

1. This is defined as fully differentiated body part with specialized functions:
 - A) cell
 - B) organ
 - C) tissue
 - D) system

2. Which of the following is characteristic of the plasma membrane?
 - A) contains a single layer of lipids with polar heads
 - B) contains a single layer of lipids with nonpolar heads
 - C) contains a bilayer of lipids with polar heads
 - D) contains a bilayer of lipids with nonpolar heads

3. Receptors that project into either the intracellular or the extracellular environments are known as:
 - A) transmembrane proteins
 - B) integral proteins
 - C) peripheral proteins
 - D) channel proteins

4. The organelle responsible for synthesis of proteins by bound ribosomes is called the:
 - A) rough endoplasmic reticulum
 - B) smooth endoplasmic reticulum
 - C) Golgi apparatus
 - D) proteosome

5. Which one of the following is part of the cellular cytoskeleton?
 - A) mitochondria
 - B) gene
 - C) cytoplasm
 - D) actin

6. The transport mechanism requiring energy is:
 - A) diffusion
 - B) osmosis
 - C) facilitated diffusion
 - D) primary active transport

7. Phagocytosis is an example of which type of cellular function?
- A) ingestion
 - B) respiration
 - C) communication
 - D) reproduction
8. Which form of signal transduction resulting from ligand-receptor binding has the potential to produce effects in the entire body system?
- A) endocrine
 - B) paracrine
 - C) autocrine
 - D) local mediation
9. What is the process that makes cells with the same genetic material develop into specific cell types?
- A) reproduction
 - B) differentiation
 - C) prophase
 - D) meiosis
10. Reduction in functional demand leads to cellular:
- A) atrophy
 - B) hypertrophy
 - C) hyperplasia
 - D) dysplasia
11. Increase in functional demand resulting in increased cell size is:
- A) atrophy
 - B) hypertrophy
 - C) hyperplasia
 - D) dysplasia
12. Increase in functional demand resulting in increased cell number is:
- A) atrophy
 - B) hypertrophy
 - C) hyperplasia
 - D) dysplasia

13. Due to a persistent stressor, columnar cells may turn into squamous cells as a method of adaptation. This process is known as:
- A) metaplasia
 - B) dysplasia
 - C) anaplasia
 - D) hyperplasia
14. Cell death associated with inflammation is known as:
- A) mitosis
 - B) dysplasia
 - C) apoptosis
 - D) necrosis
15. Damage to cells resulting from frostbite is classified as which type of injury?
- A) mechanical
 - B) thermal
 - C) chemical
 - D) endogenous
16. The permanent cessation of menses is known as:
- A) perimenopause
 - B) climacteric
 - C) menopause
 - D) menarche
17. Identify the factor that differentiates gigantism from acromegaly.
18. What are the similarities and differences between mitosis and meiosis?
19. Distinguish the differences between typical patterns of altered menstruation seen during the gradual transition to menopause.
20. List the three criteria used in the treatment of menopausal symptoms.
21. Distinguish between primary and secondary forms of cardiac hypertrophic cardiomyopathy. What are the similarities? What are the differences?

22. How does treatment for hypertension improve secondary hypertrophic cardiomyopathy?
23. Describe the effect of hormonal fluctuations on the cervical transformation zone.
24. List three risk factors that increase the risk for the development of cervical cancer.
25. What are the differences between screening and diagnostic tests? Provide examples of one screening and one diagnostic test for cervical cancer.
26. Describe how toxins in the air contribute to cardiovascular disease.

Answer Key

1. B
2. C
3. C
4. A
5. D
6. D
7. A
8. A
9. B
10. A
11. B
12. C
13. A
14. D
15. B
16. D
17. Gigantism is due to hormone-stimulated excessive growth before epiphyseal growth plate closure. Acromegaly is due to hormone-stimulated excessive growth after epiphyseal growth plate closure.
18. Mitosis is the process of somatic cell division leading to the production of two genetically identical daughter cells containing 23 pairs of chromosomes. Meiosis is the process of the division of gametes, producing genetically variable cells each containing 23 single chromosomes.
19. Menorrhagia is excessive flow or prolonged duration of flow; metorrhagia is irregular menstrual intervals; metomenorrhagia is a shortened menstrual interval accompanied by heavy bleeding; polymenorrhea refers to shortened menstrual interval.
20. Severity of symptoms; short-term treatment duration; lowest effective dosage of pharmacologic treatment.
21. Primary hypertrophic cardiomyopathy results from an inherited genetic autosomal dominant trait. Secondary hypertrophic cardiomyopathy is due to an underlying condition, such as hypertension. Both conditions promote hypertrophy of cells in the left ventricle due to increased workload. Primary hypertrophic cardiomyopathy most often causes manifestations in young individuals. Secondary hypertrophic cardiomyopathy most often causes symptoms in older individuals.
22. Treatment of hypertension reduces outflow obstruction in the aorta, reducing ventricular workload.
23. The transformation zone, also known as the squamocolumnar junction, is the location of the merger of the squamous cells of the ectocervix and the columnar cells of the cervical canal. The transformation zone migrates from inside the endocervical canal to the ectocervix under high estrogen conditions and recedes into the endocervical canal under conditions of low estrogen.
24. Early age of sexual activity onset, multiple sexual partners, exposure to oncogenic forms of the human papilloma virus (HPV), and smoking.
25. A screening test suggests the presence of disease while a diagnostic test confirms the

presence of disease. The Pap smear and HPV testing are considered screening tests for cervical cancer. Diagnostic tests for cervical cancer include colposcopy and biopsy of cervical tissue.

26. Toxic substances in the air lead to physical cellular injury leading to disease and illness. Airborne particulate matter causes oxidative damage in the heart and blood vessel cells.