## Topic: 2.9 – Tutorial 5

1. Three varieties of a crop are tested in a randomized block design with four replications. The plot yield in pounds are as follows.

| A 6 | C 5 | A 8 | B 9 |
|-----|-----|------|-----|
| C 8 | A 4 | B 6 | C 9 |
| B 7 | B 6 | C 10 | A 6 |

2. Four varieties A, B, C, D of a fertilizer are tested in RBD with 4 replications. The plot yields in pounds are as follows:

| Column/ Row | 1 | 2 | 3 | 4 |
|-------------|-------|-------|-------|-------|
| 1 | A(12) | D(20) | C(16) | B(10) |
| 2 | D(18) | A(14) | B(11) | C(14) |
| 3 | B(12) | C(15) | D(19) | A(13) |
| 4 | C(16) | B(11) | A(15) | D(20) |

3. An experiment was designed to study the performance of 4 different detergents for cleaning fuel injectors. The following "cleanliness" readings were obtained with speciallydesigned equipment for 12 tanks of gas distributed over 3 different models of engines:

| | Engine 1 | Engine 2 | Engine 3 |
|-------------|----------|----------|----------|
| Detergent A | 45 | 43 | 51 |
| Detergent B | 47 | 46 | 52 |
| Detergent C | 48 | 50 | 55 |
| Detergent D | 42 | 37 | 49 |

Perform the ANOVA and test at 0.01 level of significance, whether there are differences       in  the detergents or in the engines.