Q1. Raw materials used in synthetic fiber are stored in a place that has no humidity control. Measurements of the relative humidity in the storage place and the moisture content of a sample of the raw materials (both in percentages) on 11days yield the following results.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Humidity | 46 | 53 | 37 | 34 | 29 | 60 | 44 | 41 | 48 | 33 | 40 |
| Moisture content | 12 | 14 | 11 | 10 | 8 | 17 | 12 | 10 | 15 | 9 | 13 |

Estimate the moisture content when humidity is 50.

Estimate humidity when moisture content is 16

Q2. . From the following data find the regression equation of Y on X. If X = 15, find Y?

If Y=33, find X

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 8 | 11 | 7 | 10 | 12 | 5 | 4 | 6 |
| Y | 11 | 30 | 25 | 44 | 38 | 25 | 20 | 27 |

Q3.. Find the two regression equations from the following data. Estimate X for Y=30 and Y for X=33

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 25 | 22 | 28 | 26 | 35 | 20 | 22 | 40 | 20 | 18 |
| Y | 18 | 15 | 20 | 17 | 22 | 14 | 16 | 21 | 15 | 14 |