TEST NAME 01
CHEMISTRY

1. Boron has two stable isotopes, 10B (19%) and 11B (81%). Calculate average at.wt. of boron in the periodic table.

I. 10.8
II. 10.2
III. 11.2
IV. 10.0

2. In which case is the number of molecules of water maximum?

I. 18 mL of water
II. 0.18 g of water
III. 0.00224Lof water vapours at 1 atm and 273K
IV. 10–3 mol of water

3. An element, X has the following isotopic composition:

200X : 90 % 199X : 8.0 % 202X : 2.0 %

The weighted average atomic mass of the naturally-occurring element X is closest to _____.

I. 201 amu
II. 202 amu
III. 199 amu
IV. 200 amu

4. 1 cc N2O at NTP contains _____.

I. 1.8 224 x 1022 atoms
II. 6.02 22400 x 1023 molecules
III. 1.32 224 x 1023 electrons
IV. all the above

5. What mass of 95% pure $CaCO_3$ will be required to neutralise 50 mL of 0.5 M HCl solution according to the following reaction?

$CaCO_3(s) + 2HCl(aq) \rightarrow CaCl_2(aq) + CO_2(g) + 2H_2O(l)$

[Calculate upto second (2^{nd}) place of decimal point]

I. 1.2g
II. 1.3g

III. 3.6g
IV. 9.50g