QUIZ 11 VI TEST OF HYPOTHESIS

Roll No.	Marks

1. If the Alternative Hypothesis H_1: $\mu \neq \mu_0$, then it is called
(a) Left tailed (b) Right tailed (c) Two tailed (d) None [ ]

2. If the Alternative Hypothesis H_1: $\mu > \mu_0$ or $\mu < \mu_0$, then it is called
(a) Left tailed (b) Two tailed (c) Right tailed (d) None [ ]

3. If the Alternative Hypothesis H_1: $\mu > \mu_0$, then it is called
(a) Left tailed (b) Right tailed (c) Two tailed (d) None [ ]

4. If the Alternative Hypothesis H_1: $\mu < \mu_0$, then it is called
(a) Left tailed (b) Right tailed (c) Two tailed (d) None [ ]

5. If we accept H_0, when it is wrong, then ii is called
(a) Type I error (b) Tyepe II error (c) Type III error (d) None [ ]

6. If we reject H_0, when it is true, then ii is called
(a) Type I error (b) Tyepe II error (c) Type III error (d) None [ ]

7. For a right tailed test, the critical value z_α at 5% level of significance is
(a) 1.645 (b) 1.96 (c) 2.33 (d) 2.58 [ ]

8. For a left tailed test, the critical value z_α at 1% level of significance is
(a) –1.28 (b) –2.33 (c) –1.96 (d) –1.645 [ ]

9. For a two tailed test, the critical value $|z_{\alpha|}$ at 5% level of significance is
(a) 2.33 (b) 1.645 (c) 2.58 (d) 1.96 [ ]

10. For a right tailed test, the critical value z_α at 1% level of significance is
(a) 2.58 (b) 2.33 (c) 1.645 (d) 1.28 [ ]

11. For a left tailed test, the critical value z_α at 10% level of significance is
(a) –1.28 (b) –1.645 (c) –2.33 (d) –2.58 [ ]

12. For a two tailed test, the critical value $|z_{\alpha|}$ at 1% level of significance is
(a) 1.645 (b) 2.58 (c) 1.96 (d) 2.33 [ ]

13. For a right tailed test, the critical value $|z_{\alpha|}$ at 10% level of significance is
(a) 196 (b) 1.645 (c) 2.33 (d) 1.28 [ ]

14. For a left tailed test, the critical value z_α at 5% level of significance is
(a) 1.645 (b) –1.645 (c) –1.28 (d) –2.33 [ ]

15. For a two tailed test, the critical value $|z_{\alpha|}$ at 10% level of significance is
(a) 1.645 (b) 1.96 (c) 2.58 (d) 2.33 [ ]

16. If $\overline{x}$ = sample mean, μ = mean of the population, σ = standard deviation of the population and n = sample size; then the test statistic is

(a) $z = \frac{\overline{x} - \mu}{\sigma / \sqrt{n}}$ (b) $z = \frac{\overline{x} - \mu}{\sigma \sqrt{n}}$ (c) $z = \frac{\mu - \overline{x}}{\sigma / \sqrt{n}}$ (d) $z = \frac{\mu - \overline{x}}{\sigma \sqrt{n}}$ [ ]

17. If $\overline{x}$ = mean of the sample of size n, σ = standard deviation of the population, then (1–α) confidence interval is

(a) $\left(\overline{x} + z_{\alpha/2}\frac{\sigma}{\sqrt{n}}, \overline{x} - z_{\alpha/2}\frac{\sigma}{\sqrt{n}}\right)$ (b) $\left(\overline{x} + t_{\alpha/2}\frac{\sigma}{\sqrt{n}}, \overline{x} - t_{\alpha/2}\frac{\sigma}{\sqrt{n}}\right)$ (c) $\left(\overline{x} - z_{\alpha/2}\frac{\sigma}{\sqrt{n}}, \overline{x} + z_{\alpha/2}\frac{\sigma}{\sqrt{n}}\right)$ (d) $\left(\overline{x} - t_{\alpha/2}\frac{\sigma}{\sqrt{n}}, \overline{x} + t_{\alpha/2}\frac{\sigma}{\sqrt{n}}\right)$ [ ]

18. $\overline{x_1}$ and $\overline{x_2}$ are the means of the samples of sizes n_1 and n_2 respectively with means μ_1 and μ_2 respectively and variances σ_1^2 and σ_2^2 respectively, then we use the following test statistic for the difference of means:

(a) $\frac{\overline{x_1} + \overline{x_2}}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n2}}}$ (b) $\frac{\overline{x_1} + \overline{x_2}}{\sqrt{\frac{\sigma_1^2}{n_1} - \frac{\sigma_2^2}{n2}}}$ (c) $\frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n2}}}$ (d) $\frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{\sigma_1^2}{n_1} - \frac{\sigma_2^2}{n2}}}$ [ ]

19. If S_1^2 and S_2^2 are the variances of the samples of sizes n_1 and n_2 respectively, then σ^2 = ?

(a) $\frac{n_1 S_1^2 - n_2 S_2^2}{n_1 + n_2}$ (b) $\frac{n_1 S_1^2 + n_2 S_2^2}{n_1 - n_2}$ (c) $\frac{n_1 S_1 + n_2 S_2}{n_1 + n_2}$ (d) $\frac{n_1 S_1^2 + n_2 S_2^2}{n_1 + n_2}$ [ ]

20. If x is the number that an event occurs in n trials, then the sample proportion = p =

(a) $\frac{x}{n}$ (b) $\frac{n}{x}$ (c) $\frac{x^2}{n^2}$ (d) None [ ]