7 **(a)** A 6-digit number is to be formed using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. Each digit can be used only once in any 6-digit number. A 6-digit number cannot start with 0.

(i) Find how many 6-digit numbers can be formed. [1]

(ii) Find how many of these 6-digit numbers are divisible by 5. [3]

(b) A committee of 7 people is to be chosen from 6 doctors, 10 nurses and 8 dentists.

(i) Find the number of committees that can be chosen. [1]

(ii) Find the number of committees that can be chosen if all the doctors have to be on the committee. [1]

(iii) Find the number of committees that can be chosen if there has to be at least one dentist on the committee. [2]

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