

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics

Calculus I

Quiz No. 5

Tuesday 18/04/2017

20 Minutes

Instructor: *Dr. Monjed H. Samuh*

Std. Name:

Std. ID:

Serial No.:

Q1]... [5 points] A man walks along a straight path at a speed of $1.5m/s$. A searchlight is located on the ground $6m$ from the path and is kept focused on the man. At what rate is the searchlight rotating when the man is $8m$ from the point on the path closest to the searchlight?

Q2)... [5 points] The position of a particle is given by $s(t) = t^3 - 6t^2 + 9t$, where t is measured in seconds and s in meters.

1. When is the particle moving forward?

2. Find the total distance traveled by the particle during the first five seconds.

3. When is the particle speeding up?

GOOD LUCK