

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

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Report on Guest Lecture arranged for IV B.Tech Mechanical Students Organized by Dept of ME, 8-9 November 2014



Submitted by: Mr. Ch Sreenivasa Rao, Assoc.Professor & Mr. Guna Sekhar Reddy, Asst.Professor - Department of Mechanical Engg.,

In relation to the subject cited above, a guest lecture on the topic named "concepts of FEM" is arranged and conducted for IV B. Tech mechanical students during 8th & 9th November 2014. The resource person was **Dr. AVSSKS Gupta** who is a professor in Mechanical engineering Department and controller of exams at JNTU, Hyderabad.

Day - I

Session 1 was about the Introduction to Finite Element Method for solving field problems, shape functions. Potential Energy approach, introduction to shape functions

Session 2 was on the Introduction to natural co-ordinate system, Shape function for bar element, truss element

Session 3 was on the Introduction to load vector, load vectors for different cases of loads

Day - II

Session 1 was on Introduction to Iso parametric, shape functions for Iso parametric and stiffness matrix for Iso parametric.

Session 2 was about the Introduction to CST, Shape function CST element by using natural co-ordinate system.

Session 3 was regarding - Introduction to dynamics, derivation for mass matrix, finite element equation for bar, beam and truss problems. Eigen values and Eigen vectors problems

Along with the IV B.Tech students a team of four faculty members (viz. M Gunasekhar Reddy, CH Sreenivasa Rao, M Rajasekhar Reddy and G Sadasivaprasad) and M.Tech students also have attended the classes. The students have requested to conduct few more of such guest lectures in due course of time.