BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH   SEMESTER : I
BRANCH: CIVIL   SESSION : MO/19

SUBJECT: CE501 ADVANCED SOLID MECHANICS

TIME: FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1   Derive the relation between strain component and displacement.   [10]

Q.2   Derive the expression for displacement in ani symmetric problem.   [10]

Q.3   Analyse for concentraled force of a straight boundary by semi inverse & inverse method.   [10]

Q.4   Analyse the torsion of rectangular section which is thin.   [10]

Q.5   Explain tresca^s theory of failure and van mises theory of failure.   [10]

::::::25/11/2019::::::E