

## **STATISTICS WORKSHEET- 9**

1. (c) Type I; Type II
2. (b) We have made a correct decision
3. (b) critical value
4. (b) A Type I error was made.
5. (c)  $x = 17$ ,  $s = 7$
6. (a) fail to reject  $H_0$
7. (c) At  $\alpha = 0.05$ , reject the null hypothesis.
8. (b) 0.041 9. (c) 0.958
10. (c) Left tail
11. (a) Less than the significance level
12. (b) 0.375
13. The standard normal (or Z-distribution), is the most common normal distribution, with a mean of 0 and standard deviation of 1. The t-distribution is typically used to study the mean of a population, rather than to study the individuals within a population.
14. The T distribution, also known as the Student's t-distribution, is a type of probability distribution that is similar to the normal distribution with its bell shape but has heavier tails. T distributions have a greater chance for extreme values than normal distributions, hence the fatter tails.
15. Student's t Distribution. The t distribution (aka, Student's t-distribution) is a probability distribution that is used to estimate population parameters when the sample size is small and/or when the population variance is unknown.