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Name _____ Date: _____ Subject physics
Revision worksheet Quarter:3 Grade: 9 Section _____ Teacher's Name: Mr Ermias A

I. **EXPLAIN AND DEFINE THE FOLOWING QUESTIONS.NEATNESS COUNT.**

1. State the law of conservation of energy?

2. What is mechanical energy?

3. What is the difference between work done by frictional force and against frictional force?

4. What is gravitational potential energy?

5. What elastic potential energy?

6. What is machine?

7. What is the purpose of the machine?

8. What is effect, load and input work and also output work?

9. When we say machine is force multiplier?

10. When we say machine is distance multiplier?

11. What is mechanical advantage of a machine?

12. Define velocity ratio

13. Define efficiency?

II. WORKOUT THE FOLLOWING QUESTIONS .STEPS AND NEATNESS COUNT.

1. A spring compress at 2cm and performed a work of 200J then calculate the spring constant.

2. What will be the mechanical energy of a bird of mass 200g flying at 12m/s at a height of 50m above the ground?

3. If an object is pull up a rough inclined plane
Prove that

$$\mathbf{W_{TOTAL} = mgs(\sin\theta + \mu\cos\theta)}$$

(HINT :- The total work done =work done against gravity +work done against friction)

4. The mechanical energy of a 2kg body is 36j. If its potential energy Is 20 J then with what speed the body can move?

5. A spring of force constant 100N/M compresses by 2cm . calculate the elastic potential energy?

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