



(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

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[Max. Marks - 70]

 $15 \ge 1 = 15$

XI Std Time:2:30 Hrs

PADASALAI'S - REVISION TEST PHYSICS

I. Choose and write correct answer :-

- 1. How many light years make 1 parsec? a) 3.26 b) 6.67 c) 1.5 d) 9.4
- 2. Which one of the following physical quantities cannot be represented by a scalar.....
 - a) Mass b) length c) momentum d) magnitude of acceleration.
- 3. If a person moving from pole to equator the centrifugal force acting on him......
 a) Increases b) decreases c) remains the same d) increase and decreases
 Fill in the blanks:

4. Write the dimensional formula for i) Moment of inertia ii) Frequency

- 5. In a projectile motion for which acceleration is uniform the path traced by the particle is... Which one of the following statement is true?
- 6. a) a scalar quantity is conserved in a process
 - b) a scalar quantity does not vary from one point to another in space.
 - c) A scalar quantity can never take ve value
 - d) A scalar quantity has only magnitude and no direction.

Which one of the following statement is false?

- 7. a) one Fermi = 10^{15} m
 - b) all non zero digits are significant
 - c) speed is a derived unit
 - d) $1 \text{ AU} = 1.496 \text{ x} 10^{11} \text{ m}.$

Short answer question:

- 8. Lubricants are used between the two parts of a machine .Why?
- 9. Write the example of conservative force and non conservative force. Write the correct and incorrect statement?
- 10. The potential energy possessed by a spring due to a gravitational force which stretches or compresses the spring is termed as elastic potential energy.
- 11.Kinetic energy is the energy possessed by a body by virtue of its motion.

Which correct and incorrect pair:

- 12.a) angle of repose angle of friction
 - b) motion of vertical motion T = $\frac{2m_1}{m_1 + m_2}$
 - c) inertia of rest the inability of a body to change state of motion .
 - d) momentum impulse
 - Which one is odd man out.
- 13.Mass, Acceleration, Force, Torque
- 14.Moment of inertia of ring, moment of inertia of rod, moment of inertia disc, moment of inertia of cylinder
- 15. Assertion : the ratio d_2/d_1 is called mechanical advantage of the simple lever. The pivoted point is called is fulcrum.

Reason : there are many machines work based on this principle.

a) A and R is Wrong b) A is correct and R is wrong c) A is wrong and R is correct d) A and R is correct

Send Your Questions & Answer Keys to our email id - padasalai.net@gmail.com

II. Answer the following questions:- [Compulsory – 24]	6 x 2 = 12
16.Write the applications of dimensional analysis.	
17.Write down the kinematic equations for angular motion.	
18. What is retardation?	
19. What is the meaning by pseudo force.	
20. Under what condition will a car skid on a leveled circular road.	
21.Different between the characteristics of elastic and inelastic collision. 22.Define power.	
23. Give any two examples of torque in day $-$ to $-$ day life.	
24.A force of $(4\hat{\imath} - 3\hat{\jmath} + 5\hat{k})$ N is applied at a point whose position vector is (7)	$7\hat{\imath} + 4\hat{\jmath} - 2\hat{k}$) m.
Find the torque of force about the origin.	
III. Answer the following questions:- [Compulsory – 30]	6 x 3 = 18
25. What are the limitations of dimensional analysis.	
26. What are the advantage of the SI system.	
27.Derive the relation between linear velocity and angular velocity.	
28.State and explain angle of friction.	
29. Write the difference between static friction and kinetic friction.	
30 State and explain work energy theorem	
31 Show that the ratio of velocities of equal masses in an inelastic collision w	when one of the
v_1 v_1 $1-e$	inen one of the
masses is stationary is $\frac{1}{v_2} = \frac{1}{1+e}$	
32. Derive the expression for moment of inertia of a uniform disc about an ax	is <mark>p</mark> assing
through the center and perpendicular axis.	
33.Derive and expression for work done by the torque.	
IV. Answer the following questions:-	5 x 5 = 25
34. Assuming that the frequency γ of a vibrating string may depend upon i) a	pplied force.
ii) length iii) mass per unit length, prove that $\gamma = \frac{1}{l} \sqrt{\frac{F}{m}}$ using dimensional as	nalysis. [Or]
State and prove parallel axis theorem.	
35. Write each five properties of scalar and vector properties. [Or]	
Arrive at an expression for elastic collision in one dimension and discuss	various cases
36 Write the rules of significant figures [Or]	various cuses.
Explain the motion of blocks connected by a string in horizontal motion	
Explain the motion of blocks connected by a string in horizontal motion.	-1-0
37. Derive the kinematic equations of motion for constant acceleration.	rj
Describe the method of measuring angle of repose.	Pada
38.Discuss rolling on inclined plane and arrive at the expression for the accel	eration.
a) Any three Difference between conservative and non conservative force	.
b) Define coefficient of restitution.	