

PHYSICS: MECHANICAL PROPERTIES OF MATERIALS INTRO

1. In Ngoma town council, there is a problem of collapsing structures after completion. This has led to death of a number of people who are in these buildings. Both the government and the locals are blaming the engineering companies for what is happening. Prepare a speech that is going to be used in order to inform people about the cause of such accidents and the different ways of overcoming them.

2. Explain the following observations;

(a) Rain droplets do not easily fall off the umbrella

(b) Why damp proof polythene is put in the foundation of a building?

(c) why a glass is said to be brittle?

(d) a rubber band comes back to its original length when stretched

3. A spring was noted that it increased its length from 15cm to 20cm when some force is applied to it. Given the spring's constant is 100N/m. Come up with detailed procedures on how Jonathan can calculate the force applied on the spring.

4. Do metals contain crystals? If yes give procedures on how one can be able to know whether the crystals are contained in them. If no justify it.

5. Match the following machines to the corresponding alloys in which they are made.

Ships	stainless steel
Aircrafts	invar
Knives	duralium
Stamps	mild steel
Measuring tape	brass

