

LPUNEST - Ph.D. Bio Chemistry
(Sample Questions)

- QUESTION 1** Choose the correct statement about peptides in the Ramachandran plot.
- Option A Peptides that are unstructured will have all the backbone dihedral angles in the disallowed regions.
- Option B It is not possible to conclude whether a peptide adopts entirely helix or entirely beta sheet conformation.
- Option C The occurrence of beta turn conformation in a peptide can be deduced.
- Option D The sequence of a peptide can be deduced.
- QUESTION 2** Excess oxygen consumed after a vigorous exercise is
- Option A to pump out lactic acid from muscle
- Option B to increase the concentration of lactic acid in muscle
- Option C to reduce dissolved carbon dioxide in blood
- Option D to make ATP for gluconeogenesis
- QUESTION 3** Which one of the following describes the primary function of flippases?
- Option A Help in increasing lipid-protein interaction in the outer leaflet of the bilayer
- Option B Move certain phospholipids from one leaflet of the membrane to another
- Option C Localize more negatively charged membrane proteins in the lipid bilayer
- Option D Cause uncoupling of v-SNARES and t-SNARES after fusion of incoming vesicle with target membrane
- QUESTION 4** Mitotic cyclin-CDK activity peaks in M phase. This is because
- Option A Mitotic cyclin is synthesized only in M phase.
- Option B Threshold level of mitotic cyclin accumulates only in late G2.
- Option C Cyclin subunit is activated by phosphorylation only in M phase.
- Option D The kinase subunit is activated by dephosphorylation only in M phase.
- QUESTION 5** The gel to liquid crystalline phase transition temperature in phosphatidyl choline (PC) lipids composed of dioleoyl (DO), dipalmitoyl (DP), disteoyl (DS) and palmitoyl oleoyl (PO) fatty acids in increasing order will be
- Option A DOPC > DPPC > POPC > DSPC
- Option B DSPC > DPPC > POPC > DOPC
- Option C DPPC > DSPC > DOPC > POPC
- Option D POPC > DPPC > DOPC > DSPC

