2002 Paper 11 Question 12

Software Engineering II

(*a*) Briefly describe top-down refinement, listing both advantages and drawbacks.

[4 marks]

(*b*) How can we achieve efficiency without sacrificing reliability or programmer productivity?

[3 marks]

(*c*) How can we minimise the hazards associated with memory management?

[3 marks]

(*d*) In the Z specification language, what are Δ and Ξ schemas?   [5 marks]

(*e*) Contrast a loop invariant with the Z concept of invariant.   [5 marks]