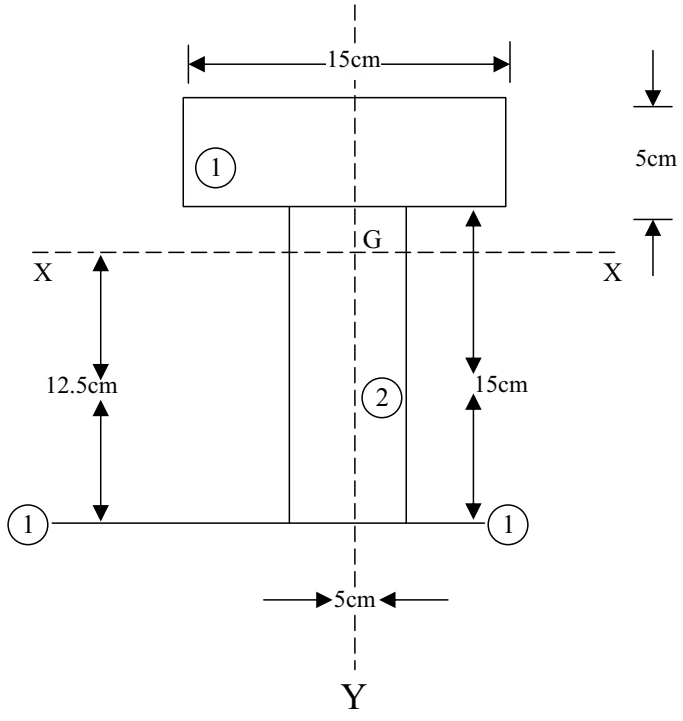
SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 A simply supported beam is carrying a u.d.l. of 3 KN/m over its left half. If the span of the beam is 5m, draw S.F.D and B.M.D for the beam.

Q.24 Discuss system of force and their types in detail.

Q.25 Find the moment of inertia of the section as shown in figure about X-X axis and Y-Y passing through the 'G' of the section.



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5th Sem / Architectural Assistantship

Subject : Structure Systems - I

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The S.I unit of stress_____

a) kg/sqcm b) N/sqm
c) kg/sqmm d) kg/sqm

Q.2 Hooke's Law holds up to

a) Elastic limit
b) plastic limit
c) Limit of proportionality
d) none of above

Q.3 The rate of change of bending moment is equal to _____?

a) shear force b) slope
c) deflection d) none of above

Q.4 The bending moment diagram for a cantilever with u.d.l. over the whole span will be

a) Triangle b) Rectangle

c) Parabola d) None

Q.5 The moment of inertia of any section about an axs passing through its centroid is

a) Maximum b) Minimum

c) Depends upon dimension of the section

d) Depends upon the shape of the section

Q.6 A brittle material has?

a) No elastic zone b) No plastic zone

c) Yield point d) Breaking point

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define U.D.L.?

Q.8 Define factor of Safety?

Q.9 Define elasticity?

Q.10 Define point of contra flexure?

Q.11 Define SHEAR FORCE..

Q.12 Write types of stress?

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write the factors upon which factor of safety depend.

Q.14 What is modulus of elasticity and bulk modulus.

Q.15 Name classification of beam? Explain

Q.16 Explain theorem of perpendicular axis?

Q.17 Draw a bending moment diagram of uniformly distributed load W N/sqmm over the whole span on simply supported beam of length L?

Q.18 Define neutral axis of a beam and moment of resistance?

Q.19 What are the difference between Centre of Gravity and Centroid?

Q.20 Draw the a shear force diagram of uniformly distributed load W N/ sqmm over the whole span on cantilever beam of length L?

Q.21 What is the Moment of Inertia of a triangle about centroid axis.

Q.22 Define cable and tensile structure and hybrid structure system.