

Student's Name: \_\_\_\_\_ ID: \_\_\_\_\_ Serial No: \_\_\_\_\_

Q.No.1:- Find  $dy/dt$  for  $y = \ln(\sqrt{7t^2 - 1}/e^t)$

Q2. The area of a circle is decreasing at a rate of  $8\pi/9$  cm<sup>2</sup>/sec. At what rate is the radius of the circle changing when the area is  $\pi/9$  cm<sup>2</sup>?

Q.No.3:-  $f(x)=x^3$ . Find  $df^{-1}(64)/dx$  without finding  $f^{-1}(x)$ .