1995 Paper 5 Question 6

Compiler Construction

Give a BNF syntax for unsigned floating point constants that would allow constants such as

h	1.2	3E4	0.23E-8	
but not	.123	20.	21.E4	
				[6 marks]

Construct a finite state machine that could be used in a lexical analyser to read in such floating point numbers. [7 marks]

Show how this finite state machine can be extended to evaluate the floating point number it reads. [7 marks]