

CENTRAL UNIVERSITY OF JAMMU

COURSE TITLE: Statistical Analysis for Managers
COURSE CODE: PGSCM1C005T
DURATION: 03 Hours

CREDITS: 04
MAX MARKS: 100

Section A

All questions in this section are compulsory. Each carries 1.5 marks.

Q1. Define:

- i. Distrust of Statistics
- ii. Data Decryption
- iii. Open End Clauses
- iv. Positively Skewed Distribution
- v. Kelly's Coefficient
- vi. Linear Correlation
- vii. Probable Error
- viii. Coefficient of Range
- ix. Assumed Mean Method
- x. Step Deviation Method

Section B

This section consists of a total of 10 questions, 02 from each unit. The candidate is required to answer 05 questions only selecting 01 from each unit. Each question carries 08 marks.

UNIT I

Q2. Explain various types of statistical methods with merits and demerits.

OR

30 pairs of values of two variables X and Y are given below. Form a two way table:

X	14	20	33	25	41	18	24	29	38	45
Y	148	242	296	312	518	196	214	340	492	568
X	23	32	37	19	28	34	38	29	44	40

(4)

Y	282	400	288	292	431	440	500	512	415	514
X	22	39	43	44	12	27	39	38	17	26
Y	282	481	516	598	122	200	451	387	245	413

Take class intervals of X as 10 to 20, 20 to 30 etc and for Y as 100 to 200, 200 to 300 etc.

UNIT II

Q3. Explain layout of a graph and also types of graphs.

OR

Draw a multiple bar diagram from the following data:

Year	Sales (Rs)	Gross Profit (Rs)	Net Profit (Rs)
2000	120	40	20
2001	135	45	30
2002	140	55	35
2003	150	60	40

UNIT III

Q4. Calculate mean deviation from the following series:

X	10	11	12	13	14
F	3	12	18	12	3

OR

Calculate mean and standard deviation from the following frequency distribution of marks:

Marks	No. of Students
0-10	5
10-20	12
20-30	30
30-40	45
40-50	50
50-60	37
60-70	21

UNIT IV

Q5. Define kurtosis and list its importance.

OR

Calculate Karl Pearson's coefficient of skewness:

Variable	Frequency	Variable	Frequency
70-80	11	30-40	21
60-70	22	20-30	11
50-60	30	10-20	6
40-50	35	0-10	5

UNIT V

Q6. The following table gives indices of industrial production of registered unemployed (in hundred thousand). Calculate the value of coefficient so obtained.

Year	1991	1992	1993	1994	1995	1996	1997	1998
Index of	100	102	104	107	105	112	103	99

Production								
Number Unemployed	15	12	13	11	12	12	19	26

OR

For certain X and Y series which are correlated, the two lines of regression are:

$$5X - 6Y + 90 = 0$$

$$15X - 8Y - 130 = 0$$

Find the means of the two series and the correlation coefficient.

SECTION C

This section consists of 05 long answer type questions and the candidate is required to answer any 03 of them including compulsory question. Each question carries 15 marks.

Q7. (Compulsory): In a trip organized by a college there were 80 persons, each of whom paid Rs 15.5 on an average. There were 60 students each of whom paid Rs 16. Members of the teaching staff were charged at a higher rate. The number of servants were 6 (all males) and they were not charged anything. The number of ladies was 20% of the total of which one was lady staff member. Tabulate the information.

Q8. Discuss in detail characteristics and objectives of representation. (Diagrammatic)

Q9. Discuss with relevant examples methods for computation of Mean.

Q10. You are given the weekly wages of 20 workers working in a household factory.

Wages (Rs)			
350.4	375.8	380.2	420.7
469.2	392.4	420.0	460.2
578.3	492.4	536.4	625.2
633.2	475.3	375.8	608.2
592.6	576.5	517.2	594.5

462.7	415.8	479.2	588.6
572.5	517.9	537.6	493.4
708.5	727.9		

Form a frequency distribution of the above data taking the first class as 300-400 and from the frequency distribution so formed, calculate Karl Pearson's coefficient of skewness.

Q11. Explain uses of regression analysis and also discuss difference between correlation and regression analysis.