1994 Paper 2 Question 6

A customer asks you, a programmer, to write a program to generate random deviates from a chi-squared distribution, and you recall that this is the same as the gamma distribution with probability density function

$$f(x) = x^{a-1}e^{-x}/\Gamma(a).$$

For small integral values of the parameter a (say up to 10) how would you do this?

[20 marks]