4. You are given:

(i) Losses follow a Single-parameter Pareto distribution with density function:

$$f(x) = \frac{\alpha}{x^{(\alpha+1)}}, \quad x > 1, \quad 0 < \alpha < \infty$$

(ii) A random sample of size five produced three losses with values 3, 6 and 14, and two losses exceeding 25.

Determine the maximum likelihood estimate of α.

(A) 0.25

(B) 0.30

(C) 0.34

(D) 0.38

(E) 0.42