7 **(a)** A committee of 8 people is to be formed from 5 teachers, 4 doctors and 3 police officers. Find the number of different committees that could be chosen if

(i) all 4 doctors are on the committee, [2]

(ii) there are at least 2 teachers on the committee. [3]

(b) Given that ${}^{n}\mathrm{P}_{5} = 6 \times {}^{n-1}\mathrm{P}_{4}$, find the value of n. [3]