

*Birzeit university*

*Civil engineering department – highway engineering*

*Quiz 2*

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**Q1** : Five vehicles traveled over 200-m section of highway at constant speeds of 11.6, 12.5, 13.2, 13.9, 14.5 m/sec. Determine the corresponding time-mean and space-mean speeds, and variance about the space-mean speed .

**Q2** : Given: 6-lane rural freeway with ADT=50,000 pcpcd, 0.92 PHF, K=0.15, D=0.6. Determine the corresponding LOS during the peak period assuming base conditions to be prevailing .

**Q3** : Given: exclusive left-lane at signalized approach with space capacity of only 3 vehicles. Determine the percentage of time the space capacity exceeded during 45-sec red-time phase if vehicles are arriving at an average rate of 1 vehicle every 10 seconds .