Essentials of Anatomy and Physiology for Nursing Practice 2nd edition Cook Test Bank

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Test bank

Correct answers are indicated by *

Using This Testbank

This testbank has been designed to be used in conjunction with *Essentials of Anatomy and Physiology for Nursing Practice, 2nd edition* by Neal Cook, Andrea Shepherd and Jennifer Boore. Correct answers for multiple choice questions are indicated with asterisks.

Chapter 1: Homeostasis

1. Match the terms from the following groups:

1. Substances entering the cell

2. Waste products leaving the cell

3. Conditions which allow life to continue

a. Steady temperature; pH between 7.35 and 7.45; electrolyte balance

b. Oxygen; substances for building complex molecules; substances acting as energy sources

c. Ammonia; carbon dioxide

Ans: 1[b], 2[c], 3[a].

2. Which term is used to describe the maintenance of a constant internal environment in the cell or body?

*a. homeostasis

b. equilibrium

c. pH balance

d. oxidative phosphorylation

3. Which of the following lists the correct sequence of levels forming the structural hierarchy of the body?

a. organ, organ system, cellular, tissue, organism

b. chemical, cellular, tissue, organism, organ, organ system

*c. chemical, cellular, tissue, organ, organ system, organism

d. organism, organ system, organ, tissue, cellular, chemical

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4. Consider a feedback loop where the stimulus is an increase in blood sugar. If the feedback loop is a negative feedback loop, what would be the result of such a stimulus?
a. increase in blood sugar levels
*b. decrease in blood sugar levels
c. initial increase in blood sugar levels, followed by a decrease
d. initial decrease in blood sugar levels, followed by an increase

5. What is the result of the initial stimulus in a positive feedback loop?
a. The stimulus is suppressed.
b. The stimulus is switched off.
c. There is no effect on the stimulus.
*d. The stimulus is amplified or exaggerated.

6. In systems controlled by negative feedback, the effector response returns the level of the stimulus towards its original level.
*a. True
b. False

7. Which of the following lists the correct sequence of messaging between the components of a control system?
a. control centre, receptors, effectors
*b. receptors, control centre, effectors
c. receptors, effectors, control system
d. effectors, control system, receptors

8. Which of the following apply to the control centre?
a. It sets the limits for a specific variable.
b. It integrates the information received with other information.
c. It sends instructions to change the action of the effector.
d. a. and c. above only

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*e. a., b. and c. above

9. Insert the missing term. Receptors and _____ communicate with the control centre to form a feedback system that regulates various internal conditions
Ans: effectors

10. Match the following descriptions with the correct body system.
1. the system that processes sensory information
2. the system that delivers nutrients to body tissues
3. the system that breaks down and absorbs food
4. the system that includes the fingernails
5. the system that includes the bladder
a. Urinary/renal
b. Integumentary
c. Digestive
d. Cardiovascular
e. Nervous
Ans: 1 (e)
2 (d)
3 (c)
4 (b)
5 (a)

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Chapter 2: The Human Cell

1. Which of the following molecules is the primary energy store in living cells?

a. DNA

b. RNA

c. Cyclic AMP

*d. ATP

2. What would be the result if a cell lacked ribosomes?

a. It would be unable to move.

*b. It would be unable to synthesise proteins.

c. It would be unable to synthesise DNA.

d. It would be unable to metabolise sugars.

e. It would be unable to divide.

3. Which compounds (1) form the inherited genetic material inside each cell and (2) relay instructions from the genes to guide protein synthesis?

*a. DNA and RNA

b. DNA and ATP

c. RNA and ATP

d. ADP and ATP

4. Which cell organelle is the main location for the production of useable energy in the form of ATP?

a. ribosome

b. rough endoplasmic reticulum

c. smooth endoplasmic reticulum

d. golgi apparatus

*e. mitochondrion

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5. Which cell organelle contains enzymes that destroy invading microbes or other harmful substances?

a. mitochondrion

b. ribosome

c. centriole

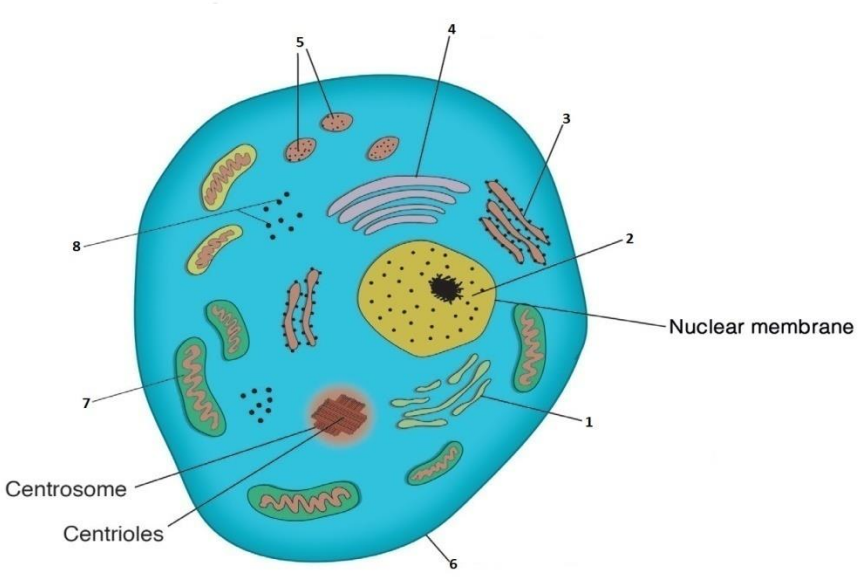
*d. lysosome

6. Proteins are packaged by the Golgi Body into secretory granules for export by exocytosis.

*a. True

b. False

7. Match the names of each of the structures to the correct number on the diagram of the cell.



Smooth endoplasmic reticulum, Golgi apparatus, Mitochondria, Nucleus, Rough endoplasmic reticulum, Plasma membrane, Ribosomes Secretory granules,

Ans:

1. Smooth endoplasmic reticulum

2. Nucleus

3. Rough endoplasmic reticulum

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4. Golgi apparatus
5. Secretory granules
6. Plasma membrane
7. Mitochondria
8. Ribosomes

8. What is the term used to describe fluids located outside the cell membrane?

*a. extracellular

b. extranuclear

c. intracellular

d. cytoplasmic

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Chapter 3: Genetic and Epigenetic Control of Biological Systems

1. What is the correct term for external modifications to DNA that turn genes on or off and, thus, alter particular characteristics?

a. non-coding DNA

*b. epigenetics

c. multifactorial inheritance

d. Punnett Square

2. Identify the core concepts of the three Laws of Inheritance from the list below.

a. Genetic alterations

*b. Dominance

c. Genomics

*d. Independent assortment

*e. Segregation

f. Punnett Square

g. Acquired characteristics

3. In inheritance when each parent carries one recessive gene for a specific gene, what is the probability in each pregnancy of having a child with the condition?

a. every child

b. one in ten

*c. one in four

d. fifty per cent

4. In mitochondrial inheritance, who passes the genes concerned on to the offspring?

a. father

b. both parents

*c. mother

d. either parent

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5. Multifactorial inheritance of disease involves genetic transmission influenced by environmental factors. Which of the following apply in this situation?

*a. Some ethnic groups develop particular disorders more commonly.

*b. A Mendelian pattern of inheritance is not shown.

*c. Concordance does not match expected Mendelian pattern in mono or dizygotic twins.

d. The disorder is sex-linked.

* e. a, b and c

f. all of these

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Chapter 4: The Human Microbiome and Health

1. Microbes can have a range of types of relationship within the human body. Link the following types with the appropriate description.

Types: 1. Commensals
2. Pathogens
3. Opportunists
4. Transients

Descriptions:
a. Briefly within the microbiota but do not colonise body
b. Normally harmless but can cause disease when immune system defences depressed
c. In symbiosis with host, harmless and gain nutrients from host
d. Cause disease, severity due to virulence of host and organism

Ans: 1(c), 2(d) 3(b) 4(a)

2. Match the following names and descriptions of types of bacteria.

Names: 1. Coccus
2. Vibrios
3. Spirochaetes
4. Bacillus

Descriptions: a. Spiral: as individuals
b. Rod: as individuals and chains
c. Curved: as individuals
d. Round: as individuals, pairs, chains and clusters

Ans: 1 (d); 2 (c); 3 (a); 4 (b)

3. Viruses are intracellular parasites and the virome is the viruses within the microbiome. Identify the correct statements in those given below.

*a. viruses multiply within their host cell
b. following multiplication, viruses congregate in groups in the ECF
*c. viruses consist of nucleic acid (RNA or DNA) surrounded by a protein capsule

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