Name:

SM223 – Calculus III with Optimization
Assoc. Prof. Nelson Uhan

Fall 2017

Quiz 3 – 14 September 2017

Instructions. You have 10 minutes to complete this quiz. You may not use any other materials (e.g., notes, homework, books, calculator). Show all your work.

Problem	Weight	Score
1	2	
2	$\frac{1}{2}$	
3	$\frac{1}{2}$	
4	$\frac{1}{2}$	
Total		/ 35

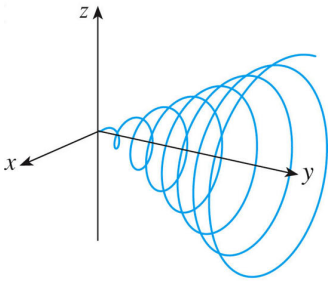
Problem 1. Find parametric equations for the line tangent to the curve given by $\vec{r}(t) = \langle t, e^{-t}, 2t - t^2 \rangle$ at the point $(0, 1, 0)$.

(turn over)

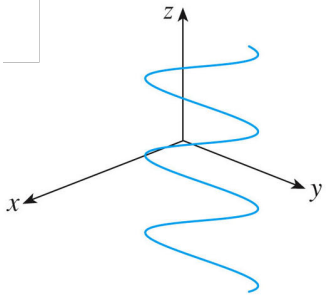
For Problems 2-4, match the given vector function with the graph of its curve (A-E).

Problem 2. $\vec{r}(t) = \langle \cos t, \sin t, \cos 2t \rangle$

A.

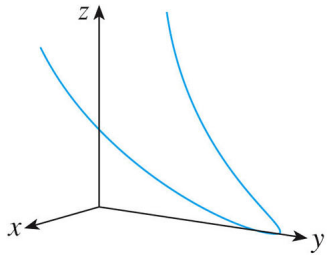


B.

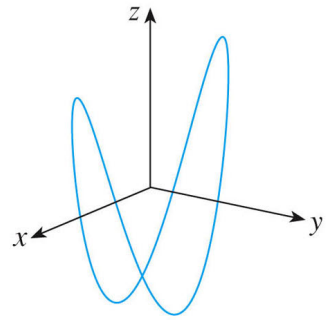


Problem 3. $\vec{r}(t) = \langle t, \frac{1}{1+t^2}, t^2 \rangle$

C.



D.



Problem 4. $\vec{r}(t) = \langle t \cos t, t, t \sin t \rangle$

E.