

LIST OF TOPICS
2024 ACADEMIC CHALLENGE SECTIONAL EXAM

Mechanics	Total count of questions	Question number
Units	1	1
Kinematics	3	3, 4, 19
Vectors	1	2
Newton's Laws	5	7, 8, 9, 10, 11
Dimensional Analysis	1	12
Work-Energy	2	13, 14
Conservation of Energy	1	15
Conservation of momentum	2	16, 17
Gravitation	1	23
Density	0	
Rotational Dynamics	3	5, 6, 20
Simple Harmonic Motion	1	24
Center of mass	1	18
Static equilibrium	1	21
Power	0	
Potential Energy	0	
Fluid Dynamics	1	22
Electricity & Magnetism	3	28, 29, 30
Thermodynamics	2	26, 27
Optics	1	31
Sound	1	25
Modern Physics	2	32, 33
Special Relativity	1	34
Nuclear Physics	1	35

Factual Recall Problems 35

Multiple Problems 5 & 6, 10 & 11

Previous Exams 12, 20, 23, 35