

APPLIED MECHANICS

[INCLUDING VECTOR APPROACH]

By

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ABOUT THE BOOK

In this text-book, the approach is to study systematically the laws of Mechanics and their application to engineering problems. The outline of the book is:

Chapters 1 and 2 discuss Introduction of Mechanics; Fundamental Concepts and Principles; Scalars, Vectors and Tensors; SI Units, Vector Algebra, etc.

Chapter 3 to 10 consist the study of Mechanics of Rigid Bodies: Fundamentals of Statics, Forces and Force systems such as coplanar concurrent force systems; Moments; Parallel Forces and Couples; Spatial forces; Reactions etc.

Chapter 11 deals in Properties of Lines, Areas and Solids.

Chapter 12 and 13 discuss application of the connected bodies viz., trusses, frames and mechanisms.

Chapter 14 gives problems of statics in Graphics Statics

Chapter 15 and 16 Moments of Inertia of Areas and Masses; Friction respectively.

Chapters 17 to 21 include the study of Dynamics and Kinematics such as — the motion of the particles, etc.

Chapters 22 to 29 deal with topics on Kinetics of Particles such as Laws of Motion; Work and Energy; Impulse and Momentum. Special Topics such as Central Force Motion and Collisions; Kinetics of Systems of Particles, Kinetics of Rigid Bodies; Motion of Vehicles are also covered.

Chapters 30 to 38 deal with topics such as Balancing and Rotating Masses; Virtual Work; The Catenary; Belt and Rope Drive; Toothed Gearing; Lifting Machine; Mechanical Vibration; Hydrostatics and Impact of Jets.

This book is now contains:

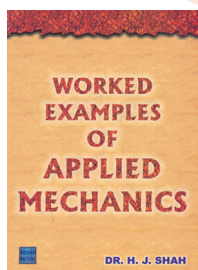
* 904 Neatly drawn figures; * 56 Useful tables ;* 453 Solved examples; * 670 Unsolved examples at the end of chapters.

It is hoped that this edition should prove extremely useful to students of Engineering reading for Degree Examinations of all the Universities of India, Diploma Examinations conducted by various Boards of Technical Education, Certificate Courses, as well as for the U.P.S.C., G.A.T.E., A.M.I.E., I.E.S. and other similar competitive and professional examinations. It should also prove of great interest and practical use to the practising engineers.

CONTENT

- 1: INTRODUCTION
- 2: VECTORS
- 3: COPLANAR CONCURRENT FORCES
- 4: MOMENTS
- 5: PARALLEL FORCES AND COUPLES
- 6: RESULTANT OF COPLANAR FORCE SYSTEMS
- 7: SPATIAL FORCES
- 8: EQUILIBRIUM OF COPLANAR FORCE SYSTEMS
- 9: REACTIONS
- 10: EQUILIBRIUM OF SPATIAL FORCE SYSTEMS
- 11: PROPERTIES OF LINES, AREAS AND SOLIDS
- 12: TRUSSES
- 13: FRAMES AND MECHANISMS
- 14: GRAPHIC STATICS
- 15: MOMENTS OF INERTIA
- 16: FRICTION
- 17: RECTILINEAR MOTION OF A PARTICLE
- 18: MOTION UNDER VARIABLE ACCELERATION
- 19: RELATIVE MOTION OF A PARTICLE
- 20: CURVILINEAR MOTION OF A PARTICLE
- 21: KINEMATICS OF RIGID BODIES
- 22: KINEMATICS OF PARTICLES LAWS OF MOTION
- 23: KINETICS OF PARTICLES : WORK AND ENERGY
- 24: KINETICS OF PARTICLES : IMPULSE AND MOMENTUM
- 25: CENTRAL FORCE MOTION
- 26: COLLISIONS
- 27: KINETICS OF SYSTEMS OF PARTICLES
- 28: KINETICS OF RIGID BODIES
- 29: MOTION OF VEHICLES
- 30: BALANCING OF ROTATING MASSES
- 31: VIRTUAL WORK
- 32: THE CATENARY
- 33: BELT AND ROPE DRIVE
- 34: TOOTHED GEARING
- 35: LIFTING MACHINES
- 36: MECHANICAL VIBRATIONS
- 37: HYDROSTATICS
- 38: IMPACT OF JETS
- APPENDIX 1 : SELECTED MATHEMATICS
- APPENDIX 2 : OBJECTIVE QUESTIONS
- INDEX

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By

Dr. H. J. Shah

651 Solutions of the unsolved examples given at the end of all 38 chapters from the text book "APPLIED MECHANICS" with 480 neat and self-explanatory drawings.

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Checklist

APPLIED MECHANICS
DETAILED CONTENTS

Chapter 1 INTRODUCTION

- 1-1. Mechanics
- 1-2. Fundamental concepts
- 1-3. Scalars, vectors and tensors
- 1-4. Fundamental principles
- 1-5. System of units: SI units
- 1-6. Using SI units
- Questions I

Chapter 2 VECTORS

- 2-1. Vectors
- 2-2. Basic operations with vectors
- 2-3. Components, unit vectors and position vector
- 2-4. Vector algebra: Dot product
- 2-5. Vector algebra: Cross product
- 2-6. Triple product of vectors
- Exercise II

Chapter 3 COPLANAR CONCURRENT FORCES

- 3-1. Forces and force systems
- 3-2. Principle of transmissibility
- 3-3. Resultant of a force system
- 3-4. Resultant of two coplanar concurrent forces
- 3-5. Resultant of several coplanar forces acting at a point: Law of polygon of forces
- 3-6. Resolution of a force
- 3-7. Resultant of a coplanar concurrent force system: Resolution method
- Examples III

Chapter 4 MOMENTS

- 4-1. Moment of a force
- 4-2. Principle of moments: Varignon's theorem
- 4-3. Coplanar applications
- 4-4. Levers
- 4-5. A simple pulley
- Examples IV

Chapter 5 PARALLEL FORCES AND COUPLES

- 5-1. Parallel force system
- 5-2. Couples
- 5-3. Equivalent couples
- 5-4. Addition of couples
- 5-5. Operations with couples
- 5-6. Equivalent systems of forces
- 5-7. Equipollent systems of vectors
- Examples V

Chapter 6 RESULTANT OF COPLANAR FORCE SYSTEMS

- 6-1. Introduction
- 6-2. Resultant of parallel force system
- 6-3. Centre of parallel forces
- 6-4. Resultant of a general coplanar force system
- 6-5. Concentrated and distributed loads
- Examples VI

Chapter 7 SPATIAL FORCES

- 7-1. Concurrent forces in space
- 7-2. Moment of a force
- 7-3. Resultant of spatial force system
- 7-4. Wrench resultant
- Examples VII

Chapter 8 EQUILIBRIUM OF COPLANAR FORCE SYSTEMS

- 8-1. Equilibrium
- 8-2. Equilibrium of a particle
- 8-3. Resultant and equilibrant
- 8-4. Principle of action and reaction
- 8-5. Free body and free body diagram
- 8-6. Tensions of strings
- 8-7. Equilibrium of three forces acting on a particle: Lami's theorem
- 8-8. Equilibrium of a particle under three forces acting on it
- 8-9. External and internal forces
- 8-10. Tension and compression

- 8-11. Connected bodies
- 8-12. Equilibrium of a rigid body
- 8-13. Conditions of equilibrium for a system of coplanar forces acting on a body
- 8-14. Types of supports
- 8-15. Solution of problems
- Examples VIII

Chapter 9 REACTIONS

- 9-1. Axial and transverse forces
- 9-2. Structural members
- 9-3. Types of beams
- 9-4. Reactions by proportions
- 9-5. Reactions by equations of statics: Principle of super-position
- 9-6. Determinate and indeterminate beams/structures
- Examples IX

Chapter 10 EQUILIBRIUM OF SPATIAL FORCE SYSTEMS

- 10-1. Equilibrium of spatial force systems
- Examples X

Chapter 11 PROPERTIES OF LINES, AREAS AND SOLIDS

- 11-1. Introductory
- 11-2. Centre of gravity
- 11-3. Centre of mass
- 11-4. Centroids
- 11-5. First moment of an element of line and area
- 11-6. First moment of a line segment and a finite area
- 11-7. Centroids of lines and areas
- 11-8. Centroids of symmetrical lines and areas
- 11-9. Centroids by integration
- 11-10. Summary of centroids of common figures
- 11-11. Centroids of composite lines and areas
- 11-12. Theorems of Pappus — Guldinus
- 11-13. Centroid of volumes
- Examples XI

Chapter 12 TRUSSES

- 12-1. Engineering applications of connected bodies
- TRUSSES
- 12-2. Introductory
- 12-3. Assumptions made in the analysis of a truss
- 12-4. Truss notations
- 12-5. Common types of trusses
- 12-6. Analysis of a truss
- 12-7. Method of joints
- 12-8. Method of sections
- 12-9. Determinateness of a truss
- 12-10. Truss with two hinges
- 12-11. Space trusses
- Examples XII

Chapter 13 FRAMES AND MECHANISMS

- 13-1. Frames and mechanisms
- Examples XIII

Chapter 14 GRAPHIC STATICS

- 14-1. Introductory
- 14-2. Basic concepts
- 14-3. Conditions of equilibrium of a point
- 14-4. Three force equilibrium of coplanar, non-concurrent, non-parallel forces
- 14-5. Resultant of non-concurrent, non-parallel forces: Funicular polygon
- 14-6. Resultant of parallel forces
- 14-7. Parallel forces: Centroid problems
- 14-8. Graphical conditions of rigid body equilibrium
- 14-9. Reactions of beams and trusses
- 14-10. Graphical methods applied to trusses
- 14-11. Force diagrams for individual joints of a truss
- 14-12. The Maxwell diagram
- 14-13. Method of substitution
- 14-14. Truss with two hinges with inclined loads
- Examples XIV

**APPLIED MECHANICS
DETAILED CONTENTS**

Chapter 15 MOMENTS OF INERTIA

- 15-1. Introduction
 - AREA MOMENT OF INERTIA
- 15-2. Definitions
- 15-3. Radius of gyration
- 15-4. Parallel axis theorem
- 15-5. Moment of inertia by integration
- 15-6. Moment of inertia of composite areas
- 15-7. Graphical method for first and second moments of a plane section about an axis in its plane
- 15-8. Product of inertia
 - MOMENT OF INERTIA OF MASSES
- 15-9. Definitions
- 15-10. Parallel axis theorem
- 15-11. Moment of inertia of thin plates
- 15-12. Moments of inertia of standard forms
- 15-13. Moment of inertia of composite bodies
 - Examples XV

Chapter 16 FRICTION

- 16-1. Introduction
- 16-2. Types of friction
- 16-3. Characteristics of dry friction
- 16-4. Angle of friction: Cone of friction
- 16-5. Angle of repose
- 16-6. Types of problems
- 16-7. Equilibrium on a rough inclined plane
 - APPLICATIONS OF FRICTION
- 16-8. The wedge
- 16-9. The screw
- 16-10. Screw-jack
- 16-11. Journal bearings, axle friction
- 16-12. Thrust bearings: Disc friction
- 16-13. Thrust bearing: Uniform wear
- 16-14. Friction plate clutches
- 16-15. Rolling resistance
 - Examples XVI

Chapter 17 RECTILINEAR MOTION OF A PARTICLE

- 17-1. Motion of a particle
- 17-2. Speed
- 17-3. Velocity
 - RECTILINEAR MOTION
- 17-4. Definitions
- 17-5. Motion under constant acceleration
- 17-6. Motion under gravity
 - Examples XVII

Chapter 18 MOTION UNDER VARIABLE ACCELERATION

- 18-1. Motion under variable acceleration
- 18-2. Vector calculus
 - Examples XVIII

Chapter 19 RELATIVE MOTION OF A PARTICLE

- 19-1. Relative motion of a particle
- 19-2. Motion of connected particles
 - Examples XIX

Chapter 20 CURVILINEAR MOTION OF A PARTICLE

- 20-1. Introductory
- 20-2. Velocity, Acceleration and Hodograph
- 20-3. Rectangular components of curvilinear motion
- 20-4. Normal and tangential components: Intrinsic co-ordinates
- 20-5. Radial and transverse components: Cylindrical co-ordinates
- 20-6. Angular motion of a line
- 20-7. Circular motion of a particle
- 20-8. Simple Harmonic Motion
- 20-9. Projectiles: Motion in a vertical plane under gravity
- 20-10. Motion of a projectile on an inclined plane
 - Examples XX

Chapter 21 KINEMATICS OF RIGID BODIES

- 21-1. Introduction
- 21-2. Translation
- 21-3. Fixed axis rotation
- 21-4. General plane motion
- 21-5. Absolute motion analysis
- 21-6. Relative motion analysis
- 21-7. Instantaneous centre: Centroides
 - Examples XXI

Chapter 22 KINEMATICS OF PARTICLES: LAWS OF MOTION

- 22-1. Introduction
- 22-2. Inertia and mass: Inertia
- 22-3. Newton's laws of motion: First law
- 22-4. Newton's second law
- 22-5. Inertial frame
- 22-6. Equations of motion
- 22-7. Constant force acting on a particle
- 22-8. Variable force acting on a particle
- 22-9. Motion of a lift
- 22-10. Motion on a rough inclined plane
- 22-11. Motion of connected bodies
- 22-12. D'Alembert's principle: Dynamic equilibrium
- 22-13. Curvilinear motion
- 22-14. Circular motion
- 22-15. Newton's law of gravitation
 - Examples XXII

Chapter 23 KINETICS OF PARTICLES: WORK AND ENERGY

- 23-1. Introductory
 - WORK AND ENERGY METHOD
- 23-2. Work done by a force
- 23-3. Standard cases
- 23-4. Power and efficiency
- 23-5. Energy
- 23-6. Conservative forces
- 23-7. Principle of conservation of energy
- 23-8. Total mechanical energy
- 23-9. Extraneous forces
 - Examples XXIII

Chapter 24 KINETICS OF PARTICLES: IMPULSE AND MOMENTUM

- 24-1. Linear momentum
- 24-2. Linear impulse
- 24-3. Variable force with time
- 24-4. Impulsive forces
- 24-5. Angular momentum
- 24-6. Angular impulse
 - Examples XXIV

Chapter 25 CENTRAL FORCE MOTION

- 25-1. Introductory
- 25-2. Central force motion
- 25-3. Trajectory of a particle under a central force
- 25-4. Launching of a space vehicle
- 25-5. Escape velocity: Particle orbits
- 25-6. Periodic time of an orbit
- 25-7. Communication satellite
- 25-8. Kepler's laws of planetary motion
 - Examples XXV

Chapter 26 COLLISIONS

- 26-1. Collision of two bodies: Impact
- 26-2. Definitions
- 26-3. Phenomenon of impact
- 26-4. The general condition
- 26-5. Collision of perfectly elastic bodies
- 26-6. Inelastic collisions
- 26-7. Collision of partially elastic bodies
- 26-8. Oblique impact on a smooth horizontal plane
- 26-9. Oblique impact of two smooth spheres
 - Examples XXVI

APPLIED MECHANICS
DETAILED CONTENTS

Chapter 27 KINETICS OF SYSTEMS OF PARTICLES

- 27-1. Introduction
- 27-2. Application of law of motion for system of particles
- 27-3. Principle of motion of mass centre
- 27-4. Work-energy
- 27-5. Linear and angular momentum of a system of particles
- 27-6. Principle of impulse and momentum for a system of particles
Examples XXVII

Chapter 28 KINETICS OF RIGID BODIES

- 28-1. Introduction
- 28-2. Translation
ROTATION
- 28-3. Rotational motion
- 28-4. Work done by a couple: Kinetic energy of rotation
- 28-5. Impulse and momentum
PLANE MOTION
- 28-6. Wheel rolling without slipping
SPECIAL TOPICS
- 28-7. Flywheels
- 28-8. Centre of Percussion
Examples XXVIII

Chapter 29 MOTION OF VEHICLES

- 29-1. Motion of vehicles
- 29-2. Tractive resistance
- 29-3. Tractive force
- 29-4. Driving torque
- 29-5. Maximum possible tractive effort
- 29-6. Power to drive a vehicle
- 29-7. A truck rolling down a rough inclined plane
- 29-8. Motion of a truck along level track
- 29-9. Motion of a truck going round a curve
- 29-10. Banking a curve: Super-elevation
Examples XXIX

Chapter 30 BALANCING OF ROTATING MASSES

- 30-1. Static and Dynamic balance
- 30-2. Balancing of several masses in the same plane of revolution
- 30-3. Dynamical loads at bearings
- 30-4. Balancing of a mass by two masses in different planes of revolution
Examples XXX

Chapter 31 VIRTUAL WORK

- 31-1. Introductory
- 31-2. Principle of virtual work
Examples XXXI

Chapter 32 THE CATENARY

- 32-1. The Catenary
- 32-2. The parabolic chain
- 32-3. The length of the cable
Examples XXXII

Chapter 33 BELT AND ROPE DRIVE

- 33-1. Belt drive
- 33-2. Velocity ratio
- 33-3. Compound belt drive
- 33-4. Length of belt: Open drive
- 33-5. Length of belt: Crossed drive
- 33-6. Transmission of power
- 33-7. Centrifugal tension
- 33-8. Optimum speed for maximum power
- 33-9. Rope drive
Examples XXXIII

Chapter 34 TOOTHED GEARING

- 34-1. Introduction
- 34-2. Friction wheels
- 34-3. Toothed wheels: Definitions
- 34-4. Motion transmitted by toothed gearing
- 34-5. Forms of wheel teeth
- 34-6. Trains of wheels
- 34-7. Design of wheel trains
- 34-8. Wheel train for a 12-hour clock
- 34-9. Screw-cutting Lathe
- 34-10. Lathe back-gear for speed reduction
- 34-11. Three-speed gear-box of a motor car
- 34-12. Epicyclic gearing
- 34-13. Epicyclic trains with bevel wheels
- 34-14. Humpage's speed-reduction gear
- 34-15. The differential gear
- 34-16. Epicyclic gearing: alternate method
Examples XXXIV

Chapter 35 LIFTING MACHINES

- 35-1. Definitions
- 35-2. Basic machines
- 35-3. Differential wheel and axle
- 35-4. Differential pulley-block
- 35-5. Differential screw
- 35-6. Pulley-blocks
- 35-7. Lifting machines with toothed gearing
- 35-8. Worm gearing
- 35-9. Worm geared screw jack
- 35-10. Worm geared pulley block
- 35-11. Linear law of machines
- 35-12. Reversibility of a machine
- 35-13. Compound efficiency
Examples XXXV

Chapter 36 Mechanical Vibrations

- 36-1. Introduction
- 36-2. Classification of vibrations
- 36-3. Vibration parameters
- 36-4. Free undamped vibrations of a particle: Spring-mass system
- 36-5. Composite springs
- 36-6. Simple pendulum
- 36-7. Conical pendulum
- 36-8. Compound pendulum
Examples XXXVI

Chapter 37 HYDROSTATICS

- 37-1. Introductory: Fluids and liquids
- 37-2. Liquid pressure
- 37-3. Relation of pressure to depth in a liquid
- 37-4. Total thrust on a plane vertical area immersed in a liquid: Centre of Pressure
- 37-5. Total thrust on an inclined plane area immersed in a liquid
- 37-6. Floatation and Buoyancy
CONDITIONS OF EQUILIBRIUM OF A FLOATING BODY
- 37-7. Metacentre
- 37-8. Metacentric height
Examples XXXVII

Chapter 38 IMPACT OF JETS

- 38-1. Force exerted by a jet
- 38-2. Flat plates: Stationary as well as moving
- 38-3. Curved vanes
- 38-4. Pelton wheel: Turbines
Examples XXXVIII

Appendix 1 SELECTED MATHEMATICS

Appendix 2 OBJECTIVE QUESTIONS

INDEX