

2112M092

**BACHELOR OF VOCATION**  
**Management Financial Services**  
**Subject: Business Statistics**  
**Subject Code: MGM-601**  
**Semester: Third**  
**December 2021**  
**Theory (External): 70 Marks**  
**Time: 03 Hours**

- 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==

**Instructions to the Students**

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

<b>Roll Number</b>									

**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
- Karl Pearson's coefficient of correlation
  - 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	98	103	108	113	118	123	128
	—	—	—	—	—	—	—	—
	97	102	107	112	117	122	127	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