

PSYCHOLOGY OF CHILDHOOD | REVIEW QUESTIONS

These review questions are designed to help you assess your grasp of the facts and definitions covered in your textbook. Knowing facts and definitions is necessary (but not sufficient) for success on formal exams, which assess your ability to conceptualize and analyze the material covered in textbook and lecture. An answer key is provided at the end of these review questions so you can check your answers.

1. The entire set of human genes is referred to as a:
 - A) genode.
 - B) genesis.
 - C) genotype.
 - D) genome.

2. The mapping of the human genome has resulted in the insight that individual differences among people are found in approximately _____ of our genes.
 - A) 1 to 1.5%
 - B) 3 to 3.5%
 - C) 11 to 11.5%
 - D) 13 to 13.5%

3. The observable expression of an individual's genetic material is referred to as the individual's:
 - A) genome.
 - B) genotype.
 - C) phenotype.
 - D) environment.

4. Genes are sections of:
 - A) chromosomes.
 - B) proteins.
 - C) genotypes.
 - D) phenotypes.

5. Individuals receive _____ copy(ies) of each gene from their mother.
 - A) one
 - B) two
 - C) three
 - D) four

6. A male zygote has the _____ pattern of sex chromosomes.
- A) XX
 - B) XY
 - C) YY
 - D) XYZ
7. Different forms of a gene are referred to as:
- A) alleles.
 - B) regulators.
 - C) recessive genes.
 - D) chromosomes.
8. Polygenic inheritance refers to:
- A) sex-linked inheritance.
 - B) the crossing over of chromosomes.
 - C) dominant-recessive patterns of inheritance.
 - D) the combined action of multiple genes.
9. All the outcomes that could theoretically result from a given genotype are referred to as the:
- A) polygenic inheritance.
 - B) genotype-environment interaction.
 - C) phenotype.
 - D) norm of reaction.
10. The manner in which individuals develop phenylketonuria is an example of:
- A) genotype-environment interaction.
 - B) phenotype-environment interaction.
 - C) direct inheritance.
 - D) polygenic inheritance.
11. A person who has a genetic disorder that results from a chromosomal anomaly possesses:
- A) two recessive genes for the disorder.
 - B) extra or missing genes.
 - C) multiple genes that code for the disorder.
 - D) more or fewer than the normal number of chromosomes.

12. Down syndrome originates from:
- A) chromosomal anomalies.
 - B) polygenic inheritance.
 - C) dominant-recessive patterns.
 - D) gene anomalies.
13. Traits that are influenced by genetic factors are considered:
- A) genes.
 - B) heritable.
 - C) sex-linked.
 - D) environmental.
14. Twin studies compare:
- A) individuals who have lived together to those who have not.
 - B) same-sex twins to opposite-sex twins.
 - C) adopted children to their biological or adopted siblings.
 - D) identical twins to fraternal twins.
15. Which of the following designs is ideal for studying behavior genetics?
- A) adoption study
 - B) family study
 - C) adoptive twin study
 - D) twin study
16. A study that examines whether adopted children's scores on a particular measure are more highly correlated with their adoptive parents' scores or their biological parents' scores is referred to as a(n) _____ study.
- A) adoption
 - B) adoptive twin
 - C) twin
 - D) heritability
17. The finding that identical twins reared together are more similar in intelligence than identical twins reared apart is evidence for the:
- A) importance of genetic factors.
 - B) importance of environmental factors.
 - C) interplay between genes and environment.
 - D) All of the answers are correct.

18. The amount of variability of a trait that is due to genetic factors is referred to as:
- A) heritability.
 - B) inheritance.
 - C) Darwinism.
 - D) shared genes.
19. Experiences that are unique to the individuals in a family are referred to as:
- A) shared genetics.
 - B) nonshared genetics.
 - C) shared environment.
 - D) nonshared environment.
20. Effects of which of the following influences result from the fact that even children who grow up in the same family do not all have the same experiences?
- A) shared genetics
 - B) nonshared genetics
 - C) shared environment
 - D) nonshared environment
21. The primary effect of nonshared environmental factors is to:
- A) increase the differences among family members.
 - B) decrease the differences among family members.
 - C) increase the similarities among nonrelated individuals.
 - D) decrease the similarities among nonrelated individuals.
22. Brain cells that are specialized for transmitting electrical messages are called:
- A) neurons.
 - B) dendrites.
 - C) synapses.
 - D) glial cells.
23. The three main components of neurons are:
- A) axons, interneurons, and dendrites.
 - B) cell bodies, glials, and synapses.
 - C) dendrites, cell bodies, and axons.
 - D) cell bodies, axons, and myelin.

24. Synapses:
- A) keep the neuron functioning.
 - B) are the connections between neurons.
 - C) conduct electrical signals away from the cell body.
 - D) contain DNA.
25. The two hemispheres of the brain communicate via the:
- A) frontal lobe.
 - B) corpus callosum.
 - C) glial cells.
 - D) association areas.
26. Changes in the brain's electrical activity in response to a particular stimulus are referred to as:
- A) functional magnetic resonance images.
 - B) electrophysiological recordings.
 - C) norms of reaction.
 - D) event-related potentials.
27. In the process of synaptogenesis:
- A) axons are insulated.
 - B) neurons are created through cell division.
 - C) connections between neurons are formed.
 - D) the brain eliminates unnecessary synapses.
28. The capacity of the brain to be shaped by experience is referred to as:
- A) neurogenesis.
 - B) myelination.
 - C) synaptic pruning.
 - D) plasticity.
29. During which period of prenatal development do all the vital organ systems undergo most of their development?
- A) zygotic period
 - B) embryonic period
 - C) fetal period
 - D) conception

30. Which major developmental process is defined as cells specializing?
- A) cell division
 - B) apoptosis
 - C) cell migration
 - D) cell differentiation
31. Phylogenetic continuity is the:
- A) theory that growth and development are continuous during the first years of life.
 - B) process by which monozygotic twins have identical developmental processes.
 - C) idea that humans share certain characteristics and behaviors with animals as a result of their evolutionary history.
 - D) stage of initial cell divisions in a zygote.
32. What is the result when two eggs are released from the ovary into the fallopian tube and both are fertilized?
- A) apoptosis
 - B) identical twins
 - C) conception
 - D) fraternal twins
33. The _____ allows the exchange of material between the mother and the fetus.
- A) amniotic sac
 - B) placenta
 - C) neural tube
 - D) blastocyst
34. Fetal breathing:
- A) is thought to help develop the chest muscles necessary for breathing.
 - B) is used to determine the effects of drugs, such as cigarette smoke, on fetal development.
 - C) causes amniotic fluid to be drawn into the lungs.
 - D) All of these answers are correct.
35. A fetus gets taste exposure from:
- A) blood.
 - B) amniotic fluid.
 - C) neural tube.
 - D) placenta.

36. Which of the following is NOT a way scientists test for fetal learning?
- A) studying habituation of fetal movement to repeated stimulation
 - B) examining preferences of newborns based on their prenatal experience
 - C) assessing how much attention the fetus pays to auditory stimuli
 - D) asking mothers to sign up for "educate your unborn child" programs
37. The impact of harmful agents, known as teratogens, during prenatal development can vary in their effect, depending on all of the following EXCEPT:
- A) timing.
 - B) length of exposure.
 - C) dose–response relationship.
 - D) sleep/wake cycles.
38. The most sensitive or critical period of prenatal development is:
- A) the zygotic period.
 - B) the embryonic period.
 - C) the fetal period.
 - D) conception.
39. Which of the following is not a maternal factor that can affect the fetus during prenatal development?
- A) age
 - B) sleep/wake cycles
 - C) nutrition
 - D) stress
40. What best explains the ancient belief in preformation?
- A) Aristotle's arguments in its favor
 - B) advances in molecular science
 - C) ignorance of the existence of cells and genes
 - D) the discovery of gametes
41. A fertilized egg is known as a:
- A) zygote.
 - B) embryo.
 - C) chromosome.
 - D) germ cell.

42. During _____, cells begin to specialize in terms of structure and function.
- A) cell fertilization
 - B) cell migration
 - C) cell division
 - D) cell differentiation
43. Which of the following purposes does amniotic fluid serve for the developing fetus?
- A) cushioning it against jolting
 - B) providing it with an even temperature
 - C) enabling it to exercise
 - D) All of these are purposes.
44. The exchange of materials in the bloodstreams of the mother and the fetus is accomplished through the:
- A) neural tube.
 - B) umbilical cord.
 - C) amniotic sac.
 - D) fallopian tube.
45. A fetus experiences scent through:
- A) amniotic fluid.
 - B) blood.
 - C) habituation.
 - D) fetal breathing.
46. Habituation refers to:
- A) the ability of the fetus to breathe.
 - B) a decrease in response to repeated stimulation.
 - C) the deceleration of the fetal heart rate in response to sound.
 - D) how fetal learning is not persistent.
47. Which of the following best describes the newborn's auditory preferences based on its prenatal experience?
- A) Newborns cannot recognize their mother's voice.
 - B) Newborns show no preference as to voice.
 - C) Newborns prefer to listen to their mother's voice.
 - D) Newborns prefer any feminine voice.

48. The fact that rats raised in cages with toys have more dendritic spines and more synapses per neuron than rats raised in cages without this stimulation is an example of:
- A) sensitive periods.
 - B) experience-expectant plasticity.
 - C) experience-dependent plasticity.
 - D) neurogenesis.
49. The time when the most significant teratogenic damage can result from something the mother does or experiences:
- A) occurs before fertilization.
 - B) occurs during the last 4 weeks of pregnancy.
 - C) occurs during childbirth.
 - D) occurs before the woman might realize she is pregnant.
50. Teratogenic damage is most commonly caused by:
- A) alcohol.
 - B) tobacco.
 - C) legal drugs.
 - D) environmental influences.
51. An embryologist would be most interested in examining the:
- A) X-ray of the internal organs of a 2-year-old child.
 - B) ultrasound images of an unborn fetus at 4 weeks and at 20 weeks following conception.
 - C) blood test of a pregnant woman.
 - D) picture of all of the members of a family.
52. Sperm and eggs are referred to as:
- A) gametes.
 - B) embryos.
 - C) zygotes.
 - D) genetic cells.
53. Germ cells contain _____ chromosomes.
- A) 13
 - B) 23
 - C) 42
 - D) 46

54. A fertilized egg is termed a(n):
- A) embryo.
 - B) zygote.
 - C) fetus.
 - D) gamete.
55. Which of the following sequences is in the correct developmental progression from earliest to latest?
- A) embryo, fetus, zygote
 - B) zygote, fetus, embryo
 - C) fetus, zygote, embryo
 - D) zygote, embryo, fetus
56. Which of the following developmental processes occurs earliest?
- A) cell migration
 - B) apoptosis
 - C) cell division
 - D) cell differentiation
57. Which of the following occurrences is an example of cell division?
- A) splitting of the fertilized egg into two equal parts
 - B) death of cells in between the ridges on the hand plate
 - C) movement of new cells into the outer layer of the brain
 - D) specialization of eye cells
58. Embryonic cells are also known as:
- A) stem cells.
 - B) divided cells.
 - C) fertilized eggs.
 - D) zygotic cells.
59. Cell differentiation refers to the _____ of cells.
- A) division
 - B) specialization
 - C) migration
 - D) death

60. The idea that humans share some developmental processes with other animals because of our shared evolutionary history is referred to as:
- A) FASD.
 - B) developmental resilience.
 - C) fetal programming.
 - D) phylogenic continuity.
61. Apoptosis refers to:
- A) programmed cell death.
 - B) cell reproduction.
 - C) cell migration.
 - D) cell division.
62. The neural tube develops into the:
- A) internal organs.
 - B) brain and spinal cord.
 - C) digestive system.
 - D) inner layers of skin.
63. Which of the following organs contains the blood vessels running between the embryo and the placenta?
- A) umbilical cord
 - B) amniotic sac
 - C) neural tube
 - D) amniotic fluid
64. Which of the following adjectives describes a characteristic of the placenta?
- A) transparent
 - B) porous
 - C) watertight
 - D) semipermeable
65. The _____ protects the fetus from bumps and jolts?
- A) umbilical cord
 - B) amniotic fluid
 - C) neural tube
 - D) placenta

66. Which of the following statements about the rate of prenatal development is true?
- A) Earlier development takes place at a more rapid pace than later development.
 - B) Later development takes place at a more rapid pace than earlier development.
 - C) The pace of development remains relatively continuous.
 - D) Development begins slowly, speeds up, and then slows down again.
67. Times when the human brain is in particular need of external experience to develop normally are referred to as:
- A) experience-dependent plasticities.
 - B) sensitive periods.
 - C) cycles of vulnerability.
 - D) critical moments.
68. Young children who suffer damage to the language area of the cortex generally:
- A) recover to a greater extent than do adults who suffer the same damage.
 - B) recover to a lesser extent than do adults who suffer the same damage.
 - C) recover to an extent equal to that of adults who suffer the same damage.
 - D) fail to recover.
69. Interneurons serve as the intermediaries between:
- A) axons and dendrites in the same neuron.
 - B) cell bodies and synapses.
 - C) sensory and motor neurons.
 - D) axons and axon terminals.
70. Which of the following structures increases the speed and efficiency of electrical impulse transmission?
- A) myelin sheath
 - B) synapses
 - C) dendrites
 - D) glial cells
71. The cerebral cortex constitutes _____ of the human brain.
- A) 10%
 - B) 25%
 - C) 80%
 - D) 100%

72. The folds of the cerebral cortex:
- A) hold the myelin that increases the efficiency of the neurons.
 - B) permit the brain to be constantly bathed in protective fluid.
 - C) facilitate the communication of its different lobes.
 - D) allow more cortex to be packed into a small area.
73. Which of the following statements about the cerebral cortex is true?
- A) The function of the cerebral cortex is almost identical across a wide variety of animal species.
 - B) The lobes of the cerebral cortex differ in the general tasks with which they are associated.
 - C) The size of the cerebral cortex is unrelated to its function.
 - D) All of the statements are true.
74. Which lobe of the cerebral cortex is most important for the processing of emotion and auditory information?
- A) temporal
 - B) parietal
 - C) frontal
 - D) occipital
75. Which lobe of the cerebral cortex is most important for foresight and goal-directed behavior?
- A) temporal
 - B) parietal
 - C) frontal
 - D) occipital
76. Information from multiple sensory systems is processed and integrated in the:
- A) frontal lobe.
 - B) corpus callosum.
 - C) glial cells.
 - D) association areas.
77. For a right-handed person, the left hemisphere processes information in a piecemeal, linear manner, whereas the right hemisphere processes information in a holistic manner. This occurrence is a result of:
- A) association area specialization.
 - B) corpus callosum communication.
 - C) frontal lobe management.
 - D) cerebral lateralization.

78. Neurogenesis is essentially complete by approximately:
- A) 2 weeks after conception.
 - B) 18 weeks after conception.
 - C) 9 months after birth.
 - D) age 6.
79. After an individual neuron is produced in the neural tube, it:
- A) migrates to its final destination.
 - B) grows a collection of dendrites.
 - C) grows an axon which can elongate to over a meter in length.
 - D) All of the answers are correct.
80. Which of the following processes increases the capacity of dendrites to form connections with other neurons?
- A) synaptic pruning
 - B) arborization
 - C) myelination
 - D) formation of axon spines
81. During synaptogenesis, each neuron forms synapses with approximately how many other neurons?
- A) tens
 - B) hundreds
 - C) thousands
 - D) millions
82. Synapse elimination generally occurs as a result of:
- A) brain damage.
 - B) nutritional deficiencies.
 - C) normal overabundance of synapses.
 - D) mental retardation.
83. Earlier research on the timing of synapse production and elimination failed to show the changes at adolescence because:
- A) only males were examined.
 - B) the same individuals were not followed over time.
 - C) adolescents often fail to comply with important procedural instructions.
 - D) the brains of adolescents are too mature for examination with child measures and too immature for examination with adult measures.

84. The process by which the brain's excess synapses are pruned has been dubbed neural:
- A) Darwinism.
 - B) Scarrism.
 - C) Watsonism.
 - D) Mendelianism.
85. _____ plasticity relies on normal human experience for normal brain development and thus requires human genes to code less information and still result in normal development.
- A) Experience-dependent
 - B) Experience-independent
 - C) Experience-expectant
 - D) Experience-protected
86. _____ plasticity allows a person's personal experiences to shape brain development.
- A) Experience-dependent
 - B) Experience-independent
 - C) Experience-expectant
 - D) Experience-protected
87. Which of the following factors is a component of experience-dependent plasticity?
- A) more synapses per neuron
 - B) increased dendritic spines on cortical neurons
 - C) thicker cortex
 - D) more supportive tissues
 - E) All of the answers are correct.
88. Younger people can generally recover from brain damage to a greater extent than can adults because of:
- A) plasticity and timing.
 - B) plasticity and experience.
 - C) timing and experience.
 - D) reorganization and experience.

Answer Key - Biology Review

1. D
2. A
3. C
4. A
5. A
6. B
7. A
8. D
9. D
10. A
11. D
12. A
13. B
14. D
15. C
16. A
17. B
18. A
19. D
20. D
21. A
22. A
23. C
24. B
25. B
26. D
27. C
28. D
29. B
30. D
31. C
32. D
33. B
34. D
35. B
36. D
37. D
38. B
39. B
40. C
41. A
42. D
43. D
44. B
45. A
46. B
47. C
48. C
49. D
50. A
51. B
52. A

- 53. B
- 54. B
- 55. D
- 56. C
- 57. A
- 58. A
- 59. B
- 60. D
- 61. A
- 62. B
- 63. A
- 64. D
- 65. B
- 66. A
- 67. B
- 68. A
- 69. C
- 70. A
- 71. C
- 72. D
- 73. B
- 74. A
- 75. C
- 76. D
- 77. D
- 78. B
- 79. D
- 80. B
- 81. C
- 82. C
- 83. B
- 84. A
- 85. C
- 86. A
- 87. E
- 88. A