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*****
*   Computer Software   *
*         for          *
*   STRUCTURAL ANALYSIS *
*     Fourth Edition   *
*         by           *
*   Aslam Kassimali    *
*****

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General Structural Data
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Project Title : 2nd Living Floor Beam
Structure Type : Beam
Number of Joints : 6
Number of Members : 5
Number of Material Property Sets (E) : 1
Number of Cross-Sectional Property Sets : 1

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Joint Coordinates
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| Joint No. | X Coordinate |
|-----------|--------------|
| 1 | 0.0000E+00 |
| 2 | 1.6700E+02 |
| 3 | 2.1200E+02 |
| 4 | 2.8000E+02 |
| 5 | 3.3000E+02 |
| 6 | 4.2400E+02 |

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Supports
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| Joint No. | Y Restraint | Rotational Restraint |
|-----------|-------------|----------------------|
| 1 | Yes | No |
| 6 | Yes | No |

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=====
Material Properties
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| Material No. | Modulus of Elasticity (E) | Co-efficient of Thermal Expansion |
|--------------|---------------------------|-----------------------------------|
| 1 | 2.9000E+07 | 0.0000E+00 |

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 Cross-Sectional Properties
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| Property No. | Moment of Inertia |
|--------------|-------------------|
| 1 | 1.4990E+03 |

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 Member Data
 =====

| Member No. | Beginning Joint | End Joint | Material No. | Cross-Sectional Property No. |
|------------|-----------------|-----------|--------------|------------------------------|
| 1 | 1 | 2 | 1 | 1 |
| 2 | 2 | 3 | 1 | 1 |
| 3 | 3 | 4 | 1 | 1 |
| 4 | 4 | 5 | 1 | 1 |
| 5 | 5 | 6 | 1 | 1 |

=====
 Joint Loads
 =====

| Joint No. | Y Force | Moment |
|-----------|-------------|------------|
| 2 | -4.5930E+03 | 0.0000E+00 |
| 4 | -1.1475E+04 | 0.0000E+00 |
| 5 | -6.2460E+03 | 0.0000E+00 |

=====
 Member Loads
 =====

| Member No. | Load Type | Load Intensity (w) |
|------------|-----------|--------------------|
| 1 | Uniform | 7.850E+1 |
| 2 | Uniform | 4.940E+1 |
| 3 | Uniform | 4.940E+1 |
| 4 | Uniform | 8.300E+0 |
| 5 | Uniform | 8.300E+0 |

***** End of Input Data *****

 * Results of Analysis *

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 Joint Displacements
 =====

| Joint No. | Y Translation | Rotation (Rad) |
|-----------|---------------|----------------|
| 1 | 0.0000E+00 | -8.3050E-03 |
| 2 | -1.0627E+00 | -2.8305E-03 |
| 3 | -1.1311E+00 | -1.8815E-04 |
| 4 | -1.0046E+00 | 3.9048E-03 |
| 5 | -7.4126E-01 | 6.4987E-03 |
| 6 | 0.0000E+00 | 8.5826E-03 |

=====
 Member End Forces in Local Coordinates
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| Member | Joint | Shear Force | Moment |
|--------|-------|-------------|-------------|
| ----- | ----- | ----- | ----- |
| 1 | 1 | 2.1436E+04 | 2.2031E+00 |
| | 2 | -8.3269E+03 | 2.4852E+06 |
| 2 | 2 | 3.7333E+03 | -2.4852E+06 |
| | 3 | -1.5103E+03 | 2.6032E+06 |
| 3 | 3 | 1.5108E+03 | -2.6032E+06 |
| | 4 | 1.8484E+03 | 2.5918E+06 |
| 4 | 4 | -1.3324E+04 | -2.5918E+06 |
| | 5 | 1.3739E+04 | 1.9152E+06 |
| 5 | 5 | -1.9984E+04 | -1.9152E+06 |
| | 6 | 2.0765E+04 | 7.2021E-01 |

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 Support Reactions
 =====

| Joint No. | Y Force | Moment |
|-----------|------------|------------|
| ----- | ----- | ----- |
| 1 | 2.1436E+04 | 0.0000E+00 |
| 6 | 2.0765E+04 | 0.0000E+00 |

***** End of Analysis *****