

King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences

Math - 201 Semester - 061 Quiz # III

Name:

S. No.:

ID:

Maximum Marks: 10

Section:

Time Allowed: 15 Minutes

NOTE: Give the solution of any TWO questions.

1. Identify the surface $z = \sqrt{1 + x^2 + y^2}$ and make a rough sketch that shows its position. (5 Marks)
2. Determine whether the line $x = t, y = 1 - t, z = 2 + t$ and the plane $x + y + z = 1$ are parallel, perpendicular, or neither. (5 Marks)
3. Show that $\lim_{(x,y) \rightarrow (0,0)} \frac{xy}{x^2 + y^2}$ does not exist. (5 Marks)

Solution.