SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA

SEMESTER END EXAMINATIONS (SUPPLEMENTARY), JUNE - 2016

B. ARCH III YEAR VI SEMESTER
THEORY OF STRUCTURES (TS-6)

Maximum Marks – 100 **Time – 3.00 Hours**

a) Answer any Four out of 1 to7 questions.
b) Question No.8 is compulsory and answer any four out of six sub questions.
c) Scientific Calculator permitted.

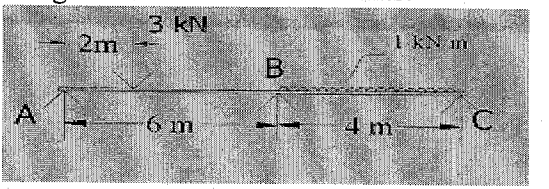
Q1. a) Define the following terms **(5x2= 20M)**
a) Earthquake b) Epicenter c) Focal depth
d) Causes of Earthquake e) Seismic waves
b) Write the difference between Intensity and Magnitude of Earthquake. **(10M)**

Q2. List the various codal provisions as per IS13920 ductile detailing of RC structures with neat sketches. **(20M)**

Q3. a) Explain about statically determinate beams and in-determinate beams with an example. **(5M)**
b) A horizontal cantilever 5m long carries a uniformly distributed load of 50kN/m over a length of 3m from fixed end. If the beam is propped at free end to the level of the fixed end, find the reaction of the prop and construct S.F and B.M diagram. **(15M)**

Q4. A continuous beam ABC of uniform section, with span AB as 6m and BC as 4m, is fixed at C and simply supported at A and B. The beam is carrying a uniformly distributed load of 30kN/m throughout its length. Find the fixed end moments along the beam using Moment Distribution method. **(20M)**

Q5. Draw the SFD and BMD for Beam as shown in figure by using theorem of three moments. **(20M)**



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Q6 Write the step by step procedure for design of slab bases with base plate. **(20M)**

Q7. a) List the different types of RC structural systems. Explain each type with neat sketches. **(10M)**

b) Explain the static analysis of mooring lines with neat sketches. **(10M)**

Q8. i) Write the importance of earthquake resistance structures in Architectural Design. **(4x5= 20M)**

ii) List the Component parts of a Welded Plate Girder with neat diagram and write about its functions.

iii) List the various types of column base with neat diagrams.

iv) List the precautions to be taken during the Construction of Earthquake resistant masonry structures.

v) Explain in brief about theorem of three moment's equation and its uses.

vi) Explain in brief about various Forming and Shapes of cold formed steel structures.

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