

2209M012

company (in million Rupees) in different financial years. Find the coefficient of correlation between sales and advertising expenditure. Also comment on the results

| Year | Sales | Advertising Expenditure |
|------------|--------|-------------------------|
| March 1995 | 5333.6 | 62.2 |
| March 1996 | 5894.2 | 74.3 |
| March 1997 | 5656.5 | 244.8 |
| March 1998 | 7143.2 | 314 |
| March 1999 | 8984.5 | 346.2 |
| March 2000 | 7168.5 | 375.4 |
| March 2001 | 8751.8 | 775.4 |
| March 2002 | 5513 | 4.9 |
| March 2003 | 7004.2 | 17.4 |
| March 2004 | 7687.7 | 8.2 |
| March 2005 | 8219.9 | 15.4 |
| March 2006 | 8005.4 | 25.1 |
| March 2007 | 7142.6 | 8.7 |

8 Explain Discriminant Analysis in detail

==END OF PAPER==

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BACHELOR OF VOCATION
Management Financial Services
Subject: Business Statistics & SPSS
Subject Code: BFS-604
Semester: Third
September 2022
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

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

- A Explain difference between bar charts and histograms
- B What are the applications of statistics in business.
- C Explain Advantages and Limitations of Arithmetic Mean
- D Interquatile range
- E Test of skewness
- F Explain different types of regression
- G Difference between simple and partial correlation
- H What is principal component analysis
- I What is multivariate analysis
- J Discuss business application of cluster analysis

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

- 1 Explain types and construction of diagrams and graphs
- 2 An Incomplete frequency distribution is given below .Find missing frequency when median is 28

| Variable | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|-----------|------|-------|-------|-------|-------|
| Frequency | 5 | 8 | ? | 16 | 6 |
| | | | | | |

- 3 An analysis of production rejects in the following figures

| No of rejects per operator | 21-25 | 26-30 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| No of operators | 5 | 15 | 28 | 42 | 15 | 12 | 3 |

Calculate standard deviation and coefficient of variation

- 4 Explain spearman's rank correlation by taking suitable example
- 5 The scores of two batsmen A and B in ten innings during a certain match are

| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|
| A | 32 | 28 | 47 | 63 | 71 | 39 | 10 | 60 | 96 | 14 |
| B | 19 | 31 | 48 | 53 | 67 | 90 | 10 | 62 | 40 | 80 |

Find out who is better scorer and who is more consistent batsman

- 6 Discuss the difference between correlation and regression
- 7 Godrej Industries , earlier known as godrej soaps is leading chemical producer in India .The company also manufactures edible oil and vanaspati. Following Table shows the sales and Advertising expenditure of the