Hoare Logic

(a) What does it mean for a logic to be sound and to be complete? [4 marks]

(b) Outline how Hoare logic can be proved sound. [4 marks]

(c) What does it mean for Hoare logic to be relatively complete? [4 marks]

(d) State conditions under which Hoare logic is relatively complete and outline the proof of completeness under these conditions. [8 marks]