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ECON 202
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Mid-term Exam
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1. (35%) Consider the following model

$$(1) \quad c\left(y, \frac{\bar{M}}{p}\right) + i(r, p^*) = y \quad i_r < 0 \quad i_r = -i_p$$

$$(2) \quad L(y, r) = \frac{\bar{M}}{p} \quad L_y > 0 \quad L_r < 0 \quad \frac{c_M}{p} > 0 \quad 0 < c_y < 1$$

$$(3) \quad y = h(p) \quad h_p > 0$$

where p^* = exogenous expected inflation rate
 \bar{M} = exogenous nominal stock of money
 y = real income
 r = nominal interest rate
 p = price level

and where the interest rate (r) price level (p) and real income (y) are the endogenous variables. Equations (1) and (2) are the IS and LM schedules. Equation (3) is an upward sloping Keynesian aggregate supply schedule.

- Calculate the effect on the nominal interest rate and level of real income from an increase in the expected inflation rate (dr/dp^* and dy/dp^*).
- What is the effect on the real interest rate ($r - p^*$) from the increase in the expected inflation rate?
- Give an economic interpretation of your results in (a) and (b). Use appropriate graphs.
- How would your answers in parts (a) and (b) change if $L_r = 0$ instead of $L_r < 0$?

