Iron and Steel: Answers

1. (a) Produces carbon dioxide

    Removes silicon(IV) oxide from the furnace

    One mark for each correct answer. Deduct a mark if three ticks are given.   [2]

    (b) (i) The mass of 1 mole (formula mass) of iron(III) oxide =

        $(2 \times 56) + (3 \times 16) = 160$ g   [1]

        Recognising 1 mole of iron(III) oxide produces 2 moles of iron atoms

        $(2 \times 56 = 112$ g)   [1]

        Answer = $160 \div 112 \times 22.4 = 32$ tonnes   [1]

        (ii) $(32 \div 48) \times 100$ [1]

        66.6%   [1]