

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[2]

Roll No

ME/IP-6005 (2) (CBGS)

B.E. VI Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Finite Element Method

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain Dynamic and kinematic analysis.
b) What is continuum and skeletal structures ?
2. Discuss basic steps in finite element method. What are the general applicabilities of this method?
3. a) How Domain is discretized?
b) What is aspect ratio? What are its applications?
4. Discuss various types of elements. Compare their applications.
5. a) Discuss local and Global coordinate systems.
b) Choleksy decomposition method in brief.

6. Explain followings
 - a) One dimensional quadratic and cubic elements
 - b) Continuity and convergence requirement.
7. a) Write down advantages and limitations of Hamilton's principle.
b) Discuss few commercial packages which are used for FEM. Give their comparative analysis of their applicabilities and applications.
8. Write Brief notes on followings:
 - a) Trusses and frames analysis by FEM
 - b) Banded and skyline assembly
