Structural Analysis Quiz Questions & Answers Pdf

1. Which one of the following is wrong with respect to strain energy method for finding deflection?
   a. Structure should be subjected to a single concentrated load
   b. Deflection can be found only at the loaded point
   c. Deflection can be found only in direction of load
   d. Deflection can be found at any point in desired direction
   Ans: d

2. If a rigid body is in equilibrium under a system of forces the virtual work done by this system of forces during virtual displacement is zero. This principle is known as
   a. Work energy principle
   b. Mecaulay's principle
   c. Bernauli's principle
   d. Castigliano's principle
   Ans: C

3. If a body in equilibrium under a system of forces is given virtual deformation, the virtual work done by the system of forces is equal to the internal virtual work done by the stresses due to that system of forces. The above principle is applicable to deformation due to
   a. Loads
   b. Settlement of support
   c. Lack of fit
   d. All the above
   Ans: D

4. In a linearly elastic structure, partial derivative of the strain energy with respect to a load is equal to the deflection of the point where the load is acting, the deflection being measured in the direction of the load. This is known as
   a. Castigliano's theorem
   b. Bernauli's theorem
   c. Work energy principle
   d. Unit load method
   Ans: A

5. The systematic development of slope deflection method in the matrix form is known as to

a. stiffness matrix method

b. displacement matrix method

c. equilibrium method

d. all the above

Ans: D