

INDEX

- Acceleration of particle 389, 486
 - Cartesian coordinates 344
 - Path variables 353
 - Polar coordinates 359
- Amplitude 485
- Angle of friction 84
- Angle of repose 86
- Angular acceleration 414
- Angular momentum 422
- Angular velocity 497
- Beams
 - Bending moment 147
 - Bending moment diagrams 155
 - Loading 147
 - Shear force 147
 - Shear force diagram 155
- Central points 268
- Center of gravity 268
- Center of mass 414
- Centrifugal force 99
- Centroid 270
- Coefficient of friction 84
- Compound pendulum 497
- Conservative force field 400
- Conservative forces 400
- Coplanar force system 21
- Corioli's component of acceleration 361
- Coulomb's law of friction 84
- Couple 25
- Cross product 14
- D'Alembert's Principle 399
- Degrees of freedom 455
- Derivative of vector 355
- Displacement vector 344
- Equations of equilibrium 44
- Equilibrium 44, 97
- Equivalent systems 30
- Euler's equation 414
- Free body diagram 40
- Free vector 71
- Frequency 485
- Friction 82
- Impulse 421
- Instantaneous center 370
- Kinematics 340
- Kinetic energy 406
- Lami's theorem 46
- Linear momentum 420
- Moment of a couple 25
- Moment of a force 22
- Moment of inertia 268, 291
 - Principal axes 304
 - Parallel axis theorem 292
 - Perpendicular axis theorem 292
- Moment of linear momentum 422
- Natural frequency 488
- Neutral equilibrium 462
- Newton's laws 1, 414
 - First law 18
 - Second law 19
 - Third law 20
- Oscillation 485
- Pappus Guldinus theorem 281

- Transfer of a force 30-32
- Parallelogram law 5
- Particle 1, 340, 399
- Pendulum
 - Compound 497
 - Simple 496
- Plane motion of rigid bodies 365, 367
- Plane truss 208
- Polar moment of inertia 291
- Position vector 16
- Potential energy 402
- Principal axis 304

- Rigid body 1
- Rolling friction 91

- Scalar 2
- Scalar product 12

- Self locking conditions 112
- Second moment of area 323, 362, 291
- Stable equilibrium 462

- Transmissibility of a force 30
- Trusses 207
 - Method of joints 212
 - Method of section 221

- Unstable equilibrium 462

- Vectors 2
- Virtual displacement 458
- Virtual work 461

- Work energy principle 405