QUIZ 13 VII TEST OF SIGNIFICANCE

Roll No.	Marks

1. The student's t is defined by the statistic

(a) $t = \dfrac{\bar{x} + \mu}{S.D./\sqrt{n-1}}$ (b) $t = \dfrac{\bar{x} - \mu}{S.D. \times \sqrt{n-1}}$ (c) $t = \dfrac{\bar{x} - \mu}{S.D./\sqrt{n-1}}$ (d) None [ ]

2. $t_{0.05}$ at 5 degrees of freedom is

(a) 2.571 (b) 2.015 (c) 4.032 (d) None [ ]

3. $t_{0.01}$ at 7 degrees of freedom is

(a) 2.998 (b) 3.499 (c) 1.895 (d) 1.415 [ ]

4. $t_{0.05}$ at 26 degrees of freedom is

(a) 2.779 (b) 1.706 (c) 2.056 (d) None [ ]

5. Student's t test formula for the difference of means is

(a) $\dfrac{\overline{x_1} + \overline{x2}}{S\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$ (b) $\dfrac{\overline{x_1} - \overline{x2}}{S\left(\dfrac{1}{n_1} + \dfrac{1}{n2}\right)}$ (c) $\dfrac{\overline{x_1} - \overline{x2}}{S^2\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$ (d) $\dfrac{\overline{x_1} - \overline{x2}}{S\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_1}}}$ [ ]

6. If $x_1, x_2, ..., x_n$ is a sample, then $\bar{x}$ =

(a) $\dfrac{x_1 - x_2 - ... - x_n}{n}$ (b) $\dfrac{\sum_{i=1}^{n} x_i}{n}$ (c) $\dfrac{-\sum_{i=1}^{n} x_i}{n}$ (d) None [ ]

7. If S_1^2 and S_2^2 are variances of two samples, then the test statistic in F-test is

(a) $F = \dfrac{S_1^2}{S_2^2}$ $\left(S_1^2 < S_2^2\right)$ (b) $F = \dfrac{S_1^2}{S_2^2}$ $\left(S_1^2 > S_2^2\right)$ (c) $F = \dfrac{S_1}{S_2}$ $\left(S_1^2 > S_2^2\right)$

(d) $F = \dfrac{S_1}{S_2}$ $\left(S_1^2 < S_2^2\right)$ [ ]

8. If s^2 is given, then we calculate S^2 using the formula

(a) $nS^2 = (n-1)s^2$ (b) $nS = (n-1)s$ (c) $ns^2 = (n-1)S^2$ (d) None [ ]

9. If S_1^2 = 555.56, S_2^2 = 1009.44, then F =

(a) 1.3480 (b) 0.7419 (c) 0.5504 (d) 1.8170 [ ]

10. If S_1^2 = 1009.44, S_2^2 = 444.45, then F =

(a) 2.2712 (b) 1.5071 (c) 0.4403 (d) 0.6635 [ ]

11. $\bar{x}$ = 58392, μ = 58000, S.D. = 648 and n = 6, then |t| = ?

(a) 80.327 (b) 1.353 (c) 0.2470 (d) 73.33 [ ]

12. $\bar{x}$ = 14, μ = 10.5, S.D. = 3.207135 and n = 8, then |t| = ?
(a) 2.062 (b) 0.4713 (c) 2.887 (d) 2.9454 [ ]

13. $\bar{x}$ = 0.742, μ = 0.7, S.D. = 0.04 and n = 10, then |t| = ?
(a) 3.15 (b) 0.35 (c) 12.017 (d) 108.15 [ ]

14. $\bar{x}$ = 990, μ = 1000, S.D. = 20 and n = 25, then |t| = ?
(a) 0.102 (b) 20.31 (c) 487.45 (d) 2.45 [ ]

15. $\bar{x}$ = 0.024, μ = 0.025, S.D. = 0.002 and n = 10, then |t| = ?
(a) 2.722 (b) 0.056 (c) 22.05 (d) 1.5 [ ]

16. $\overline{x_1}$ = 1234, $\overline{x_2}$ = 1036 are sample means of two samples of sizes 8 and 7 respectively with standard deviations 36 and 40 respectively, then |t| = ?
(a) 9.39 (b) 21.96 (c) 81.66 (d) 1.1849 [ ]

17. $\overline{x_1}$ = 196.42, $\overline{x_2}$ = 198.82 are sample means of two samples of sizes 9 and 7 respectively with variances 26.94 and 18.73 respectively, then |t| = ?
(a) 859.81 (b) 5.220 (c) 2.149 (d) 0.3368 [ ]

18. $\overline{x_1}$ = 28, $\overline{x_2}$ = 30 are sample means of two samples of sizes 12 and 15 respectively with S^2 = 71.6, then |t| = ?
(a) 477.814 (b) 0.0983 (c) 0.0034 (d) 0.610 [ ]

19. $\overline{x_1}$ = 46, $\overline{x_2}$ = 57 are sample means of two samples of sizes 5 and 7 respectively with S = 11.02, then |t| = ?
(a) 1.697 (b) 0.5818 (c) 5.448 (d) 15.890 [ ]

20. $\overline{x_1}$ = 31.286, $\overline{x_2}$ = 28.16 are sample means of two samples of sizes 7 and 6 respectively with S = 2.3, then |t| = ?
(a) 0.756 (b) 2.443 (c) 14.379 (d) 245.76 [ ]