Chapter 19 Waves Practice

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LTIPLE CHOICE. Choose the one alternative	that best completes t	he statement or answers the ques	stion.
 1) Which of these is affected by mass? A) a freely-falling object B) an object sliding down a friction-factorial control of the pendulum D) all of the above E) none of the above 	ree plane		1)
2) The pendulum with the greatest frequence A) shortest length. B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the pendulum with the greatest frequence B) leads to be a second by the greatest frequence B) leads to be a second by the greatest frequence B) and the greatest frequence B and the greatest f	cy is one with the ongest length.	C) neither of these	2)
 3) The stride of a horse would be quicker if A) in the upper part, nearer the horse B) towards its feet. C) halfway up its legs. D) uniformly all along its legs. E) none of the above 		were concentrated	3)
 4) Both a transverse wave and a longitudina A) amplitude. B) frequency. C) wavelength. D) speed. E) all of the above 	al wave have		4)
5) The amplitude of a wave is 1 meter. The A) 0.5 m.	B) 1 m.	of the above	5)
6) A fishing-boat captain returns to port say high." He is probably talking of waves of A) 1 m.B) 2 m.		nere with waves that are 4 meters D) 4 m.	6)
 7) The frequency of a simple pendulum doe A) its mass. B) its length. C) the acceleration due to gravity. D) all of the above E) none of the above 	es NOT depend on		7)
8) The frequency of a certain wave is 10 her A) 0.1 second. C) 100 seconds.	B) 10 sec	conds. of the above	8)

9) A 60-vibration-per-second wave travel	s 30 meters in 1 second. It	s frequency is	9)
A) 30 hertz and it travels at 60 m/s .	B) 60 hertz	and it travels at 30 m/s .	
C) 1800 hertz and it travels at 2 m/s $$	D) none of t	he above	
10) If you double the frequency of a vibrating	ng object, its period		10)
, , ,	halves.	C) is quartered.	,
11) An object that completes 10 vibrations i	n 20 seconds has a frequer	ncy of	11)
A) 0.5 hertz.	2 hertz.	C) 200 hertz.	
12) An object that completes 100 vibrations			12)
A) 0.5 second.	B) 1 second		
C) 2 seconds.	D) none of t	he above	
13) The period of the second hand on a cloc	k is		13)
A) 1 second.			
B) 1/60 second. C) 60 seconds.			
D) 3600 seconds.			
E) 12 hours.			
,			
14) The frequency of the second hand on a	clock is		14)
	1/60 hertz.	C) 60 hertz.	, <u> </u>
		·	
15) Some of a wave's energy dissipates as h	eat. In time, this will redu	ce the wave's	15)
A) speed.			
B) wavelength.			
C) amplitude.			
D) frequency.			
E) period.			
40 ml	1 1 1 1 1 1 1		16)
16) The compressions and rarefactions in a A) the same direction. B)	O		16)
A) the same direction.	opposite directions.	C) a vacuum.	
17) Which of these is a longitudinal wave?			17)
A) sound			
B) light			
C) radio			
D) all of the above			
E) none of the above			
18) The vibrations of a transverse wave mo	ve		18)
A) along the direction of wave travel			,
B) at right angles to the direction of			
C) that changes with speed.			

19) The vibrations of a longitudinal wave move		19)
A) along the direction of wave travel.		
B) at right angles to the direction of wave trav	el.	
C) that changes with speed.		
20) Which of these is a transverse wave?		20)
A) a Slinky shaken to and fro.		
B) a radio wave		
C) a sound wave		
D) all of the above		
E) none of the above		
04) [47] - 1		01)
21) Which equation is correct for wave speed?	P) ways aread = (1 / paried) v wayslangth	21)
A) wave speed = frequency x wavelengthC) both of these	B) wave speed = (1/period) x wavelength D) neither of these	
C) both of these	D) heruler of these	
22) What is the wave speed of a wave traveling an av	verage distance of 6 meters in one second?	22)
A) less than 0.2 m/s		
B) 1 m/s		
C) 3 m/s		
D) 6 m/s		
E) more than 6 m/s		
		22)
23) A water wave passes by a floating leaf that is made	-	23)
cycles each second, which means that the wave's A) 0.5 Hz. B) 1 Hz. C) 2 F		
A) 0.3 11Z.	12. D) 3 112. L) 6 112.	
24) A floating leaf oscillates up and down two comple	ete cycles in one second as a 10-meter long	24)
water wave passes by. What is the wave's speed?		/
A) 2 m/s		
B) 10 m/s		
C) 20 m/s		
D) 40 m/s		
E) more than 40 m/s		
25) A wave travels an average distance of one meter i	in one second with a frequency of 1 hertz. Its	25)
amplitude is A) less than 1 meter.	B) 1 meter.	
C) more than 1 meter.	D) need more information	
C) more than I meter.	b) need more mormation	
26) The distance traveled by a wave during a single p	period is	26)
A) one-half wavelength.	B) one wavelength.	, <u> </u>
C) two wavelengths.	D) none of the above	
27) A skipper on a boat sees wave crests passing the a	· · · · · · · · · · · · · · · · · · ·	27)
distance between crests is 15 m. What is the speed		
A) 3 m/s	B) 5 m/s	
C) 15 m/s	D) need more information	

28) Interference is a property of		28)	
A) sound way			
B) water way			
C) light wave			
D) all of the a			
E) none of the			
L) none of th	e above		
29) A standing wave	e is likely produced when		29)
A) two waves	s overlap.		
B) a wave ref	lects upon itself.		
C) the speed	of the wave is zero or near zero.		
	ude of a wave exceeds its waveleng	th.	
, 1			
	30) The number of nodes, including the end points, in a standing wave that is three wavelengths		30)
long is			
A) 4.			
B) 5.			
C) 6.			
D) 7.			
E) none of th	e above		
31) The Doppler effe	ect is characteristic of		31)
A) water way			
B) sound way	ves.		
C) light wave			
D) all of the a			
E) none of the			
L) none of th	cubove		
22) A D1 ((+			22)
	occurs when a source of sound mor		32)
A) towards ye		B) away from you.	
C) either of the	nese	D) neither of these	
33) A red shift for light indicates that the light source is moving		33)	
A) toward yo	u.	B) away from you.	-
C) both of the		D) neither of these	
34) If you quickly ru	in toward the orchestra at a concert	the frequency of the sound you hear will be	34)
A) decreased.		C) neither of these	J 1)
A) decreased	b) increased.	C) Hertiter of these	
-	produced when a speed boat moves		35)
	ast as the waves it produces.	B) as fast as the waves it produces.	
C) faster than	the waves it produces.	D) none of the above	
	<u>-</u>		
36) A shock wave is	produced when a wave source mov	ves	36)
	ast as the waves it produces.	B) as fast as the waves it produces.	
	the waves it produces	D) none of the above	

37) An aircraft that flies faster than the speed of sound is said to be		37)
A) subsonic.	B) supersonic.	
C) impossible.	D) none of the above	
38) A sonic boom is produced by an airplane flying at a speed		38)
A) just below the speed of sound.		
B) equal to the speed of sound.		
C) greater than the speed of sound.		
D) all of the above		
E) none of the above		
39) The source of a sonic boom		39)
A) must be a sound emitter.	B) may or may not be a sound emitter.	
C) is not a sound emitter.	D) none of the above	
40) A jet traveling at 1500 km/h passes overhead. The sonic boom produced is heard by		40)
A) a listener on the ground.	B) the jet pilot.	
C) both of these	D) neither of these	

Answer Key Testname: CHAPTER 19 PRACTICE

- 1) E
- 2) A
- 3) A
- 4) E
- 5) C
- 6) B
- 7) A
- 8) A
- 9) B
- 10) B
- 11) A
- 12) D
- 13) C
- 14) B
- 15) C
- 16) A
- 17) A
- 18) B
- 19) A
- 20) B
- 21) C
- 22) D
- 23) C
- 24) C
- 25) D
- 26) B
- 27) A
- 28) D
- 29) B
- 30) D
- 31) D
- 32) C
- 33) B
- 34) B
- 35) C
- 36) C
- 37) B 38) C
- 39) B
- 40) A