1. (b) An alloy is made by combining different percentage **by mass** of gold and copper together. A block of such alloy has a weight of 10.0 kgf in air. When the block is completely immersed in a saturated salt solution which has a density of 1230 kg m^{-3}, its weight appears to become 9.326 kgf. Calculate the percentage **by mass** of gold and copper in the alloy.

[5 marks]

[The alloy contains 95% by mass of gold and 5% by mass of copper.]

[kgf = kilogram-force. It is the weight of a kilogram under standard gravity. One kgf = 9.81 N

Densities (in kg m^{-3}) : gold : 19 300 ; copper : 8 960]