

QUIZ - IV Section 06

Math-201 (091), KFUPM

MM: 20

- Q.1 Find the local maximum and minimum values and saddle points of $f(x, y) = x^4 + y^4 - 4xy + 1$
- Q.2 Use Lagrange multipliers to find the maximum and minimum values of $f(x, y) = x^2 - y^2$; subject to $x^2 + y^2 = 1$
- Q.3 Evaluate $\iint_R y \sin(xy) dA$; $R = [1, 2] \times [0, \pi]$
- Q.4 Find the volume of the solid under the surface $z = 2x + y^2$ and above the region bounded by $x = y^2$ and $x = y^3$.