

### Practice Questions of Lecture 35 to 37

- Q.1:** Find the equation of cylinder whose directrix is  $C : x^2 + y^2 = 9$  and having elements parallel to  $\vec{n} = [1, -2, 1]$ .
- Q.2:** Find the equation of right cylinder whose directrix is circle with center  $(2, 3, 5)$  and radius 4.
- Q.3:** Find the equation of cone whose directrix is  $y^2 + z^2 = 1$ ,  $x = 2$  and vertex  $A = (0, 0, 0)$ .
- Q.4:** Find the traces of the cone  $\frac{y^2}{16} + \frac{z^2}{25} = x^2$  in  $xy$ -plane,  $xz$ -plane and  $yz$ -plane.
- Q.5:** Identify the surface  $\frac{(x-2)^2}{2^2} + \frac{(y-4)^2}{5^2} + \frac{(z+1)^2}{3^2} = 1$  and find its center and y-intercept.
- Q.6:** Identify the surface  $100x^2 + 36y^2 + 225z^2 - 200x - 216y - 4500z + 22024 = 0$  and find its center.