2017

STATISTICS

[Honours]

(CBCS)

(Practical)

PAPER — C1P

Full Marks : 20

Time : 2 hours

Answer **three** questions
Questions are to be drawn by lottery basis.

The figures in the right hand margin indicate marks

1. The following are the marks obtained in statistics in the test examination and in the final examination by statistics (Hons.) students of a college in 2016.

Test Exam. Marks	223	160	176	98	131	135	170	63
Final Exam. Marks	270	231	233	130	205	231	245	115

2. You are given the following price-quantity data.

Commodity	2000		2005	
	Price	Quantity	Price	Quantity
A	2	4000	2.5	4500
B	5	500	4	800
C	1.5	1500	2	900
D	10	250	12	260
E	8	2500	5.5	5000

Using 2000 as the base year, construct

(a) Price and quantity indices using Laspeyre's formula.

(b) Price and quantity indices using Paasche's formula.

(c) Price and quantity indices using Fisher's formula.

$$1\frac{1}{2} + 1\frac{1}{2} + 2$$

3. Compute mean, median and mode for the following frequency distribution of IQ for 310 six year old children : 5

I.Q	170-179	160-169	150-159	140-149	130-139	120-129	110-119
Frequency	1	2	3	7	19	37	79

I.Q	100-109	90-99	80-89	70-79	60-69	50-59	40-49
Frequency	69	65	17	5	3	2	1

4. Two teachers rank a number of students in a certain examination : 5

Student No. :	1	2	3	4	5	6	7	8	9	10	11	12
Teacher - 1 :	5	1	4	2	7	3	6	8	10	9	11	12
Teacher - 2 :	10	5	1	2	3	4	7	6	8	11	9	12

Measure the association between the judgements of the two teachers by using Spearman's rank correlation coefficient.

(*a*) Find the correlation between two sets of marks.

(*b*) Obtain the regression equation of final examination marks on test examination marks.

$2 + 3$

5. Represent the following data by means of percentage sub-divided bar diagrams. 5

Particulars cost per scooter	1976 Rs.	1977 Rs.	1978 Rs.
Raw Material	2,160	2,600	2,700
Labour	540	700	810
Direct Expenses	360	200	360
Factory Expenses	360	300	360
Office Expenses	180	200	270
Total cost	3,600	4,000	4,500

Laboratory Note Book. 2

Viva-voce. 3