

TEST 1 – MARK SCHEME

- A1.** (a) Mass measured correctly, given to the resolution of the balance with unit. (1)
 Percentage uncertainty calculated correctly using the resolution of the balance and expressed to 1 [accept 2] significant figures. (1) [2]
- (b) Diameter correctly measured with unit. (1) [This mark can be awarded ‘by implication’ if the volume is correct.]
 Volume calculated correctly with correct units (1) [e.c.f. on incorrect diameter].
 Volume given to 3 or 4 s.f. (1) [e.c.f. on incorrect volume]. [3]
- (c) (i) Density calculated correctly with units [Allow ecf from part (b)]. (1)
 Percentage uncertainty calculated correctly [Ans: uncertainty in (a) + 0.5%]. (1) [2]
- (ii) The true density is greater than the measured / calculated density *because* the true volume is less than the measured volume [or equiv, e.g. accept “there is missing mass which would fill up the dimples!”]
 NB Effect on density **and** reason required. [1]

Total [8]