

King Fahd University of Petroleum & Minerals  
Department of Mathematical Sciences

Math 101 - 2  
Dr. Jawad Y. Abuhlail

Quiz # 3

Semester 031

Name:

ID #:

Section #:

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Using Definition discuss the differentiability of

$$f(x) = \begin{cases} x^3 \cos(\frac{1}{x}), & x \neq 0 \\ 0, & x = 0 \end{cases}$$

at  $x = 0$ .