TEST BANK

KARP'S CELL & MOLECULAR BIOLOGY

9th Edition,

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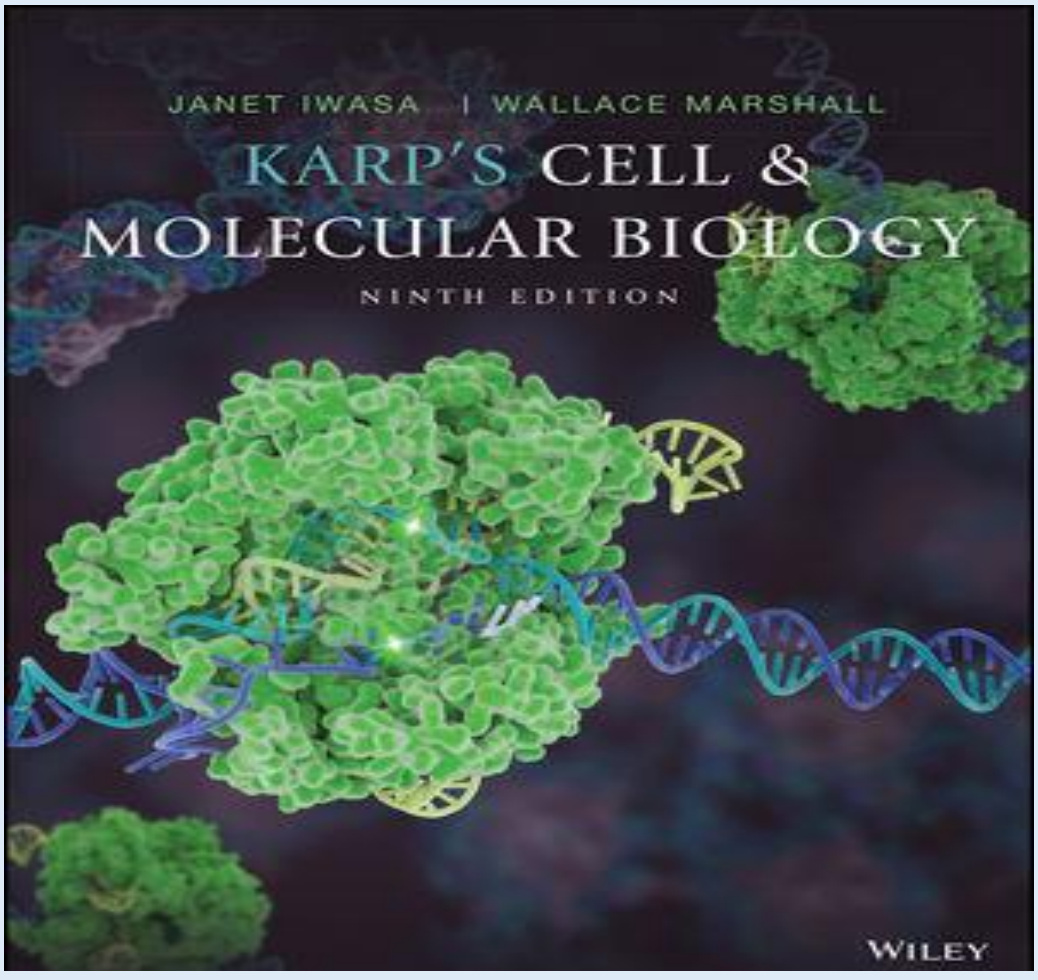

TEST BANK

Test Bank for Karp's Cell and Molecular Biology 9th Edition Karp

Table of Contents:

Chapter 1: Introduction to the Study of Cell and Molecular Biology

Karp's Cell and Molecular Biology, 9th Edition

Question Type: Multiple Choice

1) Who was the first person to name what he thought were single cells?

a) Leeuwenhoek
b) Hooke
c) Schleiden
d) Schwann
e) Virchow

Answer: b

Difficulty: Easy
Learning Objective: LO 1.1 Identify the three tenets of cell theory.
Section Reference: Section 1.1 The Discovery of Cells

2) The first compound light microscopes were constructed by the end of the sixteenth century. What characteristic defines a compound microscope?

a) It has a moveable stage.
b) It has multiple lenses.
c) Its lens is double the size of simple microscopes.
d) The lens has two different colors.
e) It has two different light sources.

Answer: b

Difficulty: Easy
Learning Objective: LO 1.1 Identify the three tenets of cell theory.
Section Reference: Section 1.1 The Discovery of Cells

3) Who was the first scientist to examine and describe living cells?

a) Leeuwenhoek
b) Hooke
c) Schleiden
d) Schwann
e) Virchow

Answer: a

Difficulty: Easy
Learning Objective: LO 1.1 Identify the three tenets of cell theory.
Section Reference: Section 1.1 The Discovery of Cells

4) Who is generally credited with the discovery of cells?

a) Leeuwenhoek
b) Hooke
c) Schleiden
d) Schwann
e) Virchow

Answer: b

Difficulty: Easy
Learning Objective: LO 1.1 Identify the three tenets of cell theory.
Section Reference: Section 1.1 The Discovery of Cells

5) Despite being correct about the first two tenets of the Cell Theory, Schleiden and Schwann made an error about another central feature of cells. What was their mistaken claim?

a) They believed that all cells were smaller than 2 μ in diameter.
b) They claimed that all cells were exactly the same in every detail.
c) They described cells as immortal.
d) They agreed that cells could arise from noncellular materials.
e) They stated that all cells had nuclei through their entire existence.

Answer: d

Difficulty: Medium
Learning Objective: LO 1.1 Identify the three tenets of cell theory.
Section Reference: Section 1.1 The Discovery of Cells

6) Which of the following characteristics is NOT a basic property of cells?

a) Cells carry out a variety of emotional reactions.
b) Cells engage in numerous mechanical activities.
c) Cells generally respond to stimuli.
d) Cells are capable of self-regulation.
e) Cells evolve.

Answer: a

Difficulty: Easy
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

7) Which of the following statements accurately characterize cells?

a) Cells are highly complex and organized.
b) Cells possess a genetic program and the means to use it.
c) Cells are capable of producing more of themselves.

d) Cells acquire and utilize energy.
e) All choices are correct.

Answer: e

Difficulty: Easy
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

8) The first culture of human cells was begun by George and Martha Gey of Johns Hopkins University in 1951. The cells were obtained from a malignant tumor and named_____cells after the donor, _____.

a) MaLe, Mary Leeds
b) HeLa, Henrietta Lacks
c) Roberts, John Roberts
d) MaLe, Martin Lewis
e) HeLa, Helen Lassiter

Answer: b

Difficulty: Medium
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

9) Cells grown in culture, outside the body are described as cells grown_____.

a) in vivo
b) live
c) in vitro
d) in culturo
e) vivacious

Answer: c

Difficulty: Medium
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

10) A high powered microscope that allows cellular organelles to be examined in great detail is called _____.

a) a refractive microscope
b) an electron microscope
c) a fluorescence microscope
d) a scanning tunneling microscope
e) a confocal laser scanning microscope

Answer: b

Difficulty: Easy

Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

11) Which list shows the correct order for cellular complexity from largest to smallest units?

a) organelles, polymers, atoms, complexes, molecules
b) organelles, complexes, polymers, molecules, atoms
c) organelles, molecules, complexes, atoms, polymers
d) organelles, atoms, molecules, complexes, polymers

Answer: b

Difficulty: Easy
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

12) The apical ends of intestinal cells face the intestinal channel and have long processes that facilitate the absorption of nutrients. What is the name of these processes and what cytoskeletal element forms their internal skeleton?

a) microvilli, microtubules
b) villi, microtubules
c) microvilli, actin filaments
d) villi, actin filaments
e) microvilli, intermediate filaments

Answer: c

Difficulty: Medium
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

13) Virtually all chemical changes that take place in cells require_____, molecules that greatly increase the rate at which a chemical reaction occurs.

a) DNAs
b) carbohydrates
c) ligands
d) enzymes

Answer: d

Difficulty: Easy
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

14) You are conducting an experiment by trying to reproduce the work performed in 1891 by Hans Driesch, a German embryologist. Working with a fertilized sea urchin egg, you allow it to complete the first cell division after fertilization. You then carefully separate the two cells of the embryo and allow

their development to continue. Based on Driesch's experiment, which result below would you expect to happen?

a) Both of the cells will die.
b) Both of the cells will develop into complete and normal embryos.
c) One cell will develop into a normal, though smaller, embryo; the other dies.
d) One cell will develop into half an embryo; the other will develop into the other half of the embryo.
e) One cell will develop into a defective embryo and the other will die.

Answer: b

Difficulty: Hard
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

15) The original cell which arose billions of years ago is referred to by some evolutionary biologists as the_____.

a) first universal common ancestor
b) last universal common ancestor
c) evolutionary tree root
d) evolutionary shrub
e) first eukaryote

Answer: b

Difficulty: Medium
Learning Objective: LO 1.2 Explain the importance of the fundamental properties shared by all cells.
Section Reference: Section 1.2 Basic Properties of Cells

16) What characteristics distinguish prokaryotic and eukaryotic cells?

a) Eukaryotes have membrane-bound organelles; prokaryotes do not.
b) Prokaryotes have relatively little DNA; eukaryotes generally have much more.
c) Eukaryotic chromosomes are linear; prokaryotic chromosomes are circular.
d) Eukaryotic DNA is usually heavily associated with protein to form a nucleoprotein complex called chromatin, which is not seen in prokaryotic genetic material.
e) All of these are correct.

Answer: e

Difficulty: Medium
Learning Objective: LO 1.3 Compare the structures and functions of prokaryotic and eukaryotic cells.
Section Reference: Section 1.3 Two Fundamentally Different Classes of Cells

17) Which of the following are NOT considered to belong to the Archaea?

a) Methanogens
b) Halophiles
c) Acidophiles
d) Thermophiles