3). For the separation of DNA by electrophoresis, which of the following method is commonly used?

a. Agarose – vertical

**b. Agarose – horizontal**

c. PAGE – vertical

d. PAGE – horizontal

4). Sodium dodecyl sulfate (SDS) used in SDS PAGE is\_\_\_\_\_\_\_\_\_\_\_.

**a. An anionic detergent**

b. A cationic detergent

c. A non-ionic detergent

d. An anion exchanger

e. A cation exchanger

5). Function of β-mercaptoethanol in SDS-PAGE is\_\_\_\_\_\_\_\_\_\_.

a. To give negative charges to amino acids in the proteins

b. For the oxidation of disulfide bonds in the proteins

**c. For the reduction of disulfide bonds in the proteins**

d. For breaking hydrogen bonds in the proteins

8). Electrophoresis is not used for the separation of \_\_\_\_\_\_\_\_.

a. Nucleic acids

b. Proteins

c. Amino acids

**d. Lipids**

9). In SDS-PAGE of protein separation, one SDS molecule will binds to \_\_\_\_\_\_\_\_\_\_.

a. Every amino **acid**

**b. Every two amino acids**

c. Every three amino acids

d. Every Four amino acids

10). In SDS-PAGE, migration of protein is effected by \_\_\_\_\_\_\_\_\_\_\_\_.

a. Charge of protein

**b. Size of protein**

c. Net charge of protein

d. All of these

1. Which technique separates charged particles using electric field?  
a) Hydrolysis  
b) Electrophoresis  
c) Protein synthesis  
d) Protein denaturing

Answer: b

2. Electrophoresis was developed by:  
a) Tswett  
b) Tsvedberg  
c) Tiselius  
d) Sanger

Answer: c

3. The speed of migration of ions in electric field depends upon:  
a) Shape and size of molecule  
b) Magnitude of charge and shape of molecule  
c) Magnitude of charge shape and mass of molecule  
d) Magnitude of charge and mass of molecule

Answer: b

4. Which of the following statements is true about migration of biomolecules?  
a) The rate of migration is directly proportional to the resistance of medium  
b) Rate of migration is directly proportional to current  
c) Low voltage is used for separation of high mass molecules  
d) Rate of migration is inversely proportional to current

Answer: b

5. What does the electrophoresis apparatus consist of?  
a) Gel, buffer chamber and fire pack  
b) Buffer chamber and electrophoresis unit  
c) Electrophoresis unit and gel separator  
d) Power pack and electrophoresis unit

Answer: d

6. If proteins are separated according to their electrophoretic mobility then the type of electrophoresis is:  
a) SDS PAGE  
b) Affinity Electrophoresis  
c) Electro focusing  
d) Free flow electrophoresis

Answer: a

8. Which of the following factors does not influence electrophoretic mobility?  
a) Molecular weight  
b) Shape of molecule  
c) Size of molecule  
d) Stereochemistry of molecule

Answer: d

10. What cannot be a reason for using electrophoresis?  
a) Comparing two sets of DNA  
b) Organizing DNA by shape of backbone  
c) Organizing DNA fragments from largest to smallest  
d) Organizing DNA in order we can see

Answer: b

1. The identity and chemical properties of an atom are determined by \_\_\_\_\_\_\_\_\_\_\_\_  
a) critical temperature  
b) critical freezing point  
c) melting temperature  
d) number of protons

Answer: d

2. Isotopes have the same number of protons.  
a) True  
b) False

Answer: a

3. Which of the following is radioactive?  
a) hydrogen sulfide  
b) vimentin  
c) tritium  
d) deuterium

Answer: c

4. The half life of a radioisotope is \_\_\_\_\_\_\_\_\_\_\_\_\_  
a) half the time taken for complete decay  
b) half the time taken for half the decay  
c) time taken for complete decay  
d) time taken for half the decay

Answer: d

5. Which of the following emitted particles consists of two protons?  
a) alpha  
b) beta  
c) gamma  
d) zeta

Answer: a

6. A beta particle is equivalent to an electron.  
a) True  
b) False

Answer: a

7. Liquid scintillation spectrometry is a method of detecting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
a) X-rays  
b) α-emitters  
c) β-emitters  
d) Gamma-rays

Answer: c

* \_\_\_\_\_\_\_\_\_\_ is a process used quite often in the dairy industry.

A. Centrifugal separation  
B. Sedimentation Theory  
C. Crystal Growth  
D. None of the above

View Answer

**Ans**: A

* Which of the following is use of Centrifugal separation?

A. clarification  
B. skimming  
C. bactofuge treatment  
D. All of the above

View Answer

**Ans**: D

* Centrifugation is based on ?

A. Patrick's Law  
B. McLaren's law  
C. Stoke's Law  
D. Stain's Law

View Answer

**Ans**: C

* The particle sedimentation velocity increases with?

A. increasing viscosity  
B. decreasing difference in density between the two phases  
C. increasing diameter  
D. All of the above

View Answer

**Ans**: C

* If raw milk were allowed to stand, the fat globules would begin to rise to the surface in a phenomena called creaming

A. TRUE  
B. FALSE  
C. Can be true or false  
D. Can not say

View Answer

**Ans**: A

* What is the principle of centrifugation?

A. Size reduction principle  
B. Filtration principle  
C. Evaporation principle  
D. Sedimentation principle

View Answer

**Ans**: D

* Which of the following used for sedimentation of red blood cells?

A. High speed centrifuge  
B. Low speed centrifuge  
C. Ultra centrifuge  
D. Vacuum centrifuge

View Answer

**Ans**: B

* What is use of density gradient centrifugation?

A. To purify viruses, ribosomes, membranes  
B. Toremovedirt  
C. To remove fine particles  
D. To remove large particles

View Answer

**Ans**: A

* What are factors that affect high-speed centrifuges?

A. Pressure and temperature  
B. Concentration and speed  
C. Speed and temperature  
D. Pressure and speed

View Answer

**Ans**: C

* Particles are not separated from a solution according to their shape

A. TRUE  
B. FALSE  
C. Can be true or false  
D. Can not say

View Answer

**Ans**: B