactive naming: Approximate pretense activity but without confirming evidence of actual pretense behavior
   7. Pretend self: Pretense behavior directed toward self in which pretense is apparent
   8. Pretend other: Pretense behavior directed away from child toward other.
   9. Substitution: Using a "meaningless" object in a creative or imaginative manner or using an object in a pretense act in a way that differs from how it has previously been used by the child.
   10. Sequence pretend: Repetition of a single pretense act with minor variation or linking together different pretense schemes
   11. Sequence pretend substitution: Same as sequence pretend except using an object substitution within sequence.
   12. Double substitution: Pretense play in which two materials are transformed, within a single act, into something they are not in reality