Test Code	Year	Form
0261	0	01
Last Revision Date: 10/12/11		

ACP Blueprint
Physics
Semester 1, 2011-2012

Test Objectives	TEKS/SE	No. of Items	% of Test
1. Generate and interpret graphs and charts describing different types of motion, including the use of real-time technology such as motion detectors or photogates.	4A	3	6%
2. Describe and analyze motion in one dimension using equations with the concepts of distance, displacement, speed, average velocity, instantaneous velocity, and acceleration.	4B	3	6%
3. Analyze and describe accelerated motion in two dimensions using equations, including projectile and circular examples.	4C	3	6%
4. Calculate the effect of forces on objects, including the law of inertia, the relationship between force and acceleration, and the nature of force pairs between objects.	4D	3	6%
5. Develop and interpret free-body force diagrams.	4E	3	6%
6. Identify and describe motion relative to different frames of reference.	4F	3	6%
7. Research and describe the historical development of the concepts of gravitational forces…	5A	3	6%
8. Describe and calculate how the magnitude of the gravitational force between two objects depends on their masses and the distance between their centers;	5B	3	6%
9. Investigate and calculate quantities using the work-energy theorem in various situations.	6A	3	6%
10. Investigate examples of kinetic and potential energy and their transformations.	6B	3	6%
11. Calculate the mechanical energy of, power generated within, impulse applied to, and momentum of a physical system.	6C	3	6%
12. Demonstrate and apply the laws of conservation of energy and conservation of momentum in one dimension.	6D	3	6%
13. Describe how the macroscopic properties of a thermodynamic system such as temperature, specific heat, and pressure are related to the molecular level of matter, including kinetic or potential energy of atoms.	6E	3	6%
14. Contrast and give examples of different processes of thermal energy transfer, including conduction, convection, and radiation. Analyze and explain everyday examples that illustrate the laws of thermodynamics, including the law of conservation of energy and the law of entropy.	6F/G	3	6%

Test Objectives	TEKS/SE	No. of Items	% of Test
15. Examine and describe oscillatory motion and wave propagation in various types of media.	7A	3	6%
16. Investigate and analyze characteristics of waves, including velocity, frequency, amplitude, and wavelength, and calculate using the relationship between wavespeed, frequency, and wavelength.	7B	3	6%
17. Compare characteristics and behaviors of transverse waves, … and characteristics and behaviors of longitudinal waves, including sound waves.	7C	3	6%
Total		**51**	**100%**

‡ This test will be consumable. A copy of the High School TAKS Science Formula Chart will be printed in the test as well as supplemental ACP Physics Formula Chart (no periodic table will be provided). Calculators are permitted.