**Assignment 19.1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | High School | Bacelors | Masters | PhD | Total |
| Female | 60 | 54 | 46 | 41 | 201 |
| Male | 40 | 44 | 53 | 57 | 194 |
| Total | 100 | 98 | 99 | 98 | 395 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | High School | Bacelors | Masters | PhD | Total |
| Female | 50.886 | 49.868 | 50.377 | 49.868 | 201 |
| Male | 49.114 | 48.132 | 48.623 | 48.132 | 194 |
| Total | 100 | 98 | 99 | 98 | 395 |

χ2 = 8.006

The critical value of χ2 with 3 degree of freedom is 7.815. Since 8.006 > 7.815, therefore we reject the null hypothesis and conclude that the education level depends on gender at a 5% level of significance.