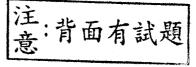所別：**產業經濟研究所碩士班 乙組** 科目：**個體經濟學**

I Multiple Choice Questions (40%)

1. *The equilibrium market price of lead pencils would decrease and the quantity of pencils produced and sold would increase if:*
   A. the price of graphite (pencil lead) decreased.
   B. pencil workers obtained higher wages.
   C. the price of typewriters or word processors decreased.
   D. the price of pens, substitute for pencil, increased.

2. *In the short run, a perfectly competitive firm will shut down and produce nothing if:*
   A. total variable cost exceeds total revenue.
   B. excess profits equal zero.
   C. total cost exceeds total revenue.
   D. the market price falls below the minimum average total cost.

3. *Given limited budgets, consumers obtain the most satisfaction of they purchases goods and services that:*
   A. provide the highest level of marginal utility.
   B. provide the highest level of marginal utility per dollars spent.
   C. provide the highest level of total utility.
   D. cost the least.

4. *Economic profit equals*
   A. normal profits plus opportunity costs.
   B. business profits minus implicit costs.
   C. business profits plus implicit costs.
   D. normal profits minus opportunity costs.

5. *A government policy that addresses market failures caused by positive externalities is:*
   A. subsidies for pollution reduction.
   B. tax policy.
   C. patent grants.
   D. the establishment of operating controls.

6. *The production function $Q = 0.25X^{0.5}Y$ exhibits:*
   A. constant returns to scale.
   B. increasing returns to scale.
   C. increasing and then diminishing returns to scale.
   D. diminishing returns to scale.

7. *If the slope of a long-run total cost function decreases as output increases, the firm's underlying production function exhibits:*
   A. increasing returns to scale.
   B. constant returns to scale.

注意：背面有試題

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    C.　decreasing returns to scale.

    D.　decreasing returns to a factor input.

8.　*The vigor of competition always decreases with a fall in*:

    A.　product differentiation.

    B.　the level of available information.

    C.　barriers to entry.

    D.　the number of competitors.

II. Answer each of the following statements as true or false, and explain your answer. (35%)

1.　The demand for mini cassette players can be characterized by the following point estimates: price elasticity = -2, cross-price elasticity with AA batteries = -1.5, and income elasticity = 3. Accordingly, a 3% price reduction in cassette players would be necessary to overcome the effect of a 2% decline in income.

2.　An increase in product differentiation will tent to decrease the slope of firm demand curves.

3.　When long-run average cost is decreasing, it can pay to operate smaller plants at their peak efficiency rather than larger plants with some excess capacity.

4.　Downward-sloping industry demand curves characterize monopoly markets; horizontal demand curves characterize perfectly competitive markets.

5.　Equilibrium in monopolistically competitive markets requires that firms be operating at the minimum point on the long-run average cost curve.

III.　Problems.　(25%)

1.　Magazine A is a dominant price leading firm in the magazine market. Magazine B and Magazine C are competing new magazines that address the same audience. Total cost relations for each magazine and the industry demand curve, respectively, are:

Magazine A
$$TC_A = 12,500 - Q_A + 0.000005Q_A^2$$

Magazine B
$$TC_B = 10,000 + 0.5Q_B + 0.00005Q_B^2$$

Magazine C
$$TC_C = 50,000 + 1.25Q_C + 0.000025Q_C^2$$

Industry demand curve
$$Q_D = 170,000 - 20,000P$$

Assume throughout this problem that Magazine B and C are perfect substitutes for Magazine A. Calculate the Magazine A's profit maximizing price and output levels. (25%)