

M.E. Second Semester (Civil (Structural Engg.)) (New - CGS)
13091 : Finite Element Method : 2 SFSE 1

P. Pages : 1

Time : Three Hours



AU - 3449

Max. Marks : 80

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|----|---|----|
| 1. | Explain: | 13 |
| | i) 2 noded linear Interpolation | |
| | ii) 3 noded Zagrangion interpolation | |
| | iii) Hermitian interpolation? | |
| 2. | Barry out the formulation for constant strain triangle? | 13 |
| 3. | Do formulation of 8 noded Rectangular parallelopiped? | 13 |
| 4. | Develop formulation for analysis of Axisymmetric structure subjected to axisymmetric loading by 6 noded triangular element? | 14 |
| 5. | What do you mean by Jacobian matrix? What are the uses of Jacobian? | 14 |

SECTION – B

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| 6. | Develop formulation for element stiffness matrix for 4 noded isoparametric element for plane stress analysis? | 13 |
| 7. | Develop formulation for analysis of axisymmetric shell subjected to axisymmetric loading using 8 noded isoparametric ring type element? | 13 |
| 8. | Develop a formulation for beam element using Hermitian shape function? Develop for element stiffness matrix? | 14 |
| 9. | Formulate element stiffness matrix for an ACM element with 12 D. O. F.? | 14 |
| 10. | Formulate element stiffness matrix using BOGNER – FOX plate element with 16 D. O. F? | 14 |
