## SECTION II

**Q1 Attempt any six ,.** **(12)**

1.calculate $5^{th}$decile and 60 th percentile for the following data.

841,289,325,225,784,729,625,400,324,169.

2.calculate the range of the following data regarding the price of particular share for 10 days.

175,177,190,173,185,180,182,195,185,190.

3 compute

4 find n

5 two fair dice are rolled simultaneously.findthe probabilities of event

A : the sum of two no is even

6. Write down the formula of price and quantity index number by simple aggregate method.

7. If P (L ) = 225 and P (P ) = 144 calculate P ( F ) and P ( D-B).

8 Let S = {a,b,c,d,e,f,g,h }. A ={a,c,d,e } B= { b.d.,e,g,h }

C={c,e,h } find A ii) (A )

**Q2 (A) attempt any two** **(6)**

1.For the following frequency distribution value of Q is 22 find the missing frequency.

| Class | Frequency |
|---|---|
| 0-10 | 5 |
| 10-20 | 8 |
| 20-30 | ? |
| 30-40 | 4 |
| 40-50 | 3 |

2 Coefficient of variation of two groups A and B are 50 % and 80 % respectively and their corresponding standard deviations are 25 and 16 finf their arithmetic means.

3.prove that 15 + 15 = 16

**(B) Attempt any two.** **(8)**

1. find n , if and find the difference between the maximum values of

2 the number of members ,mean and standard deviation of two data sets are as follows

| | | |
|---|---|---|
| Number of members | 280 | 350 |
| Mean | 45 | 54 |
| Standard deviation | 6 | 4 |

Find combined mean and standard deviation .

3. calculate all the quartiles for the following data .

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Weight | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| No of students | 5 | 7 | 13 | 16 | 25 | 14 | 9 | 6 | 3 | 2 |

**Q3 (A) attempt any two.** **(6)**

1. Fit a trend line to the following data by graphical method .

| Year | No of crimes | year | No of crimes |
|---|---|---|---|
| 1981 | 40 | 1987 | 43 |
| 1982 | 42 | 1988 | 46 |
| 1983 | 43 | 1989 | 47 |
| 1984 | 42 | 1990 | 45 |
| 1985 | 44 | 1991 | 46 |
| 1986 | 44 | | |

2.the cost of living index no for the year 2002 and 2006 are 120 and 220 respectively. A person

Earns rs 10800 per month in the year 2002 .What should be his earningper month in the year 2006 so as to maintain his former standard of living ?

3. If P( A) = 1 ,P(B )=2 P(A B)= Then find

**( B) attempt any two.** **(8)**

1.A fair dice thrown two times .What is the chance that,

i) product of the numbers on the uppermost face is 6.

ii) sum of the numbers on the uppermost face is 8.

iii) sum of the numbers on the uppermost face is at least 11.

2 Calculate the value index number in following table by using simple aggregate method

| commodity | price | quantity | price | Quantity |
|---|---|---|---|---|
| A | 55 | 20 | 72 | 10 |
| B | 75 | 10 | 95 | 20 |
| C | 80 | 15 | 115 | 16 |
| D | 110 | 9 | 85 | 14 |
| E | 105 | 20 | 65 | 10 |

3.