Na	nme:			E3B8FE5D V1 - Page 1		
1)	An impulse I is applied to an object. The change in the momentum of the object is					
	A) 2 <i>I</i>	B) 4 <i>I</i>	C) <i>I</i>	D) <i>I</i>		
2)	In a baseball game, a batter hits a ball for a home run. Compared to the magnitude of the impulse imparted to the ball, the magnitude of the impulse imparted to the bat is					
	A) less		C) greater			
	B) the same					
3)	A student drops two eggs of equal mass simultaneously from the same height. Egg A lands on the tile floor and breaks. Egg B lands intact, without bouncing, on a foam pad lying on the floor. Compared to the magnitude of the impulse on egg A as it lands, the magnitude of the impulse on egg B as it lands is					
	A) the same		C) less			
	B) greater					
4)	A constant braking force of 10 newtons applied for 5 seconds is used to stop a 2.5-kilogram cart traveling at 20 meters per second. The magnitude of the impulse applied to stop the cart is					
	A) 100 N•s	B) 10 N•s	C) 50 N•s	D) 30 N•s		
Qı	uestion 5 refers to the fo	ollowing:				
	1,000-kilogram car traver second ² until it comes t		meters per second decele	erates uniformly at -5.0 meters		
5)	What is the magnitude of the impulse applied to the car to bring it to rest?					
	A) $2.0 \times 10^4 \mathrm{Nes}$	B) $2.3 \times 10^4 \text{ N} \cdot \text{s}$	C) $2.9 \times 10^4 \text{ N} \cdot \text{s}$	D) $1.5 \times 10^4 \text{ N} \cdot \text{s}$		
6)	An unbalanced 6.0-newton force acts eastward on an object for 3.0 seconds. The impulse produced by the force is					
	A) 2.0 N•s east	B) 18 N•s east	C) 18 N•s west	D) 2.0 N•s west		
7)	A net force of 12 newtons acting north on an object for 4.0 seconds will produce an impulse of					
	A) 3.0 kg-m/sec north	B) 3.0 kg-m/sec south	C) 48 kg-m/sec north	D) 48 kg-m/sec south		
8)	A force of 10. newtons acts on an object for 0.010 second. What force, acting on the object for 0.050 second, would produce the same impulse?					
	A) 10. newtons	B) 5.0 newtons	C) 1.0 newton	D) 2.0 newtons		
9)	A 5.0-newton force imparts an impulse of 15 newton-seconds to an object. The force acted on the object for a period of					
	A) 20. s	B) 0.33 s	C) 3.0 s	D) 75 s		

10)	A force of 20. newtons is exerted on a cart for 10. seconds. How long must a 50newton force act to produce the same impulse?							
	A) 2.0 s	B) 4.0 s	C) 10. s	D) 5.0 s				
11)	Which quantity has both a magnitude and a direction?							
	A) work	B) energy	C) power	D) impulse				
12)	An air bag is used to safely decrease the momentum of a driver in a car accident. The air bag reduces the magnitude of the force acting on the driver by							
	A) increasing the length of time the force acts on the driver							
	B) decreasing the mass of the driver							
	C) increasing the rate of acceleration of the driver							
	D) decreasing the distance over which the force acts on the driver							