Comparative Architectures

A number of techniques exist to reduce the penalty of control-flow hazards. Discuss four of the following:

(a) delayed branches and annulment
(b) predicated execution and conditional moves
(c) dynamic branch prediction caches
(d) jump target hints and subroutine call return prediction stacks
(e) next-fetch predictors and branch target buffers

[4 marks each]

Why is good control-flow prediction so important to a dynamically scheduled superscalar processor? [4 marks]