The best answer is \*\*(A) a sample characteristic\*\*. Here's the breakdown and why the other options are incorrect, as a graduate statistics student would understand:

\* \*\*A statistic is a sample characteristic (A):\*\* This is the \*definition\*. A statistic is a numerical summary of a sample. We calculate statistics from the data we \*observe\* in our sample (e.g., sample mean, sample standard deviation, sample proportion). Statistics are used to \*estimate\* population parameters.

\* \*\*a population characteristic (B):\*\* This describes a \*parameter\*, not a statistic. A parameter is a numerical summary of the entire \*population\* (e.g., population mean, population standard deviation, population proportion). Parameters are usually unknown and what we are trying to estimate with statistics.

\* \*\*unknown (C):\*\* While the \*true\* value of a parameter is often unknown, the \*value of a statistic\* is \*known\* once you have the sample data and perform the calculation. We compute statistics.

\* \*\*normally distributed (D):\*\* This describes the \*distribution\* of a statistic, \*under certain conditions\*, not the statistic itself. Some statistics (e.g., sample mean) follow a normal distribution (or approximate it, by the Central Limit Theorem), but many others do not (e.g., median, mode in some cases). Further, the distribution depends on the underlying population distribution. The statistics \*themselves\* are not inherently normally distributed. Furthermore, even if a statistic does follow a normal distribution, this is not the definition of the statistic.

\*\*Therefore, (A) is the correct answer because it is the fundamental definition of a statistic.\*\*