

## QUIZ 5 VERSION A "Oligopoly and Collusion"

**INSTRUCTIONS:** This exam is closed-book, closed-notes. Simple calculators are permitted, but graphing calculators or calculators with alphabetical keyboards are NOT permitted. Mobile phones or other wireless devices are NOT permitted. Points will be subtracted for illegible writing or incorrect rounding.

**Multiple choice:** Circle the one best answer to each question. [10 pts each]

The next question refers to the following game. Firms A and B produce competing brands. Each firm finds that advertising is costly but helps attract customers away from its rival.

		Firm B	
		Advertise	Do not advertise
Firm A	Advertise	A gets \$4 million. B gets \$4 million.	A gets \$10 million. B gets \$2 million.
	Do not advertise	A gets \$2 million. B gets \$10 million.	A gets \$8 million. B gets \$8 million.

- (1) If Firm A plays "Advertise," what is Firm B's best reply?
- Advertise.
  - Do not advertise.
  - Both (a) and (b) are best replies.
  - Firm B has no best reply.

- (2) The Cournot model of duopoly assumes that each firm maximizes its profit while taking the other firm's
- cost as given.
  - price as given.
  - output quantity as given.
  - all of the above.

- (3) A Cournot firm's *best reply function* shows how the firm will respond to
- its rival's price.
  - changing market demand conditions.
  - changing cost conditions.
  - its rival's quantity of output.

- (4) One implication of the Cournot model of oligopoly is that the equilibrium price is lower
- the more firms are in the industry.
  - the more elastic is market demand.
  - both of the above.
  - none of the above.

- (5) If four firms want to produce 100 units of output at minimum combined total cost, they should set their output quotas so that
- each firm produces 25 units.
  - all four firms have the same total cost.
  - all four firms have the same average cost.
  - all four firms have the same marginal cost.

(6) After firms agree to maximize their joint profits, each firm will have an incentive to cheat on any agreement by quietly

- a. lowering its price.
- b. raising its price.
- c. lowering its output level.
- d. none of the above.

(7) A cartel member's "trigger strategy" discourages other cartel members from cheating by threatening to

- a. raise members' costs.
- b. raise the market price.
- c. lower the market price to the competitive level for a long time.
- d. admit new members to the cartel.

(8) Which market model predicts the largest quantity of total output?

- a. Price competition.
- b. Collusion to maximize joint profits.
- c. Cournot oligopoly.
- d. All models predict the same quantity of output, if all use the same assumptions about market demand and marginal cost.

(9) Under U.S. law, price-fixing is illegal

- a. if total market quantity is reduced significantly below the competitive quantity.
- b. if significant deadweight loss can be shown.
- c. if price is raised significantly above marginal cost.
- d. *per se*, except in industries Congress has exempted.

(10) Under the Department of Justice's corporate leniency program, amnesty can be given to

- a. the first cartel member that cooperates with the government investigation.
- b. the last cartel member that cooperates with the government investigation.
- c. any cartel participants that cooperate with the government investigation.
- d. any cartel participants that agree to leave the cartel.

[end of quiz]