# B. Arch. (Sem. II) Examination
## May - 2022
## Structure - II

Time : **2** Hours]                                    [Total Marks : **50**

**1**   State whether the following statements are true or false   **10**
with brief explanation : (any **five**)

(1)   Bending moment diagram of UDL (uniformly distributed load) has parabolic equation.

(2)   Moment of Inertia of same cross sectional area for Circular section is higher than Squares Section.

(3)   The mechanics of forces applied to bodies which are not moving. They are considered to be in static equilibrium.

(4)   A liner beam spanning between two support points is an example of two way system.

(5)   Arch is considered as one-way rigid curvature structure.

(6)   For the rectangular cross section area as depth increase the moment of inertia decrease.

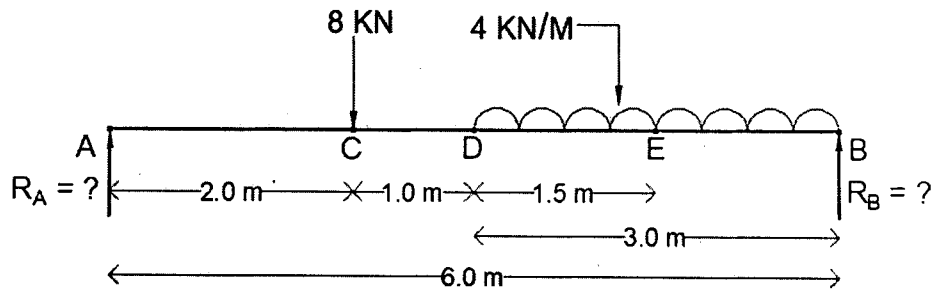(7)   Moment = force × perpendicular distance.

**2**   Explain in brief with neat sketches or diagrams : (any **four**)   **20**

(1)   Bending moment and shear for

(2)   Radius of Gyration

(3)   One way and two way slab

(4)   Difference between Bending and Buckling

(5)   Difference between Funicular and Catenary shapes
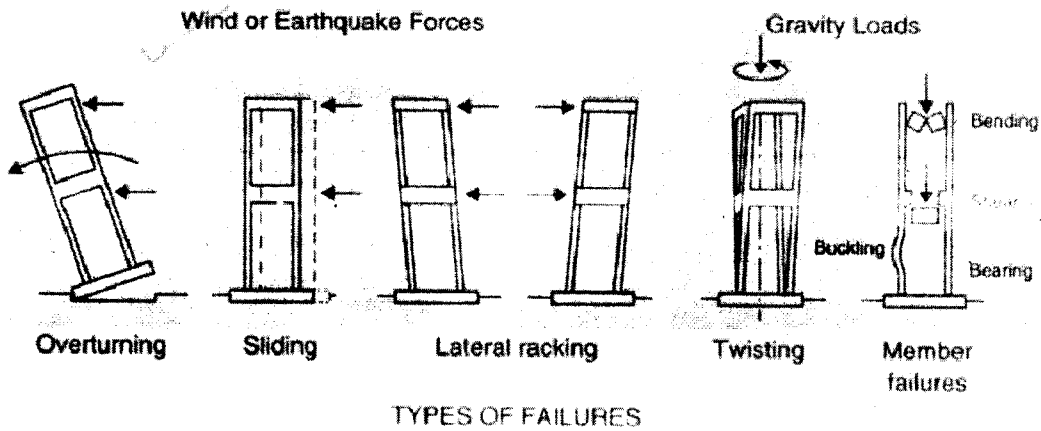
**3**  **(1)  Find the Following : (any one)**                                    **20**

(a)  Find the resultant force $R_A$ and $R_B$

(b)  Find the Bending moment at point C and E

(c)  Draw shear force and bending moment diagram

(Note : Consider Support A and B as simply supported)



(2)  (a)  Discuss the following types of stability failure and suggest the appropriate measures for the same with neat sketches.



TYPES OF FAILURES

(b)  Find the resultant force through vector diagram of the following diagrams.