

Math-201 Semester-121 QUIZ III

NAME:

S.No.

ID:

Maximum Marks: 15

Section:12

Time Allowed: 40 minutes

- (1) Show that the lines  $x = y = z$  and  $x + 1 = \frac{y}{2} = z$  are skew lines.
- (2) Find an equation for the plane consisting of all points that are equidistant from the points  $(-4, 2, 1)$  and  $(2, -4, 3)$ .
- (3) Identify and sketch the surfaces  $2x^2 + z^2 - 6z - y + 10 = 0$ . Also, find the traces in the plane  $y = k$  and  $yz$  - plane.