

Quiz 3

Total points 8/10

The respondent's email address (**jaiswal.5@iitj.ac.in**) was recorded on submission of this form.

- ✓ IIT Jodhpur uses thousands of Philips light bulbs each year. A new manufacturer, Wipro, claims that its new brand of bulbs, which cost the same as the Philips light bulbs, has a mean life of 6000 hours. IITJ has never studied how long Philips bulbs last and they decided they're curious to see how long Philips bulbs last compared to Wipro bulbs. IITJ decides to conduct a significance test at the 0.05 significance level. 64 Philips bulbs are tested and the mean life time is found to be 5910 hours. Both manufacturers report that the standard deviation for the lifespan of a light is 400 hours. Construct a HT problem to check the lifespans of the two brands of lights. What is the test statistic? *
- 2/2

- ☐ 2.48
- ☐ 1.5
- ☒ -1.8
- ☐ None of the above



- ✓ In the Question 1, what is the p-value? *
- 2/2

- ☐ 0.0359
- ☐ 0.0497
- ☐ 0.0578
- ☒ 0.0718



✗ In the Question 1, what is your decision on whether IITJ needs to opt for bulbs of Wipro brand? * 0/2

- ☐ IITJ should use bulbs of Wipro brand
- ☐ IITJ should continue to use bulbs of Philips brand
- ☒ Cannot decide due to missing information

✗

Correct answer

- ☒ IITJ should use bulbs of Wipro brand

✓ Which of the following quantities are not required for p-value computation? * 2/2

- ☐ Nature of the test
- ☐ Test statistics
- ☒ Level of significance
- ☐ None of the above are required
- ☐ None of the above

✓

✓ Which of these is a possible alternative hypothesis for $H_0: \mu = 8$? * 2/2

- ☒ $H_a: \mu \neq 8$
- ☐ $H_a: \mu \leq 8$
- ☒ $H_a: \mu > 8$
- ☐ All are correct

✓

✓



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