Mock Quiz - Question 2

Time: 6:15 - 6:30 pm

Q 2. Let $A : \{(x,y) \in \mathbb{R}^2 : x \geq 0 \text{ and } y \in \mathbb{R}\}$ and $f : A \to \mathbb{R}$ be the function defined as

$$f(x,y) = \begin{cases} xy\sin(xy) & \text{if } x \geq 0 \text{ and } y \geq 0 \\ -xy\sin(xy) & \text{if } x \geq 0 \text{ and } y < 0. \end{cases}$$

Determine the points on A where f is continuous.

[7 marks]