Need help with these and must answer in Word format:

1. If you use a 0.05 level of significance in a (two-tail) hypothesis test, what will you decide if Z stat = -0.76?
2. In the U.S. legal system, a defendant is presumed innocent until proven guilty. Consider a null hypothesis, H0, that the defendant is innocent, and an alternative hypothesis, H1, that the defendant is guilty. A jury has 2 possible decisions: Convict the defendant (i.e. reject the null hypothesis) do not convict the defendant (i.e. do not reject the null hypothesis). Explain the meaning of the risks of committing either a Type I or Type II error in this example.
3. Do students at your school study more than, less than, or about the same as students at other business schools? BusinessWeek reported that at the top 50 business schools, students studied an average of 14.6 hours per week. Set up a hypothesis test to try to prove that the mean number of hours studied at your school is different from the 14.6 – hour per week benchmark reported by BusinessWeek.
4. State the null and alternative hypothesis.
5. What is a Type I error for your test?
6. What is a Type II error for your test?
7. A manufacturer of chocolate candies uses machines to package candies as they move along a filling line. Although the packages are labeled as 8 ounces, the company wants the packages to contain a mean of 8.17 ounces so that virtually none of the packages contain less than 8 ounces. A sample of 50 packages is selected periodically, and the packaging process is stopped if there is evidence that the mean amount packaged is different from 8.17 ounces. Suppose that in a particular sample of 50 packages, the mean amount dispensed is 8.159 ounces, with a sample standard deviation of 0.051 ounce.
8. Is there evidence that the population mean amount is different from 8.17 ounces? (Use a 0.05 level of significance).
9. What is your statistical decision if you test the null hypothesis at 0.01 level of significance? If p=0.0838 and Zstat = -1.38?
10. The US Dept of Ed. Reports that 46% of full-time college students are employed while attending college. A recent survey of 60 full-time students at Miami University found that 29 were employed.
11. Use the five-step p-value approach to hypothesis testing and a 0.05 level of significance to determine whether the proportion of full-time students at Miami University is different than the national norm of 0.46.
12. Assume that the study found that 36 of the 60 full-time students were employed and repeat (a). Are the conclusions the same?
13. According to a recent study, when shopping online for luxury goods, men spend a mean of $2401, whereas women spend a mean of $1527. Suppose that the study was based on a sample of 600 men and 700 females, and the standard deviation of the amount was spent was 1200 for men and 1000 for women.
	1. State the null and alternative hypothesis if you want to determine whether the mean amount spent is higher for men than for women.
	2. In the context of this study, what is the meaning of the Type I error?
	3. In the context of this study, what is the meaning of the Type II error?
	4. At the 0.01 level of significance, is there evidence that the mean amount spent is higher for men than for women?
14. A survey of 500 shoppers was taken in a large metropolitan area to determine various information about consumer behavior. Among the question asked was “Do you enjoy shopping for clothing?” Of 240 males, 136 answered yes, of 260 females, 224 answered yes.
	1. Is there evidence of a significant difference between males and females in the proportion who enjoy shopping for clothing at the 0.01 level of significance?
	2. Find the p-value in (a) and interpret its meaning.
15. An experiment has a single factor with five groups and seven values in each group.
	1. How many degrees of freedom are there in determining the among-group variation?
	2. How many degrees of freedom are there in determining the within-group variation?
	3. How many degrees of freedom are there in determining the total variation?
16. You are working with the same experiment as in Problem 9.
	1. If SSA=60 and SST=210, what is SSW?
	2. What is MSA?
	3. What is MSW?
	4. What is the value of Fstat?
17. You are working with the same experiment as in Problem 9 and10.
	1. Construct the ANOVA summary table and fill in all values in the table.
	2. At the 0.05 level of significance, what is the upper –tail critical value from the F distribution?
	3. State the decision rule for testing the null hypothesis that all five groups have equal population means.
	4. What is your statistical decision?
18. Consider an experiment with four groups, with eight values in each. For the ANOVA summary table below, fill in all the missing results:

Source Degrees of Freedom Sum of Squares Mean Square (Variance) F

Among c-1 = ? SSA = ? MSA = 80 Fstat = ?

Groups

Within n – c = ? SSW = 560 MSW = ?

Groups

Total n – 1 =? SST = ?