

**LIST OF TOPICS
ACADEMIC CHALLENGE STATE EXAM**

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|----------------------------------|------------|
| Mechanics | Tot |
| Units | 2 |
| Kinematics | 3 |
| Vectors | 1 |
| Newton's Laws | 5 |
| Dimensional Analysis | 1 |
| Work-Energy | 1 |
| Conservation of momentum | 1 |
| Conservation of Energy | 1 |
| Conservation of angular momentum | 1 |
| Gravitation | 2 |
| Torque | 1 |
| Rotational Dynamics/Kinematics | 2 |
| Circular motion | 1 |
| Center of mass | 1 |
| Static equilibrium | 1 |
| Power | 1 |
| Electricity & Magnetism | 2 |
| Thermodynamics | 1 |
| Optics | 2 |
| Nuclear Physics | 2 |
| Sound | 1 |
| Quantum physics | 1 |
| Special Relativity | 1 |