

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

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## Quiz 6

**Question 1.** (10 marks) The weekly demand for the pulsar 25 colour LED television is  $p = 600 - 0.05x$  where  $p$  denotes the wholesale unit price in dollars and  $x$  denotes the quantity demanded. The weekly total cost function associated with manufacturing the Pulsar 25 is given by  $C(x) = 0.000002x^3 - 0.03x^2 + 400x + 80\,000$  where  $C(x)$  denotes the total cost incurred in producing  $x$  sets.

- (a) Find the Revenue function and the profit function.
- (b) Find the marginal cost function, marginal revenue function and marginal profit function.
- (c) Evaluate the functions from part (b) at  $x = 2000$  and interpret your results.