Fall 2020	ENG 5300	Quiz 1	Yanjun Yao
You must show all	work to receive full credit.	. All work is to be yo	
This is a closed bo	oks and notes test. Be org	ganized. Total poi	pints: 20 19:44-19:50

1. §10.1 Line Integral. Work done by a force. Calculate $\int_{C} \mathbf{F}(\mathbf{r}) \cdot d\mathbf{r}$ for the following data. If \mathbf{F} is a force, this gives the work done in the displacement along C. (Show the details.) $\mathbf{F} = [e^{-x}, e^{-y}, e^{-z}], C : \mathbf{r} = [t, t^2, t]$ from (0, 0, 0) to (2, 4, 2). 10 points 2. §10.2 Show the form under the integral sign is exact in space and evaluate the integral. Show the details of your work. 10 points

$$\int_{(5,3,\pi)}^{(3,\pi,3)} (\cos yz \, dx - xz \sin yz \, dy - xy \sin yz \, dz)$$