5 Calculate the mean and standard deviation from the following data :

Value	90—99	80—89	70—79	60—69	50—59	40—49	30—39
Frequency	2	12	22	20	14	4	1

6 Examine whether there is any correlation between age and blindness on the basis of the following data:

Age in years :	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Persons (in thousands)	90	120	140	100	80	60	40	20
No. of blind Persons :	10	15	18	20	15	12	10	6

7 Marks of 8 students in Mathematics and statistics are given as:

Mathematics	80	75	76	69	70	85	72	68
Statistics:	85	65	72	68	67	88	80	70

Find the regression lines. When marks of a student in Mathematics are 90, what are his most likely marks in statistics?

8 Define Discriminant Analysis and Cluster Analysis.

===END OF PAPER===

2112M093

BACHELOR OF VOCATION
Management Financial Services
Subject: Business Statistics & SPSS
Subject Code: BFS604
Semester: Third
December 2021
Theory (External): 70 Marks
Time: 03 Hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 2 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number

SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x2=20 Marks)

A Define statistics?

B Write 2 methods of collecting primary data and 2 methods of collecting Secondary data

C What do you understand by classification of data? What are its objectives?

D What do you understand by mode? Discuss its relative merits and demerits as a measure of central tendency.

E What do you understand by coefficient of variation? What purpose does it serve?

F What is correlation and Regression? Also write types of correlation.

G Following are the heights and weights of 10 students of a B.Com. Class.

Height (in inches) X	62	72	68	58	65	70	66	63	60	72
Weight (in kgs.) Y	50	65	63	50	54	60	61	55	54	65

Draw a scatter diagram and indicate whether the correlation is positive or negative.

H Write formula of
a) Karl Pearson's coefficient of correlation
b) spearman's rank correlation coefficient

I Define principal component analysis

J How do you show empirical relationship between mean, median and mode

SECTION –B (ESSAY TYPE QUESTIONS)
(5x10=50 Marks)

1 Given that the mean height of a group of students is 67.45 inches. Find the missing frequencies for the following incomplete distribution of height of 100 students.

Height in inches	60 – 62	63 – 65	66 – 68	69 – 71	72 – 74
No. of Students	5	18	-	-	8

2 Compute AM, GM, and HM for the numbers 6, 8, 12, 36.

3 Find the value of mean, mode and median from the data given below:

Weight (in kg.)	93 — 97	98 — 102	103 — 107	108 — 112	113 — 117	118 — 122	123 — 127	128 — 132
No. of students	3	5	12	17	14	6	3	1

4 Calculate the mean deviation from mean for the following data.

Class Interval	2-4	4-6	6-8	8-10
Frequency	3	4	2	1