Applied Pathophysiology for the Advanced Practice Nurse, First Edition
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Chapter 1 Assessment Quiz

Import Settings:
Base Settings: Brownstone Default
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Chapter: Chapter 01 - Quiz

Multiple Choice

1. Protein hormones and enzymes are stored in the _____, awaiting signals to be released into the cell.
A) food vacuole
B) Golgi complex
C) rough endoplasmic reticulum
D) secretory vesicles
Ans: D
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

2. Low serum albumin levels (hypoalbuminemia) can cause edema because:
A) oncotic pressure increases.
B) oncotic pressure decreases.
C) osmotic pressure increases.
D) hydrostatic pressure decreases.
Ans: B
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

3. Neurotransmitters are packaged into vesicles and then fuse with the cell membrane for release. This is an example of:
A) pinocytosis.
B) phagocytosis.
C) exocytosis.

D) endocytosis.
Ans: C
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

4. What is a possible reason for increased risk for chromosomal abnormalities with older maternal age?
A) Ova meiosis is complete by the time a girl is born thereby making them less likely to divide properly.
B) The older ova are more likely to have errors during meiosis.
C) Older ova are more likely to have p53 gene mutations.
D) Ova are continuously produced thereby increasing the chance of creating defective ova.
Ans: B
Complexity: Moderate
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

5. DNA that is transmitted from parents to offspring mainly comes from the:
A) mitochondria.
B) nucleolus.
C) ribosomes.
D) nucleus.
Ans: D
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

6. A patient will be receiving stem cells obtained from a donor's blood (allogenic transplant) for leukemia (abnormal white blood cells). These stem cells are categorized as multipotent because they can make:
A) multiple types of cells in the body.
B) only white blood cells.
C) all types of blood cells.
D) differentiated cells that can become any cell.
Ans: C
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

7. During which phase of the cell cycle are there "checkpoints" where damaged DNA is fixed?
A) Interphase
B) Prophase
C) Metaphase
D) Anaphase
Ans: A

Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

8. A woman had a biopsy of a breast mass. Which of the following findings are considered precancerous?
A) Columnar metaplasia
B) Ductal atrophy
C) Atypical hyperplasia
D) Squamous hypertrophy
Ans: C
Complexity: Easy
Ahead: Cellular Adaptation and Damage
Subject: Chapter 1
Title: Cellular Function

9. A _____ gene is one that produces an effect only in the homozygous state.
A) dominant
B) recessive
C) sex-linked
D) hemizygous
Ans: B
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

10. Antioxidants found in food and vitamin supplements are thought to:
A) increase oxygenation.
B) improve absorption of beneficial minerals.
C) increase elimination of toxic chemicals.
D) counteract oxidative stress.
Ans: D
Complexity: Easy
Ahead: Cellular Adaptation and Damage
Subject: Chapter 1
Title: Cellular Function

11. Single nucleotide polymorphisms are best described as:
A) disease-causing genetic mutations.
B) variations on a single DNA base pair.
C) a number of copies on a particular gene that varies.
D) base pairs that alter gene expression.
Ans: B
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1

Title: Cellular Function

12. Which of the following are characteristic of malignant cells?
A) Anaplastic, proliferate, and nonfunctioning
B) Well differentiated and nonfunctioning
C) Anaplastic, encapsulated, and functioning
D) Some differentiation, evade apoptosis, and functioning
Ans: A
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

13. A patient has pancreatic cancer and has a RAS proto-oncogene mutation. This oncogene affects cells by:
A) suppressing cellular growth and division.
B) turning off protein transcription.
C) allowing the cell to gain function such as proliferation.
D) destroying cellular repair mechanisms.
Ans: C
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

14. A mutation of the breast carcinoma 1 and 2 (*BRCA1* and *BRCA2*) gene associated with cancer of the breast and ovaries will result in cell:
A) loss of tumor suppressor function.
B) gain of tumor suppressor function.
C) accelerated hyperplasia.
D) increase in protein transcription.
Ans: A
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

15. Epigenetics is the field of science that evaluates:
A) changes in underlying DNA sequence.
B) single nucleotide polymorphism development.
C) copy number variant development.
D) mechanism of activation and deactivation of genes.
Ans: D
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

16. Dysplasia of epithelial cells sometimes results from:
A) excessive sodium intake.
B) chronic irritation or inflammation.
C) increased enzyme synthesis.
D) apoptosis.
Ans: B
Complexity: Easy
Ahead: Cellular Adaptation and Damage
Subject: Chapter 1
Title: Cellular Function

17. Which of the following types of gangrene is usually a result of arterial occlusion?
A) Necrosis
B) Dry
C) Wet
D) Gas
Ans: D
Complexity: Easy
Ahead: Cellular Adaptation and Damage
Subject: Chapter 1
Title: Cellular Function

18. A metastatic tumor is one that:
A) needs an adequate blood supply to survive.
B) shows slow expansion and well-differentiated cells.
C) remains active to survive.
D) invades deeply into the tissue where it arose.
Ans: A
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

19. An example of a test that is used for cancer screening (asymptomatic test) is:
A) cytology (pap) smear.
B) endometrial (uterine) biopsy.
C) magnetic resonance imaging of the lungs.
D) thyroid cancer blood tests.
Ans: A
Complexity: Easy
Ahead: Neoplasms
Subject: Chapter 1
Title: Cellular Function

20. Enzymes that use oxidation to convert food materials into energy are found in sausage-shaped structures called:
A) secretory vesicles.
B) ribosomes.
C) mitochondria.
D) Golgi apparatus.
Ans: C
Complexity: Easy
Ahead: Basic Cell Function and Structure
Subject: Chapter 1
Title: Cellular Function

21. _____ syndrome occurs in males when there is an extra X chromosome.
A) Triple X
B) Turner
C) Klinefelter
D) XYY
Ans: C
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

22. A couple has three offspring: one child has an autosomal dominant disease trait and the other two children do not have the trait. The father is affected by the autosomal dominant disease, but the mother does not have the disease gene. What is the recurrence risk of this autosomal dominant disease for their next child?
A) 50%
B) 33%
C) 25%
D) Unable to determine
Ans: A
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

23. What is the diagnosis of a 13-year-old female who has a karyotype that reveals an absent homologous X chromosome with only a single X chromosome present? Her features include a short stature, widely spaced nipples, reduced carrying angle at the elbow, and sparse body hair.
A) Down syndrome
B) Cri du Chat
C) Fragile X syndrome
D) Turner syndrome
Ans: D
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

24. A normal male and a female carrier for red–green color blindness want to have children. Given that red–green color blindness is an X-linked recessive trait, what information should be given to the parents?
A) 25% males affected
B) 50% females affected
C) Females mostly affected; no males affected
D) Males mostly affected; females mostly carriers
Ans: D
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

25. A 5-year-old male presents with mental retardation and is diagnosed with Fragile X syndrome. When the parents ask what caused this, the nurse practitioner responds with:
A) translocation of the Philadelphia chromosome.
B) nondisjunction of chromosome 21.
C) expansion of cytosine-guanine-guanine (CGG) repeats 200.
D) mutation in the transmembrane conductance regulator.
Ans: C
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

26. To express a polygenic trait:
A) genes must interact with the environment.
B) several genes must act together.
C) multiple mutations must occur in the same family.
D) penetrance must occur.
Ans: B
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

27. A colleague asks why people who have neurofibromatosis will show varying degrees of the disease. Which genetic principle would explain this variation?
A) Penetrance
B) Expressivity
C) Dominance
D) Recessiveness
Ans: B
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

28. What information should parents be given about the consequences of phenylketonuria (PKU)?
A) Mental retardation is inevitable.
B) PKU is commonly associated with other congenital anomalies.
C) High dietary tyramine may help induce enzyme production.
D) Failure to treat properly results in progressive mental retardation.
Ans: D
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function

29. Children with PKU must avoid phenylalanine in the diet. Phenylalanine is most likely a component of:
A) fat.
B) sugar.
C) protein.
D) carbohydrate.
Ans: C
Complexity: Easy
Ahead: Genetic and Congenital Disorders
Subject: Chapter 1
Title: Cellular Function