

47609

Name:

Reg.No.

SIXTH SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2008

CE.04.602 Structural Mechanics – III

Time: 3 hours

Maximum: 100 marks

(Answer all questions)

PART - A

- I. a. Explain briefly flexibility.
- b. State different methods of matrix analysis of structures.
- c. Explain static and kinematics indeterminacy.
- d. Write a note on stiffness matrices for truss.
- e. Explain plane truss.
- f. Explain lack of fit and temperature effects.
- g. Briefly explain degrees of freedom.
- h. Explain single degree of freedom.

(8x5=40 marks)

PART - B

- II. a. Explain in detail force and displacement method of analysis and development of flexibility matrices a physical approach.
- OR**
- b. Explain in detail development of total flexibility matrices of the structures and simple structure analysis.

- III. a. Detail displacement transformation matrix and analysis of simple structures.

OR

- b. Discuss stiffness matrices of elements in global co-ordinates from element co-ordinates.

- IV. a. Explain in detail D. Alembert's principles and damping free response of damped and undamped systems.

OR

- b. Explain base excited single degree freedom systems and two degree freedom systems.

(3x20=60 marks)