## King Fahd University of Petroleum and Minerals Department of Mathematics and Statistics Math-201 Semester-112QUIZ II

NAME: S.No. ID:

Time Allowed: 30 minutes Maximum Marks: 10 Section:04

(1) Find the slope of the tangent line to the polar curve  $r=1-\sin\theta$  at  $\frac{\theta}{6}$ .
(3) Find the area of the region that lies inside the circle  $r=3\sin\theta$  and outside the curve  $r = 1 + \sin \theta$ .