

Roll No. 

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Total No. of Pages: 02

Total No. of Questions: 07

**B.Com. (2011 & Onwards) (Sem. – 2)**

**BUSINESS STATISTICS**

**M Code: 22011**

**Subject Code: BCOP-204**

**Paper ID: [B1120]**

**Time: 3 Hrs.**

**Max. Marks: 60**

**INSTRUCTIONS TO CANDIDATES:**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.

**SECTION A**

1. a) Why is Arithmetic Mean considered to be the most suitable measure of Central Tendency?  
b) Distinguish between Classification and Tabulation.  
c) Distinguish between Questionnaire and Schedule.  
d) Explain the mathematical properties of Standard Deviation.  
e) Explain the properties of Regression coefficients.  
f) Explain the desirable properties of a good average.  
g) Distinguish between Sample mean and population mean.  
h) Distinguish between the trend and seasonal fluctuation in Trend Analysis.  
i) Define Range as a measure of Skewness.  
j) Discuss the advantages of graphical representation of data.

**SECTION B**

2. Define Statistics. Discuss its functions as well as limitations.
3. What do you mean by Questionnaire? Also explain the various steps of framing a Questionnaire.

4. In the frequency distribution of 100 families given below, the number of families corresponding to expenditure groups 20-40 and 60-80 are missing from the table.

However, median is known to be 50. Find the missing frequencies.

<b>Expenditure</b>	0-20	20-40	40-60	60-80	80-100
<b>No. of families</b>	14	?	24	?	15

5. Find the standard deviation and Coefficient of variance for the data given below:

<b>Weekly Wages (Rs.)</b>	150-180	180-210	210-240	240-270	270-300	300-330	330-360	360-390	390-420
<b>No. of Workers</b>	18	23	40	25	16	13	8	5	3

6. Find Karl Pearson's coefficient of Correlation from the following series of marks secured by 10 students in class test in Mathematics and Statistics.

<b>Marks in Maths</b>	45	70	65	30	90	40	50	75	85	60
<b>Marks in Statistics</b>	35	90	70	40	95	40	60	80	80	50

Take 60 and 65 respectively as assumed means for the above two series.

7. (a) What is Time Series? Discuss its components .  
 (b) For the data given below, calculate the trend values taking 3yearly and 5yearly period of moving average.

<b>Year</b>	<b>Sales ('000 Units)</b>	<b>Year</b>	<b>Sales ('000 units)</b>
1994	9	2002	16
1995	12	2003	18
1996	11	2004	20
1997	8	2005	24
1998	14	2006	23
1999	15	2007	25
2000	27	2008	27
2001	18		