Question

From the list of populations and samples, select all of the samples that are likely to be representative (not biased) of the population from which they are drawn.

there can be only 1 or multiple correct possible answers

A. Population: Healthy adults from a single geographical area for a vaccine study. Sample: Employees at a local factory

B. Population: Individuals infected with hepatitis C virus. Sample: Patients presenting with hepatitis C virus at a liver clinic in a teaching hospital

C. Population: Women diagnosed with breast cancer between 1990 and 1999. Sample: Women first attending hospital with breast cancer between 1990 and 1999

D. Population: A study of the general population to assess the prevalence of a number of blood-borne viruses. Sample: Blood donors

Solution

A. Probably representative. As employees at a factory are likely to give a broad range of occupations and regions of residence, and as they are working, they are likely to be reasonably healthy, this sample will probably be ok.

C. Probably representative. As almost all women diagnosed with breast cancer would require treatment this would probably lead to a representative sample.

B. and D. are samples that have self-selected to be known positives - hardly representative.

Answer: A, C.