At the start:

Samplesize=20
Obsleft=136

Obsnum=1

If ranuni(0) < 20/136   ELSE
→
Select obsnum #1   Do not select obsnum #1
                                                    Samplesize=20
Samplesize = 19   Obsleft=135
Obsleft=135
                                                    Obsnum=2
Obsnum = 2   →
→   If ranuni(0) < 20/135
If ranuni(0) < 19/135   Select obsnum #2
Select obsnum #2

Etc.

Stop when samplesize = 0 (no more observations needed for sample)

If at any point in the process, samplesize ≥ obsleft, then all remaining observations will certainly be
selected.