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## Assignment IV

## Topic: - Diagrammatic Presentation

Q1 Discuss the advantages of diagrammatic presentation?
Q2 Represent the following data with the help of sub-divided bar diagram:

| Year | Production ( In ‘000 tonnes) |  |  |
| :--- | :--- | :--- | :--- |
|  | Wheat | Rice | 10 |
| 2002 | 35 | 22 | 16 |
| 2003 | 15 | 25 | 20 |
| 2004 | 40 | 12 |  |

Q3 Represent the data relating to the cost of production in a factory by means of percentage diagram:

| Element of cost <br> (Rs in '000) | Items |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: |
|  | A |  | B |  |  | C |
| Raw Materials | 75 | 55 | 60 |  |  |  |
| Wages | 45 | 30 | 25 |  |  |  |
| Factory overheads | 15 | 10 | 30 |  |  |  |
| Office overheads | 5 | 15 | 5 |  |  |  |

Q4 Represent the following data with help of pie diagram.

| Items | Rent | Food | Clothing | Transpor <br> tation | Recreation | Savings | Others |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Expenditure <br> (in percent) | $20 \%$ | $25 \%$ | $22 \%$ | $15 \%$ | $8 \%$ | $6 \%$ | $4 \%$ |

Q5 What is the main difference between a frequency polygon and a frequency curve?
Q6 Distinguish between histogram and bar diagram.
Q7 Present the following data in the form of frequency polygon, using histogram.

| Daily <br> wages <br> (Rs.) | $60-80$ | $80-100$ | $100-120$ | $120-140$ | $140-160$ | $160-180$ | $180-200$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. of <br> workers | 3 | 5 | 10 | 15 | 7 | 4 | 2 |

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Q8 Draw a less than Ogive from the following data:

| Marks | $30-40$ | $40-50$ | $50-60$ | $60-70$ | $70-80$ | $80-90$ | $90-100$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. of <br> students | 12 | 14 | 18 | 21 | 15 | 11 | 9 |

Q9 Make histogram and frequency polygon from the following distribution:

| Class - <br> interval | $0-20$ | $20-30$ | $30-40$ | $40-60$ | $60-100$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 10 | 4 | 6 | 14 | 16 |

Q10 Present the data given in the table below in the form of histogram

| Mid point | 15 | 25 | 35 | 45 | 55 | 65 | 75 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 5 | 12 | 20 | 18 | 16 | 25 | 22 |

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## Assignment V <br> Economics (XI/Eco/9.2/2014)

## Topic: - Measures of Central Tendency - Arithmetic Mean

Q1 State three merits and two demerits of Arithmetic mean.
Q2 State the formula (short-cut method) for calculating mean in case of individual series, discrete series and continuous series.
Q3 Explain the mathematical properties of Arithmetic mean.
Q4 Compute mean marks from the data given below by (i) Direct method (ii) Short-cut method and (iii) Step deviation method.

| Marks | 5 | 15 | 25 | 35 | 45 | 55 | 65 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Students | 4 | 6 | 10 | 20 | 10 | 6 | 4 |

Q5 Find the mean from the following data:

| Marks | No. of students |
| :---: | :---: |
| Less than 10 | 5 |
| Less than 20 | 20 |
| Less than 30 | 45 |
| Less than 40 | 70 |
| Less than 50 | 80 |
| Less than 60 | 88 |
| Less than 70 | 98 |
| Less than 80 | 100 |

Q6 Calculate mean from the following data

| $X$ | $0-10$ | $10-20$ | $20-30$ | $30-60$ | $60-90$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 5 | 9 | 20 | 12 | 4 |

Q7 The mean weight of 150 students in a class is 60 kg . The mean of boys in the class is 70 kg and that of girls is 55 kg . Find the number of boys and girls in the class.
Q8 Find out the median for the following data:

| Age (in years) | No. of persons |
| :---: | :---: |
| $10-20$ | 8 |
| $10-30$ | 32 |
| $10-40$ | 54 |
| $10-50$ | 58 |
| $10-60$ | 66 |
| $10-70$ | 80 |

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Q9 Compute median from the following data:

| Mid values | 37.5 | 42.5 | 47.5 | 52.5 | 57.5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| No. of <br> Students | 30 | 20 | 15 | 13 | 22 |

Q10 Determine teh value of median from the following data with the help of (i) less than and more than Ogive method (ii) Less than Ogive method
(iii) More than Ogive method.

| Marks | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. of <br> students | 10 | 15 | 25 | 30 | 10 | 10 |

Q11 Calculate the median, lower quartile and upper quartile from the following data:

| Marks | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. of <br> Students | 2 | 3 | 6 | 15 | 10 | 5 | 4 | 3 | 1 |

Q12 Calculate upper and lower quartile from the following data:

| Variable | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 10 | 20 | 35 | 40 | 25 | 25 | 15 |

