## Q. 1)

| | Mean | Standard Deviation | Size |
|---|---|---|---|
| GIRLS | 89 | 4 | 50 |
| BOYS | 82 | 9 | 120 |

| | |
|---|---|
| Diffrence Between Mean | 7 |
| S.D. Square for girls | 0.32 |
| S.D. Square for boys | 0.675 |
| Sqare Root of the total | 0.997496867 |
| T value | 7.0175659 |

**CALCULATION OF DEGREE OF FREEDOM**

| | |
|---|---|
| S1^2/N1 | 0.32 |
| S2^2/N2 | 0.675 |
| Summation | 0.995 |
| Sqaure | 0.990025 |
| Remaining value | -1.994155125 |
| DF | -0.496463383 |

**value  of two tail test**                                    1.96

7>1.96                              **Reject the null hypothesis**

## Q. 2)

| | Cancer | Without Cancer | Total |
|---|---|---|---|
| Smoker | 220 | 230 | 550 |
| NON-Smoker | 350 | 640 | 990 |
| Total | 680 | 910 | 1590 |

| | Cancer | Without Cancer |
|---|---|---|
| Smoker | 235.2201258 | 314.7798742 |
| NON-Smoker | 423.3962264 | 566.6037736 |

Difference Square

| | Cancer | Without Cancer |
|---|---|---|
| Smoker | 231.6522289 | 7187.627072 |
| NON-Smoker | 5387.006052 | 5387.006052 |

CHI-Square

| | Cancer | Without Cancer |
|---|---|---|
| Smoker | 0.984831669 | 22.83382027 |
| NON-Smoker | 12.72332089 | 9.507536489 |

Summation of all the values        46.04950931

Degree of Freedom        1

Critical Value = 3.841

46.049>3.841

rejec all the null hypothesis.