A & P I
PRACTICE TEST I

1. Define a Chemical Element:__________________________

2. There are approximately 109 recognized Chemical Elements, of these, about 24 are found in the body. Name the 6 elements that make up 99% of all living organisms.
   1. ____________________________
   2. ____________________________
   3. ____________________________
   4. ____________________________
   5. ____________________________
   6. ____________________________

3. Which of the following is not part of an atom?
   A. Proton        c. Electron
   B. Isotope       D. Neutron
   C. Electron      E. All of the above

4. An Isotope is an atom of a particular element with the same # of Protons, but with a different # of______________________

5. A strong bond that utilizes equal sharing of electrons between atoms is a(n)__________________________bond.

6. A bond that has actual transfer of electrons from one atom to another is a(n)__________________________bond.
7. Which of the following is not considered one of the four (4) major classes of organic compounds.
   A. Proteins  C. Carbohydrates
   B. Glygogens  D. Lipids
   E. Nucleic Acids

8. A(n) ___________________________ is formed when two (2) monosaccharides are joined by dehydration synthesis.

9. Which of the following is a polysaccharide formed and stored in the liver.
   A. Cholesterol  C. Glycogen
   B. Glycerol  D. Glycolysis

10. ___________________________ are the subunits of proteins.

11. ___________________________ are lipid hormones synthesized from cholesterol.

12. List 5 functions of Globular Proteins:
   A. ______________________________________
   B. ______________________________________
   C. ______________________________________
   D. ______________________________________
   E. ______________________________________

13. A lipid, containing all single bonds between Carbons is considered to be:
   A. Saturated
   B. Unsaturated
   C. Polysaturated
   D. Phospholipid
14. Which is the most common lipid in the diet?
   A. Crisco
   B. Steroid
   C. Triglyceride
   D. Phospholipid

15. Which describes phospholipids?
   A. Phospholipids are not soluble in water.
   B. The fatty acid tails are hydrophilic.
   C. Phospholipids consist of a glycerol covalently bonded to two fatty acids chains and a phosphate group.
   D. The phosphate "head" makes the molecule hydrophobic.
   e. Phospholipids are not soluble in water because the phosphate "head" of the molecule makes it hydrophobic.

16. List 2 functions of Cholesterol:
   A. 
   B. 

17. The name of the bond between amino acids is:
   A. Glycosidic
   B. Hydrogen
   C. Peptide
   D. Phosphosynthetic
   E. None of the above

18. A triglyceride consists of a glycerol and__________________________
__________________________.
19. The __________ level of protein structure is determined by the number and sequence of amino acids.

A. Primary
B. Complimentary
C. Secondary
D. Quaternary

20. (CH₂O) is the basic formula for:
   A. Lipids
   B. Esters
   C. Proteins
   D. Carbohydrates

21. Which of the following are "Packages" produced by Golgi bodies?
   A. Lysosomes
   B. Peroxysomes
   C. Transport Vessicles
   D. Ribosomes
   E. A, B, & C
   F. All of the above

22. Define Histology: ________________________________

23. There are two types of Endocytosis. List them:
   1. ________________________________
   2. ________________________________

24. Which of the following are true of epithelial tissue.
   A. Forms all linings and coverings of the body
   B. Contains very little matrix
   C. All have basement membranes
   D. All of the above are true
25. A Codon is:
   A. Every 3 tRNA bases
   B. Every 3 mRNA bases
   C. Codes for a particular Amino Acid
   D. A & C
   E. B & C

26. Active transport requires energy and moves substance from ___________ to ___________ concentrations.

27. Define Endocytosis: ________________________________
   ________________________________
   ________________________________.

28. A Nucleotide is composed of _______________________
   ______________________________ & ________________________.

29. Define Metabolism: ________________________________
   ________________________________
   ________________________________.

30. The mass of an atom is determined primarily by the:
   A. Number of Protons
   B. Number of Electrons
   C. Number of Electrons and Protons
   D. Number of Protons and Neutrons
   E. Number of Neutrons

31. The movement of materials across a membrane involving the expenditure of energy is:
   A. Filtration
   B. Active transport
   C. Dialysis
   D. Osmosis
   E. Diffusion
32. Which one of the following does not affect the rate of enzyme activity?

A. Change in pH
B. Increase in temperature
C. Changes in substrate concentration
D. All of the above affect enzyme activity

33. A solution with which of the following pH values would be considered the most acidic?

A. 7  D. 9
B. 3  E. 12
C. 5

34. A solution which causes a cell to swell is said to be:

A. Hypertonic
B. Hypotonic
C. Isotonic
D. Hyperosmotic
E. None of the above are correct

35. Which one of the following terms includes all the others?

A. Glucose
B. Disaccharide
C. Carbohydrate
D. Polysaccharide
E. Monosaccharide

36. Which of the following bases is found only in DNA?

A. C  D. A
B. G  E. U
C. T

37. Nucleic acids are composed of smaller repeating units called______________________________.
38. Define an acid: ____________________________________________

__________________________________________.

39. Which term describes the process of a cell taking solid material from the external environment?
   A. Exocytosis
   B. Pinocytosis
   C. Phagocytosis
   D. Endocytosis
   E. None of the above are correct

40. Define Exocytosis: ____________________________________________

__________________________________________.

41. If one sequence of one side of a DNA molecule is composed of the base sequence A-T-C-T-G-C, then the messenger RNA sequence formed from those DNA bases will be:
   A. A-T-C-T-G-C
   B. A-U-G-T-C-G
   C. U-A-G-A-C-G
   D. C-G-U-G-T-U

42. Which one of the following contains all of the others:
   A. Sugar
   B. Phosphate
   C. Nitrogen containing base
   D. Nucleotide

43. Which one of the following substances can pass through the cell membrane by themselves with little difficulty?
   A. Lipid soluble nonpolar molecules
   B. Positively charged ions
   C. Large Molecules
   D. None of the above are correct
44. The synthesis of RNA is known as:

A. Transduction
B. Translation
C. Transcription
D. Transference

45. If an Epithelium has all cells touching the basement membrane, but not all cells reaching the free surface, then one would call that tissue a ________________ epithelium.

A. Simple
B. Striated
C. Transitional
D. Pseudostratified
E. Stratified

46. If an Epithelium has cells that are taller than they are wide, then the shape of the cells is said to be:

A. Cuboidal
B. Columnar
C. Squamous
D. Pyramidal

47. List the three layers in all mucous membranes:

1. __________________________

2. __________________________

3. __________________________

48. Which of the following are true of skeletal muscle.

A. Has striations
B. Multinucleated
C. Nuclei are peripheral
D. None of the above are correct
49. List three places you would find smooth muscle.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________

50. In which of the following places would you find elastic C.T.?
    A. Ligaments  
    B. Tendons  
    C. Aponeuroses  
    D. All of the above  
    E. None of the above

51. Simple Squamous Epithelium is not found in the:
    A. Alveoli  
    B. Kidneys  
    C. Lining of the Trachea  
    D. Blood Vessels

52. Simple Squamous Epithelium could act to aid in:
    A. Absorption or Protection  
    B. Secretion or Absorption  
    C. Protection or Filtration  
    D. Filtration or Diffusion

53. Stratified Squamous Epithelium is not found in the:
    A. Anus  
    B. Stomach  
    C. Mouth  
    D. Vagina
54. Which one of the following is not a characteristic of connective tissues?
   A. Cells
   B. Fibers
   C. Matrix
   D. Avascular

55. If a tissue has a blood supply, Lacunae, and Canaliculi, that tissue is probably:
   A. Elastic Cartilage
   B. Bone
   C. Fibrocartilage
   D. Hyaline cartilage

56. If a tissue has intercalated disks, striations, and one nucleus per cell, then that tissue must be:
   A. Skeletal Muscle
   B. Smooth Muscle
   C. Visceral Muscle
   D. Cardiac Muscle

57. The kind of connective tissue found in Fascia is:
   A. Dense irregular
   B. Elastic
   C. Dense Regular
   D. Areolar
58. MATCHING

_____ A. Endoplasmic Reticulum
     1. Site of Protein Synthesis

_____ B. Golgi Bodies
     2. Packets of strong digestive enzymes

_____ C. Lysosomes
     3. A series of channels that run throughout the cytoplasm, usually attached to the nuclear membrane

_____ D. Ribosomes
     4. Control center of cells

_____ E. Mitochondria
     5. Packaging center of cells

_____ F. Nucleus
     6. Site for Aerobic Respiration

59. ANSWER TRUE OR FALSE. IF THE ANSWER IS FALSE, CROSS OUT THE UNDERLINED WORD OR PHRASE THAT MAKES THE STATEMENT FALSE AND WRITE IN THE CORRECT WORD OR PHRASE THAT MAKES THE STATEMENT TRUE.

A. _______ Simple Diffusion will require energy.

B. _______ A base is any substance that will combine with hydrogen ions.

C. _______ The "head" or Polar portion of a Phospholipid is said to be hydrophobic.

D. _______ Rough ER is heavily involved with steroid synthesis.

E. _______ All Epithelial tissue has a basement membrane.
A & #1 - TEST #1 ANSWERS (DONE BY TRUC PHAM)

Note: Some of the page numbers provided is based on the previous edition text book.

1. A composition of identical particles or building block called atoms. Ex: C, O, N…
2. O, C, H, N, Ca, P
3. B
4. Neutron
5. Covalent bond
6.Ionic bond
7. B
8. Disaccharides
9. C
10. Amino Acid
11. Steroid
13. A
14. B (Pg 49)
15. C
16. Cholesterol is found in cell membrane, is raw material of vit. D, is a steroid hormone for reproduction functioning, and presents in bile salts. (Pg 49)
17. C
18. 3 fatty acid
19. A (Pg 51)
20. D
21. A (Pg 88)
22. Study of tissue.
23. There are actually 3 types of endocytosis: phagocytosis, pinocytosis, and Receptor-mediated endocytosis (Pg 79)
24. D
25. B
26. Lower to higher concentration
27. A mean by which fairly large extracellular molecules or particles enter cells.
28. Pentose sugar (C5), includes Ribose and Deoxyribose; Phosphate group; and Nitrogenous base.
29. Total of chemical reactions occurring in the body cells.
30. D
31. B
32. D
33. B
34. B
35. C
36. C
37. Nucleotide
38. Substance that release H+ when in solution, called proton donor
39. C
40. Mechanism by which substances are moved from the cell interior to the extracellular space as a secretory vesicle fuses with the plasma membrane.
41. C
42. D
43. A
44. C
45. D (Pg 119)
46. B
47. Epithelial $\rightarrow$ loose CT $\rightarrow$ smooth muscle.
48. A & B
49. Digestive and urinary tract organs, uterus, and blood vessel
50. E (Can be found in the skin, lungs, and blood vessel walls- Pg 128)
51. B
52. D
53. B (Pg 121)
54. D (Pg 127)
55. B
56. D
57. C
58. 3-A, 5-B, 2-C, 1-D, 6-E, 4-F
59. A. False
   B. True
   C. F, correct answer is hydrophobic
   D. F $\rightarrow$ smooth
   E. T