**Multiple Choice:** Choose the best answer.

1. What do we call the ability to do work?
   a. Force
   b. Energy
   c. Power
   d. Motion

2. Which of the following is a simple machine?
   a. Motor
   b. Battery
   c. Pulley
   d. Engine

3. Energy due to movement is called:
   a. Potential energy
   b. Heat energy
   c. Kinetic energy
   d. Chemical energy

4. A stretched bow stores which type of energy?
   a. Kinetic
   b. Heat
   c. Potential
   d. Light

5. Which part of the Earth has the highest temperature?
   a. Crust
   b. Mantle
   c. Outer core
   d. Inner core

6. Weathering causes rocks to:
   a. Melt
   b. Break into smaller pieces
   c. Move to another place
   d. Sink underground

7. The movement of soil and rock by wind or water is called:
   a. Weathering
   b. Deposition
   c. Erosion
   d. Rock cycle

8. The continuous process that changes rocks over time is the:
   a. Energy cycle
   b. Rock cycle
   c. Water cycle
   d. Weather cycle

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9. Which is a renewable energy source?
   a. Oil
   b. Coal
   c. Natural gas
   d. Wind

10. Burning fossil fuels mainly causes:
   a. Flooding
   b. Pollution
   c. Earthquakes
   d. Tides

11. A seesaw is an example of a:
   a. Pulley
   b. Lever
   c. Wheel and axle
   d. Inclined plane

12. Wind turbines change wind energy into:
   a. Heat energy
   b. Sound energy
   c. Electrical energy
   d. Nuclear energy

13. The outermost layer of the Earth is the:
   a. Mantle
   b. Outer core
   c. Inner core
   d. Crust

14. When sediments are dropped in a new place, the process is called:
   a. Weathering
   b. Erosion
   c. Deposition
   d. Melting

15. Energy in moving water is:
   a. Potential
   b. Kinetic
   c. Chemical
   d. Nuclear

16. Energy from the Sun is called:
   a. Thermal energy
   b. Wind energy
   c. Solar energy
   d. Electrical energy

17. Fossil fuels are formed from:
   a. Rocks and sand
   b. Living animals
   c. Dead plants and animals
   d. Water and air

18. The soft layer below the Earth's crust is the:
   a. Crust
   b. Mantle
   c. Outer core
   d. Inner core

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19. Which simple machine helps lift objects by rolling?
    a. Wedge
    b. Lever
    c. Inclined plane
    d. Wheel and axle

20. Rocks formed from layers of sediments are:
    a. Igneous
    b. Metamorphic
    c. Sedimentary
    d. Magma rocks

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**Directions: Choose the correct word to complete the sentence.**
เลือกคำที่ถูกต้องเพื่อเติมเต็มประโยค

**energy – kinetic energy – potential energy – erosion – crust – renewable – fossil – rock – simple – distance**

21. The energy of motion is called _____.

22. Stored energy is known as _____.

23. The process that moves soil and rocks is _____.

24. The Earth's outermost layer is the _____.

25. _____ is the ability to do work.

26. A ramp is a _____ machine.

27. Coal and oil are _____ fuels.

28. The _____ cycle explains how rocks change.

29. Solar and wind are _____ energy sources.

30. Work = force × _____.

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**Fill in the table of the Earth Layer's Compositions and Characteristics**
**กรอกข้อมูลลงในตารางองค์ประกอบและลักษณะเฉพาะของชั้นต่างๆ ของโลก**

| **Layer** | Depth Range (km)<br>ช่วงความลึก (กม.) | Composition<br>องค์ประกอบ | Properties<br>คุณสมบัติ |
|---|---|---|---|
| A. Crust | | | |
| B. Mantle | | | |
| C. Outer Core | | | |
| D. Inner Core | | | |

**Problem Solving**

**Calculating Work and Power**

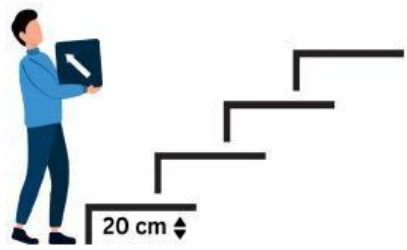

Figure 2

Figure 2 shows a boy with a mass of 50 kg carrying a load of 35 kg and moving up stairs that consists of 12 steps. The height of each step is 20cm. He took 20 seconds to climb up the stairs. (Weight of 1 kg = 10 N)

**a.)** Calculate the work done by the boy.

**Formula:**_____

**Solution:**_____

**b.)** Calculate the power generated by the boy. คำนวณกำลังไฟฟ้าที่เด็กชายคนนั้นสร้างขึ้น

**Formula:**_____

**Solution:**_____

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**Solving Potential and Kinetic Energy**

**Figure 3** shows a basketball thrown up and entered the basket.
แสดงภาพลูกบาสเก็ตบอลที่ถูกโยนขึ้นไปและลงห่วง

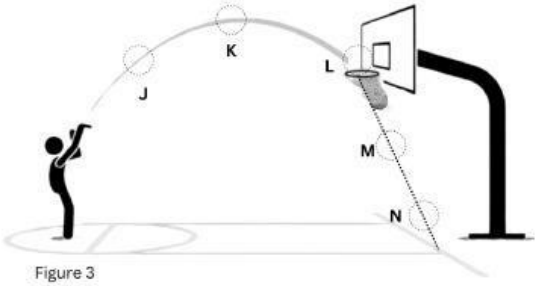

Figure 3

a.) At which position does the ball have the maximum potential energy?
ลูกบอลจะมีพลังงานศักย์สูงสุดที่ตำแหน่งใด?

b.) At which position does the ball have the maximum kinetic energy?
ลูกบอลจะมีพลังงานจลน์สูงสุดที่ตำแหน่งใด?

**Writing Task**

**Give 2 disadvantages of using fossil fuels and 2 advantages of using renewable energy.**

ระบุข้อเสีย 2 ข้อของการใช้เชื้อเพลิงฟอสซิล และข้อดี 2 ข้อของการใช้พลังงานหมุนเวียน

| Advantages of Fossil Fuels<br>ข้อดีของเชื้อเพลิงฟอสซิล | Advantages of Renewable Energy<br>ข้อดีของพลังงานหมุนเวียน |
|---|---|
| 1. | 1. |
| 2. | 2. |

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