Do not put your name anywhere on the assignment, other than on the back of this sheet of paper. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you one point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you ten points. If you do double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (35 points) Illustrate on both the $A P_{L} / \mathrm{MP}_{\mathrm{L}}$ diagram and the $\mathrm{MRP}_{\mathrm{L}} / \mathrm{MRC}_{\mathrm{L}}$ diagram an increase in the amount of capital. Explain why the curve(s) moved as drawn. What happens to the quantity of labor used?
2) (15 points) Explain why the $\mathrm{MP}_{\mathrm{L}}$ curve takes the shape drawn in your answer to Question \#1.
3) (20 points) Copy this table onto your answer sheet and fill it in. Show all work for all calculations. If a row does not require calculations, then explain how you got the entries.

| L | $\mathrm{TP}_{\mathrm{L}}$ | $\mathrm{MP}_{\mathrm{L}}$ | $\mathrm{AP}_{\mathrm{L}}$ |
| :---: | :---: | :---: | :---: |
| 0 |  |  |  |
| 2 | 40 |  |  |
| 4 |  |  | 25 |
| 6 |  | 25 |  |
|  | 160 |  | 20 |

4) (10 points) When the book calculates $M R P_{L}$ in Column 3 on Page 242, they say that $M R=P$. Why can they say that?
5) ( 20 points) The book draws on Page 240, a graph of $\mathrm{TP}_{\mathrm{L}}$. What why does it slope down in Stage III of production? Why do we disregard that area of the graph?
