**Assignment & Practical**

**ASA1101**

1. Two verities of potato plants (A and B) yielded tubes are shown in the following table. Does the mean number of tubes of the variety „A‟ significantly differ from that of variety B?

Tuber yield, kg/plant

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variety-A | 2.2 | 2.5 | 1.9 | 2.6 | 2.6 | 2.3 | 1.8 | 2.0 | 2.1 | 2.4 | 2.3 |
| Variety-B | 2.8 | 2.5 | 2.7 | 3.0 | 3.1 | 2.3 | 2.4 | 3.2 | 2.5 | 2.9 |  |

1. Show that the conditions at home have a bearing on the condition of the child on the basis of the following observed table:

|  |  |
| --- | --- |
|  | **Condition at home** |
| **Conditions of child** | **Clean** | **Not clean** | **Total** |
| Clean | 75 | 40 | 115 |
| Fairly clean | 35 | 15 | 50 |
| Dirty | 25 | 45 | 70 |
| Total | 135 | 100 | 235 |

1. A random sample of married couples shows the age of husbands (x) and their wives (y) in different years as:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| x | 30 | 29 | 36 | 72 | 37 | 36 | 51 | 48 | 37 | 50 | 51 | 36 |
| y | 27 | 20 | 34 | 67 | 35 | 37 | 50 | 46 | 36 | 42 | 46 | 35 |

Calculate the coefficient of simple correlation between age of husbands and their wives and test for its significance.

1. The following data give the yield per plant (gm) (Y) and days to flowering (X) of 11 pigeon-pea plants. Fit regression equations of Y on X and X on Y. Also estimate Y when the flowering period is 149.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Y | 24.72 | 20.25 | 38.56 | 74.72 | 72.75 | 78.45 | 69.8 | 80.4 | 160.2 | 165.75 | 77.56 |
| X | 91 | 76 | 98 | 136 | 128 | 119 | 142 | 135 | 147 | 145 | 122 |

1. Calculate the coefficient of rank correlation for the following data and test the significance of rank correlation coefficient.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Students** | **1** | **2** | **3** | **4** | **5** | **6** |
| **Marks in Math** | 75 | 40 | 52 | 65 | 60 | 80 |
| **Marks in Statistics** | 30 | 45 | 35 | 50 | 48 | 42 |