Week 5 Assignment

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1) A 2D $^{13}$C 1D experiment at natural abundance has a sensitivity of 10. How can one improve its sensitivity 100 times more?

- Increase the number of scans by 1000 times
- Enrich the molecule with $^{13}$C
- Use INEPT and transfer polarization from $^1$H to $^{13}$C
- Use INEPT three to four times to enhance sensitivity

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Enrich the molecule with $^{13}$C

2) The process of uptake of DNA fragments from surrounding by bacteria is known as?

- Transduction
- Conjugation
- Transformation
- Replication

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

3) In bacterial transformation, the bacteria take up and express foreign DNA usually in the form of a_______?

- Plasmid
4) What is the optimal temperature for Bacterial growth?  
- 10° C  
- 15° C  
- 20° C  
- 37° C  

No, the answer is incorrect.  
Score: 0

Accepted Answers: 
Plasmid

5) Which of the following is a typical carbon source in the minimal media used for the over-expression of proteins in Bacteria?  
- Glucose  
- Starch  
- Riboflavin  
- Ethylene glycol  

No, the answer is incorrect.  
Score: 0

Accepted Answers: 
Glucose

6) Which of the following is a typical Nitrogen source in the minimal media used for the over-expression of proteins in Bacteria?  
- Ammonia  
- Urea  
- Ammonium Chloride  
- Thymine  

No, the answer is incorrect.  
Score: 0

Accepted Answers: 
Ammonium Chloride

7) The 1H-15N HSQC spectra of a peptide (Sequence: FVKTLTGKITLEVEPSDTIE) shows X number of peaks. What will be the number of peaks in 1H-15N HSQC spectrum if we selectively unlabeled three Aminoacids: T, G, and S?  
- X-5  
- X-6  
- X-7  
- X-8  

No, the answer is incorrect.  
Score: 0

Accepted Answers: 
X-7

8) What is the role of IPTG in the procedure of the over-expression of proteins in bacteria?  

1 point
9) Which of the following nucleus have the least natural abundance?

- $^{12}\text{C}$
- $^2\text{H}$
- $^{13}\text{C}$
- $^{15}\text{N}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$^2\text{H}$

10) If the spin-lattice relaxation time is $T_2$, what is the line width of NMR spectral lines?

- $T_2$
- $\pi T_2$
- $2\pi T_2$
- $1/\pi T_2$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$1/\pi T_2$