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روابط مواقع التواصل الاجتماعي بحسب الصف العاشر المتقدم

روابط مواقع التواصل الاجتماعي بحسب الصف العاشر المتقدم				
روابط مواد الصف العاشر المتقدم على تلغرام				
التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الاجتماعيات	الرياضيات

POP QUIZ 3 - Physics Grade 10

Student Name		Date	

Choose the best answer

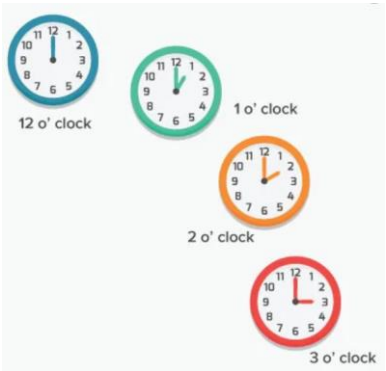
1	**In physics; a system in which mass is not allowed to go in or out, while energy can, is called a(n) …….**	
	A	Closed system
	B	Open system
	C	Isolated system
	D	Automatic system

2	**When a star (an isolated system) nears its end, it starts to collapse, making its radius and moment of inertia (I) smaller. Nevertheless, the star will continue to rotate. If the star has an angular velocity (ω), and an angular momentum (L), which of the following is true?**	
	A	ω will decrease with time
	B	ω will increase with time
	C	L will decrease with time
	D	L will increase with time

3	**A scientist ran a computer simulation of a star with an angular velocity of 500 rad/s and a moment of inertia of 3 x 10^6 kg.m^2. As the star starts to collapse, what will be its angular velocity once it reaches a point where its moment of inertia is 300 kg.m^2 ?**	
	A	5 x 10^6 rad/s
	B	5 x 10^{10} rad/s
	C	500 rad/s
	D	50 m/s

4	**A 4 tons asteroid traveling in space with a velocity of 2000.0 m/s, collides heads on with a stationary rock with a mass of 500.00 kg. After the collision they travel as one. The velocity of the two after the collision will be……**	
	A	1777.8 m/s
	B	2000.0 m/s
	C	5000.0 m/s
	D	177.80 m/s

5	**180-degree angle is equivalent to what in radian?**	
	A	0
	B	π
	C	2 π
	D	π/2

6	**An hour hand of a clock moves from 12 to 3 o'clock, as shown in the figure.** **What is the angular displacement made by the hour hand?** 	
	A	$\pi/4$ rad
	B	$\pi/2$ rad
	C	π rad
	D	3π rad

7	**Referring to the problem in Q6, what is the angular velocity of the hour hand in rad/s?**	
	A	0.5 rad/s
	B	1.5×10^{4} rad/s
	C	1.5×10^{-4} rad/s
	D	0.25 rad/s

8	**The rate of change of angular velocity is measured in rad/s^2, and is called….**	
	A	Angular momentum
	B	Angular acceleration
	C	Angular velocity
	D	Angular displacement

9	**A bicyclist applies the break, slowing down the motion of the bicycle's wheels from 5 rad/s to 1 rad/s over a period of 10 sec. The angular acceleration of the wheels will be……**	
	A	4 rad/s^2
	B	0.4 rad/s^2
	C	-0.4 rad/s^2
	D	-0.6 rad/s^2

10	**Referring to the problem in Q9, what will be the linear acceleration of the wheels? knowing that the wheels have a diameter of 40 cm.**	
	A	-1.6 m/s^2
	B	-0.16 rad/s^2
	C	0.08 m/s^2
	D	-0.08 m/s^2

Feedback

Tested Learning outcomes	Question	√	X	Action (extra practice question)
State the difference between open, closed and isolated systems in physics.	Q1			
Use the conservation of angular momentum Law conceptually.	Q2			
Apply the conservation of angular momentum Law mathematically.	Q3			
Apply the conservation of momentum.	Q4			
• Differentiate between the radian and the degree angular systems. • Convert between them.	Q5			
Define and calculate angular displacement.	Q6			
Define and calculate angular velocity.	Q7			
• Identify and define angular acceleration. • Differentiate between the various angular motion quantities.	Q8			
Define angular acceleration, and its link to angular velocity.	Q9			
Link angular quantities to linear quantities, as used in describing motion.	Q10			
Student Comments				
Parent Signature				

Answer key

Multiple Choice	
Q1	A
Q2	B
Q3	A
Q4	A
Q5	B
Q6	B
Q7	C
Q8	B
Q9	C
Q10	D