

DPH101/ENV203

Instructor: Elmer V Villanueva
Elmer.Villanueva@xjtlu.edu.cn

13 November 2019

Exercise 1. 50 Marks

A study by Thienprasiddhi et al. [?] examined a sample of 16 subjects with open-angle glaucoma and unilateral hemifield defects. The ages (years) of the subjects were 62, 62, 68, 48, 51, 60, 51, 57, 57, 41, 62, 50, 53, 34, 62, and 61. Can we conclude that the mean age of the population from which the sample may be presumed to have been drawn is less than 60 years? Carry out the ten-step hypothesis testing procedure for $\alpha = 0.05$.

Exercise 2. 50 Marks

Can we conclude that the mean maximum voluntary ventilation value for apparently healthy college seniors is not 110 liters per minute? A sample of 20 yielded the following values: 132, 33, 91, 108, 67, 169, 54, 203, 190, 133, 96, 30, 187, 21, 63, 166, 84, 110, 157, and 138. Carry out the ten-step hypothesis testing procedure for $\alpha = 0.01$. What assumptions are necessary?