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Roll No. .....

5th Semester/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 A force that tends to rotate a body is called:

a) Strain b) Moment

c) Stress d) Reaction

Q.2 Strain is defined as:

a) Stress x area

b) Deformation / original length

c) Load x time

d) None

Q.3 Centroid of a triangle lies at the intersection of its:

a) Angles b) Heights

c) Medians d) Bisectors

SECTION-D

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

Q.23 Explain the different types of supports with sketches.

Q.24 Draw shear force and bending moment diagram for cantilever beam of span 5m and carrying an udl of 3KN/m on entire span.

Q.25 Explain types of structural systems and their uses.

Q.4 Snow load is a type of:

a) Imposed load b) Dead load

c) Wind load d) Earth quake load

Q.5 Elastic limit means:

a) Start of plastic zone b) Breaking point

c) Maximum stretch

d) Limit of elastic behaviour

Q.6 Which material obeys Hook's law within elastic limit?

a) Plastic b) Rubber

c) Mild Steel d) Lead

SECTION-B

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

Q.7 _____ is the point where area is assumed to act.

Q.8 Moment of Inertia is used to find_____.

Q.9 Dead load includes _____.

Q.10 Simply supported beam rests on _____ supports.

Q.11 The material returns to original shape in _____ limit.

Q.12 Frame structures are made from _____ and columns.

SECTION-C

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

Q.13 Define force. What are its effects?

Q.14 List types of coplanar forces with examples.

Q.15 What is centroid? Find centroid of a 3m square.

Q.16 What s radius of gyration?

Q.17 State Hook's Law with terms.

Q.18 List types of loads as per IS:875.

Q.19 Define load bearing structure.

Q.20 Draw stress-strain curve of mild steel.

Q.21 Describe cantilever and overhanging beam with diagram.

Q.22 Write notes on (a) Shell structures (b) Cable structures