Assignment 6

The due date for submitting this assignment has passed. As per our records you have not submitted this  
assignment. Due on 2019-03-13, 23:59 IST.

1) In gel electrophoresis, the gel acts as

- a. molecular glue
- b. molecular copy machine
- c. molecular sieve
- d. molecular scissor

No, the answer is incorrect. Score: 0
Accepted Answers: 
- c. molecular sieve

2) Which is a suitable technique for separating large DNA fragments?

- a. Agarose Gel Electrophoresis
- b. SDS-Poly Acrylamide Gel Electrophoresis
- c. Native Poly Acrylamide Gel Electrophoresis
- d. All of the above

No, the answer is incorrect. Score: 0
Accepted Answers:
- a. Agarose Gel Electrophoresis

3) Which of the following can be determined using SDS-PAGE?

- b. pI of a protein.
- d. Dissociation constant of a protein-ligand complex.

No, the answer is incorrect. Score: 0
Accepted Answers:
a. It acts as a reducing agent.
b. It imparts uniform negative charge to the proteins.
c. It controls the pore size of the gel matrix.
d. It determines the pH of the gel.

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. It imparts uniform negative charge to the proteins.

5) Agarose is:

a. protein
b. polysaccharide
c. DNA
d. lipid

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. polysaccharide

6) Migration of a protein in SDS-PAGE is determined by:

a. charge of the protein.
b. size of the protein.
c. shape of the protein.
d. pI of the protein.

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. size of the protein.

7) The main advantage of using separate gels for stacking and resolving in SDS-PAGE is:

a. to increase the resolution of the separation.
b. to increase the migration rate.
c. to maintain the charge of the proteins.
d. to retain the shape of the protein.

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. to increase the resolution of the separation.

8) The role of APS in SDS-PAGE or native PAGE is:

a. to catalyze polymerization of acrylamide.
b. to cross-link acrylamide and bis-acrylamide.
c. to provide free radicals for cross-linking reactions.
d. to maintain the pH of the gel.

No, the answer is incorrect.
Score: 0

Accepted Answers:
9) In SDS-PAGE, the major ions present in the buffer are:

- a. Tris
- b. Glycine
- c. Chloride
- d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. All of the above

10β-mercaptoethanol (BME) is used in SDS-PAGE to

- a. break hydrogen bonds and unfold a protein.
- b. break disulfide bonds.
- c. break the peptide bonds.
- d. break multimeric proteins into monomers.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b. break disulfide bonds.

11A non-essential component of SDS-PAGE is

- a. acrylamide
- b. tetramethylethylenediamine
- c. ammonium persulfate
- d. β-mercaptoethanol

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. β-mercaptoethanol

12To visualize the proteins in gel, which of the following staining method is used:

- a. Coomassie brilliant blue staining
- b. EtBr staining
- c. Gram staining
- d. Silver staining

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. Coomassie brilliant blue staining
d. Silver staining

13In native PAGE the proteins separate depending on their:

- a. size
- b. charge
- c. pl
- d. all of the above
14 The pore size of a polyacrylamide gel can be changed by
   a. changing the acrylamide concentration.
   b. changing the bis-acrylamide concentration.
   c. changing the ratio of acrylamide and bis-acrylamide.
   d. all of the above.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. all of the above.

15 In electrophoresis, DNA will migrate towards
   a. anode
   b. cathode
   c. depends on the DNA sequence
   d. depends on the DNA length

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. anode

16 To reduce the pore size of agarose gel one needs to:
   a. increase agarose percentage
   b. decrease agarose percentage
   c. increase salt content
   d. change the pH of the buffer

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. increase agarose percentage

17 To visualize DNA in gel, a common dye is
   a. Coomassie brilliant blue
   b. Ethidium Bromide
   c. Bromophenol blue
   d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
b. Ethidium Bromide

18 In agarose gel, the migration of DNA depends on:
   a. Shape
   b. Size

1 point
19. Which of the following statements is TRUE?  

- c. Net charge  
- d. Agarose concentration in the gel.  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
a. Shape  
b. Size

20. Which of the following statements is TRUE?  

- a. In SDS-PAGE, all proteins are negatively charged.  
- b. In native PAGE, proteins can be negatively charged, positively charged or neutral.  
- c. In agarose gel, nucleic acids are positively charged.  
- d. No denaturing agent is added in agarose gel electrophoresis.  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
a. In SDS-PAGE, all proteins are negatively charged.  
b. In native PAGE, proteins can be negatively charged, positively charged or neutral.  
d. No denaturing agent is added in agarose gel electrophoresis.