

**LIST OF TOPICS
2018 ACADEMIC CHALLENGE EXAM**

Topic	Regional	Sectional	State
Mechanics:			
Units	1	1	2
Kinematics	5	5	4
Vectors	1	1	2
Newton's Laws	5	5	3
Dimensional Analysis	1		1
Work		2	
Work-Energy	2	2	1
Conservation of Energy	2	1	2
Conservation of momentum	2	2	2
Rotational Dynamics		2	
Gravitation	1		1
Density	1		
Torque	1		
Cons. of angular momentum			
Uniform circular motion	2	2	1
Center of mass	1		
Static equilibrium	3	1	1
Power	1		
Moment of Inertia			1
Fluids			1
Electricity & Magnetism	2	3	5
Thermodynamics	1	3	3
Optics	1		2
Sound	1		
Radioactivity		2	2
Atomic Physics		1	
Quantum physics			1
Special Relativity		1	1
Particle Physics	1	1	
Total	35	35	35

**LIST OF REFERENCES
2018 ACADEMIC CHALLENGE PHYSICS EXAM**

1. Physics for Scientists and Engineers – 8th Ed. – Serway and Jewett – Brooks/Cole – 2010 – ISBN 978-1-4390-4845-0
2. Conceptual Physics – 12th Ed. – Hewitt – Addison-Wesley – 2015 – ISBN 978-0-321-90910-7
3. College Physics – 10th Ed. – Serway and Vuille – Cengage Learning – 2015 – ISBN 978-1-285-73702-7
4. University Physics with Modern Physics – 14th Ed. – Young and Freedman – Pearson – 2016 – ISBN 978-0-321-97361-0
5. Physics – 4th Ed. – Walker – Addison Wesley – 2009 – ISBN 978-0321611116