Multiple Choice Quiz: Section 3.6: Coefficients of Moisture Expansion

_____ 1. The longitudinal moisture expansion coefficient of a lamina is a function of the following (check all that apply)

A Young's moduli of fiber and matrix

B Poisson's ratio of fiber and matrix

C Volume fraction of fiber and matrix

D Density of fiber and matrix

E Moisture concentration in fiber and matrix

F Coefficient of moisture expansion of fiber and matrix

_____ 2. If the fibers do not absorb or deabsorb moisture, the longitudinal moisture expansion coefficient is a function of the following (check all that apply)

A Density of fiber and matrix

B Young's moduli of fiber and matrix

C Coefficient of moisture expansion of matrix

D Volume fraction of fiber and matrix

E Poisson's ratio of fiber and matrix

_____ 3. For a lamina exposed to changes in moisture, it is generally assumed that

A the change in moisture concentration is the same for the fiber and the matrix.

B the change in moisture concentration is zero for the fiber.

C the change in moisture concentration is zero for the matrix.

D the change in moisture concentration is different for the fiber and the matrix.

_____ 4. For polymer matrix composites with high fiber to matrix Young's moduli ratios and no absorption or deabsorption of water in fibers, the longitudinal coefficient of moisture expansion is

A same order as the transverse coefficient of moisture expansion

B higher than the transverse coefficient of moisture expansion

C close to zero

_____ 5. The transverse moisture expansion coefficient is a function of the following (check all that apply)

A Moisture concentration in fiber and matrix

B Volume fraction of fiber and matrix

C Young's moduli of fiber and matrix

D Density of fiber and matrix

E Poisson's ratio of fiber and matrix

F Coefficient of moisture expansion of fiber and matrix

_____ 6. If the fibers do not absorb or deabsorb moisture, the transverse moisture expansion coefficient is a function of the following (check all that apply)

A Volume fraction of fiber and matrix

B Moisture concentration in matrix

C Density of fiber and matrix

D Young's moduli of fiber and matrix

E Coefficient of moisture expansion of matrix

F Poisson's ratio of fiber and matrix