Number of Unskilled Workers Hired	Quantity of Radios Produced (per day)
0	0
1	20
2	45
3	60
4	70
5	75
6	79
7	80

2. Assume that HZRad Company produces clock radios as shown in the short-run production function in the table above. HZRad can sell all the clock radios it produces at a market price of $20 each and can hire all the unskilled labor it needs at a wage of $90 per day per worker. Assume also that labor is the only variable input.

(a) Using the specific information above, draw a correctly labeled graph of HZRad's current supply curve for unskilled labor.

(b) What is HZRad's profit-maximizing output level? Explain.

(c) Suppose that HZRad is the first company to use a new technology that increases the productivity of its unskilled workers.

   (i) How will the new technology affect the quantity of unskilled labor HZRad hires? Explain.

  (ii) How will the new technology affect the wage paid to HZRad's unskilled workers?

3. Two bus companies, Roadway and Rankin Wheels, operate a route from Greensboro to Spring City, transporting a mix of passengers and freight. They must file their schedules with the local transportation board each year and cannot alter them during that year. Those schedules are revealed only after both companies have filed. Each company must choose between an early and a late departure. The relevant payoff matrix appears below, with the first entry in each cell indicating Roadway's daily profit and the second entry in each cell indicating Rankin Wheels' daily profit.

<div align="center">

Rankin Wheels

		Early	Late
Roadway	Early	$1,000, $900	$950, $850
	Late	$750, $650	$700, $800

</div>

(a) In which market structure do these firms operate? Explain.

(b) If Roadway chooses an early departure, which departure time is better for Rankin Wheels?

(c) Identify the dominant strategy for Roadway.

(d) Is choosing an early departure a dominant strategy for Rankin Wheels? Explain.

(e) If both firms know all of the information in the payoff matrix but do not cooperate, what will be Rankin Wheels' daily profit?
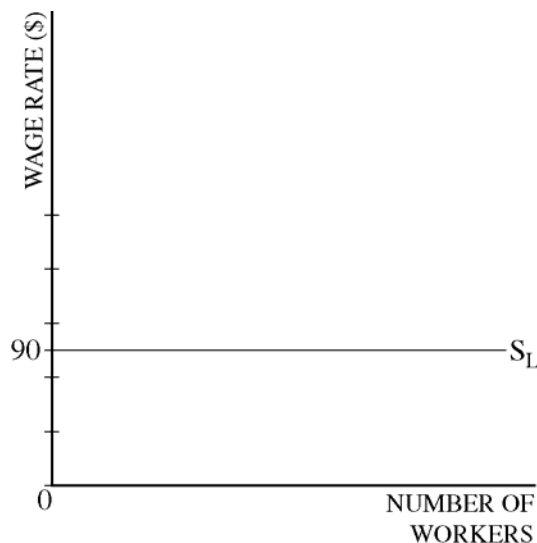
STOP

END OF EXAM

Question 2

6 points (1 + 2 + 3)

(a) 1 point:
- One point is earned for correctly labeled axes with a horizontal labor supply curve at $90.

(b) 2 points:
- One point is earned for identifying the profit-maximizing output as 75, or between 75 and 79.
- One point is earned for stating that MRP is greater than $90 for the fifth worker, but less than $90 for the sixth worker.

(c) 3 points:
- One point is earned for stating that the quantity of labor HZRad hires increases.
- One point is earned for the explanation that the marginal product of labor increases at each input level, or the marginal product of labor curve shifts to the right, or the demand curve for labor shifts to the right.
- One point is earned for stating that the wage rate will remain constant.