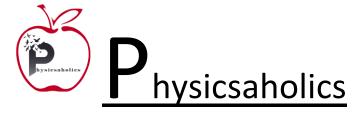




		DPP – 1 (C	Circular Motion)				
Video Solution on Website:-		https://ph	ysicsaholics.com/home/courseDetails/39				
Video Solution on YouTube:-		https://youtu.be/3KMTUMzkQjk					
Written Solution on Website:-		https://ph	ysicsaholics.com/note/notesDetalis/42				
Q 1.	The angular velocity when its angular acco (a) 0.25 sec (c) 1 sec		given by $\omega = 1.5t - 3t^2 + 2$, Find the time es zero: (b) 0.5 sec (d) 2 sec				
Q 2.	A wheel rotates with an angular acceleration given by $\alpha = 4at^3 - 3bt^2$, where t is the time and a and b are constants. If the wheel has initial angular speed ω_0 , write the equations for the angular speed: (a) $\omega = \omega_0 + 4at^4 - 3bt^3$ (b) $\omega = \omega_0 + at^4 - bt^3$ (c) $\omega = at^4 - bt^3$ (d) $\omega = 4at^4 - 3bt^3$						
Q 3.	A grinding wheel attained a velocity of 20 rad/sec in 5 sec starting from rest. Find the number of revolutions made by the wheel. (a) $\pi/25$ revolutions (b) $1/\pi$ revolutions (c) $25/\pi$ revolutions (d) none of these						
Q 4.	The magnitude of dis constant angular spec (a) 2 a sin ωt (c) 2a cos ωt		particle moving in a circle of radius with a time t as: (b) 2a sin (ωt/2) (d) 2a cos (ωt/2)				
Q 5.	The ratio of angular s (a) 1 : 12 (c) 12 : 1	speeds of minut	es hand and hour hand of a watch is - (b) 6 : 1 (d) 1 : 6				
Q 6.	The angular displace angular velocity (in r (a) 27 (c) 15		le is given by $\theta = (t^3 + t^2 + t + 1)$ rad then, its c is: (b) 17 (d) 16				
Q 7.		and 't' is in seco	le performing circular motion is $\theta = \left(\frac{t^3}{60} - \frac{t}{4}\right)$ nd .Then the angular velocity and angular 5 s will be: (b) 1 rad/s, 0.5 rad/s ² (d) 0.1 rad/s, 5 rad/s ²				
Q 8.			f a particle if the angular velocity of a particle velocity 1 rad/s in 2 seconds: (b) $1 rad/s^2$				





(c) 1.5 rad/s^2

(d) $2 rad/s^2$

- Q 9. A fan is rotating with angular velocity 100 rev/s. Then it switched off. It takes 5 min to stop. Find the total number of revolution made before the fan stops: (assume uniform angular retardation)
 (a) 9000 rev
 (b) 13000 rev
 - (c) 15000 rev (d) 4500 rev
- Q 10. The angular acceleration of a fan is $\alpha = -\frac{3}{2}t^2$. At the initial moment, its angular velocity $\omega = 10$ rad/s and has an angular position of 1 rad. Choose the incorrect option:
 - (a) its angular velocity at t=1sec. is 9.5 rad/s
 - (b) its angular position at t=2 sec. is 5 rad
 - (c) its angular velocity at t=2 sec. is 6 rad/s
 - (d) its angular position at t=1 sec. is $\frac{87}{8}$ rad

Answer Key

Q.1 a	Q.2 b	Q.3 c	Q.4 b	Q.5 c
Q.6 b	Q.7 b	Q.8 c	Q.9 c	Q.10 b