# Review Test Submission: Unit 3b Quiz (Topics 3.1 & 3.2) - Due at 9am - Tuesday Oct 4th

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| User | Saurav Jain |
| Course | 2016W1-BIOL200-105-Fundamentals of Cell Biology |
| Test | Unit 3b Quiz (Topics 3.1 & 3.2) - Due at 9am - Tuesday Oct 4th |
| Started | 10/3/16 6:10 PM |
| Submitted | 10/3/16 6:13 PM |
| Due Date | 10/4/16 9:00 AM |
| Status | Needs Grading |
| Attempt Score | Grade not available. |
| Time Elapsed | 3 minutes out of 2 hours |
| Results Displayed | Submitted Answers, Incorrectly Answered Questions |

## Question 1

1 out of 1 points

Which of the following statements about nuclear transport is true?

Selected Answer: Nuclear pores have water-filled passages that small, water-soluble molecules can pass through in a nonselective fashion.

## Question 2

1 out of 1 points

What is the role of the nuclear localization sequence in a nuclear protein?

Selected Answer: It is bound by cytoplasmic proteins that direct the nuclear protein to the nuclear pore.

## Question 3

1 out of 1 points

The classic "beads-on-a-string" structure is the most decondensed chromatin structure possible and is produced experimentally. Which chromatin components are not retained when this structure is generated?

Selected Answer: H1 histone

## Question 4

1 out of 1 points

Stepwise condensation of linear DNA into chromosomes happens in different packing processes. Which of the following processes has a direct requirement for histone H1?

Selected Answer: formation of the 30-nm fiber

## Question 5

1 out of 1 points

A large protein that passes through the nuclear pore must have an appropriate targeting sequence, which typically contains the _____.

Selected Answer: positively charged amino acids lysine and arginine.

## Question 6

1 out of 1 points

**Transport of macromolecules in and out of the nucleus happens via the nuclear pores.**

**True or False: While small uncharged molecules that are 9 nm and smaller, can move in and out of the nuclear pores freely by diffusion, charged molecules in the same size range need special transporters across the nuclear envelope.**

Selected Answer: False

## Question 7

2 out of 4 points

Choose all that apply. Transport in and out of the nucleus of molecues larger than 9 nm:

Selected Answers:
- requires a nuclear import receptor protein in the nucleoplasm to recognize the NLS and bring it to the nuclear pore for entry into the nucleus.
- requires energy in the form of GTP.
- is an active transport process.

must have a nuclear localization sequence, called the NLS for entry into the nucleus, that is removed (cleaved) after entry.

## Question 8

4 out of 4 points

Choose all that apply. The NLS (Nuclear Localization Signa/sequence)

Selected Answers:
- is not the signal sequence for transport out of the nucleus.
- has a consensus basic amino acid residue sequence, KKKRK.
- is a short stretch of amino acyl residues in the protein destined to the nucleus.
- is recognized by a soluble nuclear import receptor protein in the cytoplasm and taken to the nuclear pore complexes, for entry into the nucleus.

## Question 9

4 out of 4 points

Choose all that apply. A 30 nm chromatin fibre is made of:

Selected Answers:
- H1 histone proteins.
- DNA
- Core histone proteins.
- non-histone proteins.

## Question 10

1 out of 1 points

Which of the following histones is not part of the core-histone complex?

Selected Answer: H1 histone

## Question 11

1 out of 1 points

Histones are said to belong to a family of basic proteins, because they are rich in:

Selected Answer: basic amino acyl residues carrying an overal positive charge.

## Question 12

1 out of 1 points

Micrococcal nuclease enzyme is not able to degrade (digest) which of the following:

Selected Answer: DNA interacting with the core histones in a nucleosome.

**Question 13**

Needs Grading (Extra Credit)

What did you find difficult/confusing about the pre-class material (reading and quiz) in this unit?

Selected Answer: [None Given]

Monday, October 3, 2016 10:11:50 PM PDT

← OK