

# Applied Pathophysiology for the Advanced Practice Nurse

## 1st Edition Dlugasch Story Test Bank

### Chapter 1 Cellular Function

1.	The nucleus _____, which is essential for function and survival of the cell.
A)	is the site of protein synthesis
B)	contains the genetic code
C)	transforms cellular energy
D)	initiates aerobic metabolism
2.	Although energy is not made in mitochondria, they are known as the power plants of the cell because they:
A)	contain RNA for protein synthesis.
B)	utilize glycolysis for oxidative energy.
C)	extract energy from organic compounds.
D)	store calcium bonds for muscle contractions.
3.	Although the basic structure of the cell plasma membrane is formed by a lipid bilayer, most of the specific membrane functions are carried out by:
A)	bound and transmembrane proteins.
B)	complex, long carbohydrate chains.
C)	surface antigens and hormone receptors.
D)	a gating system of selective ion channels.
4.	To effectively relay signals, cell-to-cell communication utilizes chemical messenger systems that:
A)	displace surface receptor proteins.

B)	accumulate within cell gap junctions.
C)	bind to contractile microfilaments.
D)	release secretions into extracellular fluid.

5.	Aerobic metabolism, also known as oxidative metabolism, provides energy by:
A)	removing the phosphate bonds from ATP.
B)	combining hydrogen and oxygen to form water.
C)	activating pyruvate stored in the cytoplasm.
D)	breaking down glucose to form lactic acid.

6.	Exocytosis, the reverse of endocytosis, is important in _____ into the extracellular fluid.
A)	Engulfing and ingesting fluid and proteins for transport
B)	Killing, degrading, and dissolving harmful microorganisms
C)	Removing cellular debris and releasing synthesized substances
D)	Destruction of particles by lysosomal enzymes for secretion

7.	The process responsible for generating and conducting membrane potentials is:
A)	diffusion of current-carrying ions.
B)	millivoltage of electrical potential.
C)	polarization of charged particles.
D)	ion channel neurotransmission.

8.	Epithelial tissues are classified according to the shape of the cells and the number of layers. Which of the following is a correctly matched description and type of epithelial tissue?
A)	Simple epithelium: cells in contact with intercellular matrix; some do not extend to surface

B)	Stratified epithelium: single layer of cells; all cells rest on basement membrane
C)	Glandular epithelium: arise from surface epithelia and underlying connective tissue
D)	Pseudostratified epithelium: multiple layers of cells; deepest layer rests on basement membrane

9.	Connective tissue contains fibroblasts that are responsible for:
A)	providing a fibrous framework for capillaries.
B)	synthesis of collagen, elastin, and reticular fibers.
C)	forming tendons and the fascia that covers muscles.
D)	filling spaces between tissues to keep organs in place.

10	Although all muscle tissue cells have some similarities, smooth muscle (also known as involuntary muscle) differs by:
A)	having dense bodies attached to actin filaments.
B)	containing sarcomeres between Z lines and M bands.
C)	having rapid contractions and abundant cross-striations.
D)	contracting in response to increased intracellular calcium.

11	Which of the following aspects of the function of the nucleus is performed by ribosomal RNA (rRNA)?
A)	Copying and carrying DNA instructions for protein synthesis
B)	Carrying amino acids to the site of protein synthesis
C)	Providing the site where protein synthesis occurs
D)	Regulating and controlling protein synthesis

12	Breakdown and removal of foreign substances and worn-out cell parts are performed by which of the following organelles?
A)	Lysosomes