1. Programmed cell death is called
   A. mitosis
   B. cytokinesis
   C. apoptosis
   D. interphase

2. Apoptosis is critical for
   A. cell division to occur correctly
   B. removing cells which are dividing when they should not
   C. spermatogenesis
   D. DNA synthesis

3. A photograph of cellular chromosomes taken just prior to division and arranged in pairs is called:
   A. micrograph
   B. chromograph
   C. karyotype
   D. photochromograph

4. The normal cycle of events whereby a cell grows and divides is called:
   A. the circle of life
   B. the cell cycle
   C. cytotropism
   D. cytogenesis

5. The interval of time between cell divisions is called:
   A. interphase
   B. cytokinesis
   C. cellular streaming
   D. furrowing
6. The cell cycle consists of:

   A. mitosis and meiosis
   B. interphase, cytokinesis and mitosis
   C. mitosis and cell death
   D. meiosis and cell death

7. Interphase:

   A. is truly a resting stage
   B. is a time of DNA replication
   C. has cellular activity before DNA replication
   D. is a time of DNA replication and cellular activity before DNA replication

8. Cells that are about to divide contain:

   A. 3n chromosomes
   B. 1n chromosomes
   C. two nuclei
   D. duplicated chromosomes

9. In a non-dividing cell, the nucleus contains indistinct and diffuse chromatin, but in a dividing cell, these become short and thick and are called:

   A. genes
   B. DNA
   C. chromosomes
   D. chromatin
   E. chromogen

10. Chromatids within a replicated chromosome are held together by a:

    A. centriole
    B. centromere
    C. chromocenter
    D. spindle fiber
11. Mitosis is characterized by four stages. Place these in chronological order:

A. anaphase, prophase, telophase, metaphase
B. prophase, telophase, metaphase, anaphase
C. prophase, metaphase, anaphase, telophase
D. telophase, metaphase, anaphase, prophase

12. The structures that begin to attach to centromeres as the chromosomes continue to shorten and thicken during prophase are:

A. asters
B. chromatin
C. centromeres
D. spindle fibers

13. Mitosis is NOT associated with:

A. a body cell
B. tissue repair
C. the zygote
D. sperm and egg production

14. In this phase, chromosomes arrive at the poles and an indentation passes around the circumference of the cell:

A. interphase
B. prophase
C. metaphase
D. anaphase
E. telophase

15. Pairs of similar chromosomes are called:

A. tetrads
B. homologous
C. bifurcates
D. replicants
16. In meiosis, the process of homologous chromosomes lining up together side-by-side is called:

A. tetrad  
B. synapsis  
C. alignment  
D. crossing-over

17. Homologous chromosomes separate during which phase of meiosis:

A. metaphase I  
B. anaphase I  
C. telophase I

18. The cells resulting from meiotic division are called:

A. parent cells  
B. daughter cells  
C. autosomic cells  
D. dyad pairs  
E. homozygous cells

19. In the beginning of meiosis II, each chromosome is duplicated and attached. These chromosomes are called:

A. homologous chromosomes  
B. tetrads  
C. autosomic chromosomes  
D. sister chromatids  
E. sister chromosomes

20. In prophase of meiosis I, homologous chromosomes form groupings called:

A. dyads  
B. tetrads  
C. synapsis  
D. di-kinases  
E. di-hybrid crosses
21. Crossing-over:

A. is a way to recombine the genetic material during meiosis
B. causes mutagens
C. occurs during interphase
D. is associated with mitosis

22. During crossing-over:

A. exchange of genetic material occurs
B. sister chromatids duplicate genetic material
C. all chromatids shuffle their own genetic material
D. chromosomes align in parallel

23. A single diploid cell is divided into four haploid cells in:

A. meiosis only
B. mitosis only
C. both meiosis and mitosis

24. Choose the following description of a polar body that is the most accurate.

A. a small, malformed sperm formed during spermatogenesis
B. a small daughter cell formed during oogenesis
C. a small malformed sperm formed during oogenesis
D. a small daughter cell formed during spermatogenesis

25. Following mitosis, a human cell:

A. is 2N
B. has 23 pairs of homologous chromosomes
C. has either an X or Y
D. is both 2N and has 23 pairs of homologous chromosomes

26. An inactive X chromosome is called a

A. Down body
B. Jacobs body
C. Barr body
D. Trisome body
27. Trisomy 21 is more commonly known as:

A. Turner syndrome  
B. cri-du-chat  
C. Klinefelter's  
D. Down syndrome  
E. Duchene disorder  

28. Turner syndrome individuals have which genotype?

A. XXY  
B. XO  
C. XYY
1. Programmed cell death is called
   a. mitosis
   b. cytokinesis
   C. apoptosis
   d. interphase

2. Apoptosis is critical for
   a. cell division to occur correctly
   B. removing cells which are dividing when they should not
   c. spermatogenesis
   d. DNA synthesis

3. A photograph of cellular chromosomes taken just prior to division and arranged in pairs is called:
   a. micrograph
   b. chromograph
   C. karyotype
   d. photochromograph

4. The normal cycle of events whereby a cell grows and divides is called:
   a. the circle of life
   B. the cell cycle
   c. cytotropism
   d. cytogenesis
5. The interval of time between cell divisions is called:
   A. interphase  
   b. cytokinesis  
   c. cellular streaming  
   d. furrowing

6. The cell cycle consists of:
   a. mitosis and meiosis  
   B. interphase, cytokinesis and mitosis  
   c. mitosis and cell death  
   d. meiosis and cell death

7. Interphase:
   a. is truly a resting stage  
   b. is a time of DNA replication  
   c. has cellular activity before DNA replication  
   D. is a time of DNA replication and cellular activity before DNA replication

8. Cells that are about to divide contain:
   a. 3n chromosomes  
   b. 1n chromosomes  
   c. two nuclei  
   D. duplicated chromosomes
9. In a non-dividing cell, the nucleus contains indistinct and diffuse chromatin, but in a dividing cell, these become short and thick and are called:

   a. genes
   b. DNA
   C chromosomes
   d. chromatin
   e. chromogen

10. Chromatids within a replicated chromosome are held together by a:

   a. centriole
   B centromere
   c. chromocenter
   d. spindle fiber

11. Mitosis is characterized by four stages. Place these in chronological order:

   a. anaphase, prophase, telophase, metaphase
   b. prophase, telophase, metaphase, anaphase
   C prophase, metaphase, anaphase, telophase
   d. telophase, metaphase, anaphase, prophase

12. The structures that begin to attach to centromeres as the chromosomes continue to shorten and thicken during prophase are:

   a. asters
   b. chromatin
   c. centromeres
   D spindle fibers
13. Mitosis is NOT associated with:
   a. a body cell
   b. tissue repair
   c. the zygote
   D sperm and egg production

14. In this phase, chromosomes arrive at the poles and an indentation passes around the circumference of the cell:
   a. interphase
   b. prophase
   c. metaphase
   d. anaphase
   E telophase

15. Pairs of similar chromosomes are called:
   a. tetrads
   B homologous
   c. bifurcates
   d. replicants

16. In meiosis, the process of homologous chromosomes lining up together side-by-side is called:
   a. tetrad
   B synapsis
   c. alignment
   d. crossing-over

17. Homologous chromosomes separate during which phase of meiosis:
   a. metaphase I
   B anaphase I
   c. telophase I
18. The cells resulting from meiotic division are called:
   a. parent cells
   **B** daughter cells
   c. autosomic cells
   d. dyad pairs
   e. homozygous cells

19. In the beginning of meiosis II, each chromosome is duplicated and attached. These chromosomes are called:
   a. homologous chromosomes
   b. tetrads
   c. autosomic chromosomes
   **D** sister chromatids
   e. sister chromosomes

20. In prophase of meiosis I, homologous chromosomes form groupings called:
   a. dyads
   **B** tetrads
   c. synapsis
   d. di-kinases
   e. di-hybrid crosses

21. Crossing-over:
   
   **A** is a way to recombine the genetic material during meiosis
   b. causes mutagens
   c. occurs during interphase
   d. is associated with mitosis
22. During crossing-over:

A exchange of genetic material occurs
b. sister chromatids duplicate genetic material
c. all chromatids shuffle their own genetic material
d. chromosomes align in parallel

23. A single diploid cell is divided into four haploid cells in:

A meiosis only
b. mitosis only
c. both meiosis and mitosis

24. Choose the following description of a polar body that is the most accurate.

a. a small, malformed sperm formed during spermatogenesis
B a small daughter cell formed during oogenesis
c. a small malformed sperm formed during oogenesis
d. a small daughter cell formed during spermatogenesis

25. Following mitosis, a human cell:

A is 2N
b. has 23 pairs of homologous chromosomes
c. has either an X or Y
d. is both 2N and has 23 pairs of homologous chromosomes

26. An inactive X chromosome is called a

a. Down body
b. Jacobs body
C Barr body
d. Trisome body
27. Trisomy 21 is more commonly known as:
   a. Turner syndrome
   b. cri-du-chat
   c. Klinefelter's
   D Down syndrome
   e. Duchene disorder

28. Turner syndrome individuals have which genotype?
   a. XXY
   B XO
   c. XYY
Bio 100 - Chapter 18 Summary

<table>
<thead>
<tr>
<th>Category</th>
<th># of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mader - 018 Chapter...</td>
<td>28</td>
</tr>
</tbody>
</table>