Week2_Assignment2

The due date for submitting this assignment has passed. Due on 2019-08-21, 23:59 IST. As per our records you have not submitted this assignment.

1) Young’s modulus of elasticity (E) for a stiff material would be _______ than that of a soft one. 1 point

- Smaller
- Greater
- Equal

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

2) On a non-linear ECM, the dependence of cell spread area on stiffness is 1 point

- Linear
- Non-linear
- Sigmoidal
- Constant

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

3) While measuring the viscoelasticity of a material, the strain at the top and central portion of the sample material is same in 1 point

- Parallel plate rheometer
- Cone plate rheometer
- Capillary rheometer
4) The viscosity of a Newtonian fluid
- Increases with time
- Decreases with time
- Remains constant
- Is non-monotonic

No, the answer is incorrect.
Score: 0
Accepted Answers:
Remains constant

5) Fibronectin binds to cell surface molecules through the amino acid sequence:
- DRG
- RDG
- RGD
- ADG

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

6) Statement A: Fibronectin unfolding occurs due to presence of urea in vivo.
Statement B: Unfolding leads to exposure of cryptic binding sites in fibronectin that triggers its binding to other molecules.

- Only statement A is correct
- Only statement B is correct
- Both Statements A and B are correct
- Both statements A and B are incorrect

No, the answer is incorrect.
Score: 0
Accepted Answers:
Only statement B is correct

7) A researcher needs to measure the mechanical properties of cells in culture media. Which type of AFM tip will be used to measure the same?
- Spherical tip
- Blunt pyramidal tip
- Sharp pyramidal tip
- Squared tip

No, the answer is incorrect.
Score: 0
Accepted Answers:
Blunt pyramidal tip

8) Which portion of the Z-pos versus Deflection curve is analysed during protein unfolding studies?

1 point
9) In a protein unfolding experiment using AFM, for a protein with 'X' number of folded domains, the number peaks that can be achieved in a retraction curve is

- \(=X\)
- \(=X+2\)
- \(\leq X+2\)
- \(\geq X+2\)

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

10) A researcher obtained no signal for the protein unfolding experiments using AFM. What might be the possible reason(s) for this?

- The protein is unstable
- The force required to detach the tip from the protein is greater than the forces required to unfold the individual domains
- The unfolding forces are lower than the detectable limit
- a and c
- a, b and c

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