

King Fahd University of Petroleum and Minerals  
Department of Mathematics and Statistics  
Math-201 Semester-091 QUIZ II

NAME:

S.No.

ID:

Maximum Marks: 10

Section:04

Time Allowed: 15 minutes

- (1) Sketch the curve for polar equation  $r = 1 + 3\sin\theta$ .
- (2) Find the area of the region that lies inside the circle  $r = 3\sin\theta$  and outside the cardioid  $r = 1 + \sin\theta$ .
- (3) Find the scalar projection of  $\mathbf{b} = \langle 1, 1, 2 \rangle$  onto  $\mathbf{a} = \langle -2, 3, 1 \rangle$ .