

11. Choose **reversible or irreversible** to describe these processes:

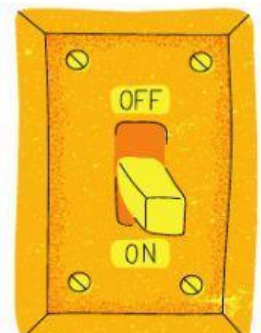
- |                 |                   |
|-----------------|-------------------|
| a) combustion   | f) melting        |
| b) oxidation    | g) evaporation    |
| c) freezing     | h) solidification |
| d) fermentation | i) heating        |
| e) condensation | j) cooling        |

12. Are these changes **chemical or physical**?



13. What **types of energy** do these sentences describe?

- a) The sum of potential and kinetic energy is called \_\_\_\_\_ energy.
- b) Energy released during a chemical reaction is \_\_\_\_\_ energy.
- c) Vibrations we can detect with our ears is \_\_\_\_\_ energy.
- d) Energy that flows from warm objects to cooler ones is called \_\_\_\_\_ energy.
- e) When electrons move from one atom to another this creates \_\_\_\_\_ energy.



14. Identify the types of energy you can see in the pictures:



a) \_\_\_\_\_



b) \_\_\_\_\_



c) \_\_\_\_\_



d) \_\_\_\_\_



e) \_\_\_\_\_

15. Read the text about **light and thermal energy**.

**Choose the correct word** to complete each sentence.

Light energy travels in i) \_\_\_\_\_ lines and it's the ii) \_\_\_\_\_ form of energy. When light touches the surface of an object, it can be reflected, transmitted or iii) \_\_\_\_\_. Natural light from the Sun is called iv) \_\_\_\_\_ light and it contains \_\_\_\_\_ different colours. We can see all these colours as a rainbow when light passes through water in the air and changes direction during v) \_\_\_\_\_. To see colour around us, we need light. Colours we see are created when some of the white light is absorbed and some is vi) \_\_\_\_\_ into our eyes.

Thermal energy affects materials in 3 different ways. Warm objects get bigger in a process called vii) \_\_\_\_\_ expansion, then they start to melt and at last, to change into a gas during viii) \_\_\_\_\_. Thermal energy makes materials move up or ix) \_\_\_\_\_ when it gets hot then go down or \_\_\_\_\_ when it starts to become cool. This process is called x) \_\_\_\_\_ and we use it to cook. When we touch objects together, thermal energy can pass from one object to another in a process called xi) \_\_\_\_\_. Heaters and hobs use a process called xii) \_\_\_\_\_ to push heat away from them. This also happens with heat from the Sun.



Go back and **read ALL of your answers** again *before* you send the exam.