King Fahd University of Petroleum and Minerals
MATH-101
Dr. Ahmad Al-Dweik
Quiz 5

Name:- **ID:-** **Sec.:-** **S.N.:-**

1. If $f(x)=\frac{1+x^3}{1-x^2}$, find

i) The domain of $f(x)$ (2 points)

ii) Find the vertical asymptotes if any (2 points)

iii) Find the horizontal asymptotes if any (2 points)

iv) Find the slant asymptotes if any (2 points)

v) Find the interval of increase or decrease (2 points)

vi) Find the local maximum and local minimum (2 points)

vii) Find the interval of concavity (2 points)

viii) Find the inflection points if any (2 points)

ix) Use the information from part (i)-(viii) to sketch the graph. (4 points)