Date __/__/____

# Assignment #2

(1)

(a)

| Range | f | | x | fx |
|---|---|---|---|---|
| 1 - 10 | 2 | 0.5 - 10.5 | 5.5 | 11 |
| 11 - 20 | 7 | 10.5 - 20.5 | 15.5 | 100.5 |
| 21 - 30 | 10 | 20.5 - 30.5 | 25.5 | 255 |
| 31 - 40 | 3 | 30.5 - 40.5 | 35.5 | 106.5 |
| 41 - 50 | 1 | 40.5 - 50.5 | 45.5 | 45.5 |
| | 23 | | | 526.5 |

$$\bar{X} = \frac{\Sigma fx_i}{\Sigma f} = \frac{526.5}{23} = 22.89 \text{ Ans}$$

(b)

| Range | f | x | fx |
|---|---|---|---|
| 0 - 10 | 2 | 5 | 10 |
| 10 - 20 | 7 | 15 | 105 |
| 20 - 30 | 15 | 25 | 375 |
| 30 - 40 | 10 | 35 | 350 |
| 40 - 50 | 11 | 45 | 495 |
| 50 - 60 | 5 | 55 | 275 |
| | 50 | | 1610 |

$$\bar{X} = \frac{\Sigma fx}{\Sigma f} = \frac{1610}{50} = 32.2 \text{ Ans}$$

(C)

| Exam Score | No. of Students |
|---|---|
| 51 – 60 | 4 |
| 61 – 70 | 8 |
| 71 – 80 | 15 |
| 81 – 90 | 8 |
| 91 – 100 | 5 |
| | 40 |

| | x | fx |
|---|---|---|
| 50.5 – 60.5 | 55.5 | 222 |
| 60.5 – 70.5 | 65.5 | 524 |
| 70.5 – 80.5 | 75.5 | 1132.5 |
| 80.5 – 90.5 | 85.5 | 684 |
| 90.5 – 100.5 | 95.5 | 477.5 |
| | | 3040 |

$$\bar{x} = \frac{\Sigma fx}{\Sigma f} = \frac{3040}{40} = 76 \text{ Ans}$$

(2)

| | Group I | Group 2 |
|---|---|---|
| Mean wages | 75 | 60 |
| No. of workers | 1000 | 1500 |

$$\bar{x}_{12} = \frac{x_1 N_1 + x_2 N_2}{N_1 + N_2} = \frac{75 \times 1000 + 60 \times 1500}{1000 + 1500} = \frac{75000 + 90000}{2500}$$

$$= \frac{165000}{2500} = 66 \text{ Ans}$$

Saathi

Date __/__/____

(3)

| Medical Examination | No. Examined | Mean weight (Pounds) |
|---|---|---|
| A | 50 | 113 |
| B | 60 | 120 |
| C | 90 | 115 |

$$\bar{x}_{123} = \frac{x_1N_1 + x_2N_2 + x_3N_3}{N_1 + N_2 + N_3} = \frac{113 \times 50 + 120 \times 60 + 115 \times 90}{50 + 60 + 90}$$

$$= \frac{5650 + 7200 + 10350}{200} = \frac{23200}{200} = 116 \text{ Ans}$$