

You may use a calculator in this examination, but mobile phones are strictly prohibited. A sheet of the periodic table the RAMs of the elements is provided.

Answer ALL Questions:

1) Find the number of hydrogen atoms in 20.0 g of glucose, $C_6H_{12}O_6$.
(2 marks)

2) What volume would contain 3.5 g of methane gas at STP? (2 marks)

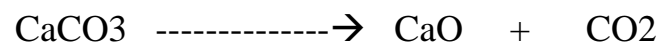
3) Calculate the volume of 15M NH_3 that must be used to prepare 250mL of 0.5M solution of ammonia. (2 marks)

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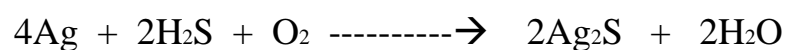
4) State all practical steps involved to prepare 50 mL of 0.4M ammonium nitrate. (2 marks)

5) A rock weighing 95.0 g, when heated produced 8.6 litres of carbon dioxide.

Calculate the percentage of calcium carbonate contained in the rock and the mass of calcium oxide produced: (5 marks)



- 6) What mass of silver sulphide (Ag_2S) could be obtained as a mixture of 0.95g Ag, 0.14g H_2S , and 0.08g O_2 were allowed to react: (4 marks)



- 7) Find the molecular formula of a compound that contains 7.04g phosphorous, and 5.46g sulphur if it has a molecular weight of 220 amu. (3 marks).

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