



AUM

American University Of The Middle East

2020 SUMMER 2 ONLINE- MAT175-O1- ASSESSMENT 2

Name & Surname &ID:

There are 3 pages and 3 questions. To get the full credit please show all your work.

Q1] Find the equation of the line perpendicular to $-7x + 4y - 3 = 0$ and passing through the point $A(2, -4)$. [20pts]

Q2] Let $p = S(x) = x^2 + x + 3$ \$ and $p = D(x) = 21 - 3x^2$ \$ are supply and demand functions respectively. [40 pts]

- a. Find the value of equilibrium quantity and equilibrium price.
- b. Sketch the graph of supply and demand functions on the same coordinate system.
- c. For what values of x is there a market shortage? A market surplus?

Q3] A greeting card company can sell cards for \$2.75 each. The company's total cost consists of a fixed overhead of \$12000 plus a variable cost of 35 cents per card. [40 pts]

- a. Express the company's total revenue, total cost, and total profit in terms of x , the number of cards sold.
- b. How many cards must be sold for the company to make a profit of \$9000.