no	judul bab	jml soal	
1	Analyze motion in straight line, circular motion and parabolic motion by using vectors	2	Analyze the quantity of displacement, velocity and acceleration in motion in two dimensions by using vector analysis
			Analyze displacement and velocity in parabolic motion by using vector analysis
2	Analyze regularity of planets' motion in solar system by using Newton's Law	1	Calculate the resultant of gravity forces that exerted on a particle in a certain system
3	Analyze the influence of the force upon the elasticity of a matter	1	Compare the force constant based on data that gathered from the experiment
4	Analyze the relation between force and oscillation	1	Describe the characteristic of spring oscillation
5	Analyze the relation between work, the change in energy and the law of conservation of mechanical energy	2	Describe the relation between work, force and displacement to find mathematical expression of work
			Analyze the relation between work and the change in kinetic energy
6	Apply the Law of conservation of mechanical energy to solve daily life problem	1	Apply the law of conservation of mechanical energy in explaining motion in simple harmonic oscillation
7	Show the relation between impulse and momentum concept to overcome collision problems	2	Formulize mathematical expression for momentum and Impulse, the relation between them and their application in explaining daily life phenomenon
			Integrate the law of conservation of energy and the law of conservation of mechanical energy in some case when collision occur
smt 2			
1	Formulize the relation between concept of torque, angular momentum and moment inertia; based on Newton's 2nd law and their application in explaining problems about rigid body mechanic	5	Determine the influence of torque due to the rotation of a body
			Find the analogy of Newton's second Law in translation and rotation
			Apply the concept of moment inertia in some rigid bodies to find their moment inertia if they are rotated about a certain axis
			Formulate mathematical expression for the law of conservation of angular momentum
			Apply the concept of center of weight to determine the center of weight of some b odies
2	Analyze the laws that are related with static fluid and dynamic fluid and also their application in daily life	5	Formulate the basic laws of static fluid
			Apply the laws of static fluid in solving problems in students' daily life
			Formulate the basic laws of dynamic fluid
			Apply the laws of dynamic fluid in solving problems in students' daily life
3	Describe the properties of monoatomic ideal gases	2	Describe the general equation of ideal gases in daily physics problem
			Apply general equation for ideal gases in isothermal, isochoric, and isobaric process

no	judul bab	jml soal	
4	Analyze changes of ideal gases by applying the law of thermodynamics	3	Describe the work that are done, heat that are transferred and the change in internal energy by using the laws of thermodynamics
			Analyze the process in a system of gases by observing their graphic of pressure against volume
			Describe how carnot machine works