SHRI MAHAVEER COLLEGE, JAIPUR

Name of faculty	Dr. KHUSHBOO SOGANI
Class- I Year	B.Com – I Year
Course Code	
Course Name	BUSINESS STATISTICS
Session	2022-23

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT

Vision & Mission of Shri Mahaveer College

Vision

To be a globally competent learning and research centre for the contemporary holistic development of young minds to make them industry-fit and job-creators by providing quality education in varied disciplines with modern insights and ethical values.

Mission

- To empower our students to achieve global excellence in varied disciplines and carve a niche on global horizon.
- To foster holistic development of our students to develop professionalism and globally competent skill-set.
- To encourage and support our students to develop innovative thinking for contributing towards a progressive ethical contemporary society.

Vision & Mission of Department of Commerce and Management

Vision

To educate and train competent human resources suitable for industry, business entrepreneurship and service sector by integrating all aspects of commerce and management.

Mission

1) To empower students with all the knowledge and guidance required to become qualified management professionals.
2) To provide holistic and value-based development of students which ultimately enhancestheir employability.
3) To prepare the youth in becoming a truly global personality capable of dealing with the modern world and its challenges.

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT

PROGRAM OUTCOMES (POs)

- On completion of BBA Program the student will be able to -

S.No.	Program Outcomes	Description
1.	PO1	Apply knowledge of management theories and practices to solve business problems.
2.	PO2	Foster analytical and critical thinking abilities for data-based decision-making.
3.	PO3	Ability to develop value-based leadership ability.
4.	PO4	Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
5.	PO5	Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
6.	PO-6	Foster out-of-the box thinking for identifying business opportunities and develop as successful entrepreneurs.
7.	PO-7	Ability to formulate managerial strategies by identifying potential global opportunities in business world.
8.	PO-8	Develop managerial, human and technical skills for being equipped in the competitive business environment.
9	PO-9	Demonstrate able motivators for generating higher productivity and efficiency of co-workers.
10.	PO-10	Ability to design solutions for complex business problems with statistical and quantitative tools and techniques.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- On completion of BBA Program the student will be able to –

S.No.	Program Specific Outcomes	Description
1.	PSO1	Exhibit strategic and pro-active thinking towards business decision-making.
2.	PSO2	Apply analytical and problem solving skills in business organization.

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT

MAPPING OF KEY PHRASES OF THE INSTITUTES MISSION STATEMENT WITH THE KEY PHRASES OF INSTITUTES VISION STATEMENT

(Institution Mission Vs Institute Vision)

Key Phrases of the Mission Statement of the Institute	Key Phrases of the Vision Statement of the Institute		
	To create knowledge based society with scientific temper	Team spirit	To face the global competitive challenges
Skill based systems for effective delivery of knowledge	✔	✔	✔
To equip young professionals with dedication	✔	✔	✔
Excellence in all spheres of life	✔	✔	✔

MAPPING OF KEY PHRASES OF THE DEPARTMENTS VISION STATEMENT WITH THE KEY PHRASES OF INSTITUTES MISSION STATEMENT

(Department Vision Vs Institution Mission)

Key Phrases of the Vision Statement of the Department	Key Phrases of the Mission Statement of the Institute		
	Skill Based Systems	Delivery of Knowledge	Excellence in all spheres of life
Centre of Excellence	✔	✔	✔
Wider recognition	✔	✔	✔
Rapid innovation.	✔	✔	✔

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT
MAPPING OF KEY PHRASES OF THE DEPARTMENTS MISSION STATEMENT WITH THE KEY PHRASES OF DEPARTMENTS VISION STATEMENT
(Department Mission Vs Department Vision)

Key Phrases of the Mission Statement of the Department	Key Phrases of the Vision Statement of the Department		
	Centre of Excellence	Wider recognition	Rapid innovation.
Learning-centered environment	✔	✔	✔
Research and Discovery	✔	✔	✔
Social Responsibility	✔	✔	✔

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT

MAPPING OF KEY PHRASES OF PSO WITH KEY PHRASES OF DEPARTMENTS MISSION STATEMENT

(PSO Vs Department Mission)

Key Phrases of PSO Statement	Key Phrases of the Mission Department		
	Learning-centred environment	Research and Discovery	Social Responsibility
Professional Knowledge	✔	✔	✔
Standards, Ethic, Tools, Challenges Societal Problems	✔	✔	✔
Entrepreneur, Lifelong Learning and Higher Studies.	✔	✔	✔

Shri Mahaveer College

Department of Commerce & Management
Time Table
B.Com Part I (2022-23)

Day /Period	I 9:00-9:50	II 9:55-10:45	III 10:50-11:40	IV 11:45-12:35	V 12:40-1:30	1:30-2:00	2:00-3:00	VI 3:00-5:00
Mon	ABST-II BS (Dr. KS) RN-9							
Tue	ABST-II BS (Dr. KS) RN-9							
Wed	ABST-II BS (Dr. KS) RN-9					LUNCH		
Thurs								
Fri								
Sat								

Time Table Coordinator

SHRI MAHAVEER COLLEGE, JAIPUR

DEPARTMENT OF COMMERCE & MANAGEMENT

RAJASTHAN UNIVERSITY,
JAIPUR
Syllabus

I Year: B.Com

BUSINESS STATISTICS

Max. Marks: 100

End Term Exam: 3 Hours

Unit	Contents	Hours
I	Introduction of Statistics: Growth of Statistics, Definition, Scope, Uses, Misuses and Limitation of Statistics, Collection of Primary & Secondary Data, Approximation and Accuracy, Statistical Errors Classification and Tabulation of Data: Meaning and Characteristics, Frequency Distribution, Simple and Manifold Tabulation, Presentation of Data: Diagrams/Graphs of Frequency Distribution Ogive and Histograms..	
II	Measures of Central Tendency: Arithmetic Mean (Simple and Weighted), Median (including quartiles, deciles and percentiles), Mode, Geometric and Harmonic Mean- Simple and Weighted, Uses and Limitations of Measures of Central Tendency	
III	Measures of Dispersion: Absolute and Relative Measures of Dispersion; Range, Quartile Deviation, Mean Deviation, Standard Deviation and Co-efficient of Variation. Uses and Interpretation of Measures of Dispersion. Skewness: Different measures of Skewness	
IV	Correlation: Meaning and Significance, Scatter Diagram, Karl Pearson's Coefficient of Correlation between two Variable: Grouped and Ungrouped Data, Coefficient of Correlation of Spearman's Rank Differences Method and Concurrent Deviation Method.	
V	Index Numbers: Meaning and Uses, Simple and Weighted Price Index Numbers, Methods of Construction, Average of Relatives and Aggregative Methods, Problems in construction of Index Numbers. Fishers Ideal Index Number, Base shifting, Splicing and Deflating. Interpolation: Binomial, Newtons Advancing differences Method and Lagrange's Method.	
	Total	

ABC Analysis (RGB method)

Unit No.	A (Hard Topics)	B (Topics with average hardness level)	C (Easy-to-understand topics)
I			Data Collection, Classification, Presentation & Tabulation of Data
II	Geometric Mean, Dispersion : Standard Deviation	Median (including Quartile, Deciles , Percentiles)	
III			Skewness: Different measures of Skewness
IV		Correlation : Meaning & significance , Scatter diagram, Karl Pearson's coefficient of correlation	
V	Interpolation: Binomial , Newtons Advancing differences Methods & Lagranges Method		

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE & MANAGEMENT

Campus: Shri Mahaveer College   Class/Section: B.Com I   Date:6/9/22
Course: B.Com I   Year: I
Name of Faculty: Dr. Khushboo Sogani   Name of Subject: Business Statistics   Code:

COURSE PLAN –BLOWN UP

SNo.	TOPIC AS PER SYLLABUS	BLOWN UP TOPICS (up to 10 Times Syllabus)
1.	Zero Lecture	Objective, scope and outcome of the course.
2.	Introduction of Statistics. Collection of Primary & Secondary Data. Classification and Tabulation of Data	1. Introduction of Statistics: Growth of Statistics. 2. Definition, Scope, Uses, Misuses and Limitation of Statistics. 3. Collection of Primary & Secondary Data. 4. Methods of data collection 5. Various Sampling Techniques. 6. Approximation and Accuracy, Statistical Error. 7. Classification : Meaning and Characteristics 8. Tabulation of Data: Meaning and Characteristics. 9. Frequency Distribution, Simple and Manifold Tabulation. 10. Construction of frequency distribution. 11. Presentation of Data: Diagrams/Graphs of Frequency. 12. Distribution Ogive and Histograms..
3.	Measures of Central Tendency	1. Concept of Central Tendency and Requirements of Good Measures of Central Tendency 2. Uses and Limitations of Measures of Central Tendency. 3. Measures of Central Tendency. 4. Mean: Meaning & various methods for calculation 5. Simple Arithmetic Mean 6. Weighted Arithmetic Mean 7. Median: Meaning & various methods for calculation 8. Quartiles, deciles and percentiles 9. Mode: Meaning & various methods for calculation. 10. Geometric Mean 11. Harmonic Mean 12. Quadratic Mean

4.	Dispersion: Measures of Dispersion Skewness :Measures of Skewness	1. Dispersion: Introduction, Definition & Meaning. 2. Measures of Dispersion: Absolute and Relative Measures of Dispersion. 3. Range 4. Quartile Deviation 5. Mean Deviation 6. Standard Deviation 7. Coefficient of Variation. 8. Uses and Interpretation of Measures of Dispersion. 9. Skewness: Introduction, Definition & Meaning 10. Different measures of Skewness.
5.	Correlation:	1. Correlation: Introduction & Meaning and Significance 2. Correlation: Merits & Uses 3. Various Methods of Correlation 4. Scatter Diagram 5. Karl Pearson's Coefficient of Correlation between two Variable: Grouped and Ungrouped Data: Introduction 6. Karl Pearson's Coefficient of Correlation: Methods to calculate 7. Coefficient of Correlation of Spearman's Rank Differences Method: Introduction 8. Coefficient of Correlation of Spearman's Rank Differences Method: Methods to Calculate 9. Concurrent Deviation Method : Introduction 10. Concurrent Deviation Method : Method to calculate .
6.	Index Numbers: Introduction & Various methods. Interpolation: Introduction	1. Index Numbers: Meaning and Uses 2. Simple and Weighted Price Index Numbers 3. Methods of Construction, Average of Relatives and Aggregative Methods 4. Problems in construction of Index Numbers 5. Various methods to calculate Index Numbers 6. Fishers Ideal Index Number 7. Base shifting, Splicing and Deflating. Interpolation: Introduction & Meaning 8. Binomial Method 9. Newtons Advancing differences Method 10. Lagrange's Method.

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE& MANAGEMENT

Course: B.Com
Name of Faculty: Dr. Khushboo Sogani

Year/ Section –I
Name of Subject :Business Statistics

Date: 27/7/22
Code:

COURSE PLAN (Deployment)
COURSE PLAN

Course Name : Business Statistics
Course Code: B.COM

Syllabus

Unitl

Introduction of Statistics: Growth of Statistics, Definition, Scope, Uses, Misuses and Limitation of Statistics, Collection of Primary & Secondary Data, Approximation and Accuracy, Statistical Errors.

Classification and Tabulation of Data: Meaning and Characteristics, Frequency Distribution, Simple and Manifold Tabulation, Presentation of Data: Diagrams/Graphs of Frequency Distribution, Ogive and , Histograms..

UNIT2:

Measures of Central Tendency: Arithmetic Mean (Simple and Weighted), Median (including quartiles, deciles and percentiles), Mode, Geometric and Harmonic Mean-

Simple and Weighted, Uses and Limitations of Measures of Central Tendency.

UNIT3:

Measures of Dispersion: Absolute and Relative Measures of Dispersion; Range, Quartile Deviation, Mean Deviation, Standard Deviation and Co-efficient of Variation. Uses and Interpretation of Measures of Dispersion. Skewness: Different measures of Skewness.

UNIT4:

Correlation: Meaning and Significance, Scatter Diagram, Karl Pearson's Coefficient of Correlation between two Variable: Grouped and Ungrouped Data, Coefficient of Correlation of Spearman's Rank Differences Method and Concurrent Deviation Method.

UNIT5:

Index Numbers: Meaning and Uses, Simple and Weighted Price Index Numbers, Methods of Construction, Average of Relatives and Aggregative Methods, Problems in construction of Index Numbers. Fishers Ideal Index Number, Base shifting, Splicing and Deflating.

Interpolation: Binomial, Newtons Advancing differences Method and Lagrange's Method.

TEXT BOOK: Business Statistics , Ajmera Book Company (Gupta, Goyal, Sharma , Biyani, Jain, Gupta)

REFERENCES:
1. Sancheti and Kapoor: Business Statistics
2. SP Gupta: Business Statistics
3. Yadav, Jain, Mittal: Business Statistics
4. K N Nagar Elements of Statistics

Course Outcomes(COs): After the successful completion of the course, students will be able to

CO1: Explainvarious concepts and methods and various statistical tools for data collection.
CO2: Determine the various methods of statistical averages for interpreting values of averages and variation.
CO3:Classify the various measures to calculate the correlation between two series of data concerning different types of facts
CO4: Compare the techniques and concepts of different types of Index Numbers & Interpolation of the missing data within the given data series.

Shri Mahaveer College
(Affiliated to the University Rajasthan)
Course Delivery Plan
Department: Commerce and Management
Programme: B.Com I
Course: Business Statistics
Name of Faculty: Dr Khushboo Sogani
Session:2022-23

Course Plan (Deployment)
COURSE PLAN

S. No.	Lect. No.	Points to Cover	CO /LO	Proposed Date of coverage	Actual Date of coverage (Handwritten)	Ref. Book/Journal with Page No.
1.	L1	Zero Lecture: Ice breaking		6/9/22	6/9/22	
2.	L2	Unit 1 Introduction and Meaning and Definition of Statistics Importance, Characterstics & Functions	C1	6/9/22	6/9/22	Sancheti and Kapoor
3	L3	Meaning of Investigation, Planning of Investigation	C1	7/9/22	7/9/22	Sancheti and Kapoor
4	L4	Meaning & Definition of Collection of Data	C1	12/9/22	13/9/22	Sancheti and Kapoor
5	L5	Various Sampling Techniques	C1	13/9/22	14/9/22	Sancheti and Kapoor
6	L6	Editing Of Collected Data	C1	14/9/22	19/9/22	SP Gupta: Business Statistics
7	L7	Meaning & Definition Of Classification	C1	19/9/22	20/9/22	SP Gupta: Business Statistics
8	L8	Methods of Classification	C1	20/9/22	21/9/22	SP Gupta: Business Statistics
9	L9	Meaning & Definition Of Tabulation	C1	21/9/22	27/9/22	SP Gupta: Business Statistics

10	L10	Main Parts of Table: Rules & Precautions for Tabulation	C1	27/9/22	28/9/22	SP Gupta: Business Statistics
11	L11	Practical Sums	C1	28/9/22	10/10/22	SP Gupta: Business Statistics
12	L12	Unit II Statistical Averages: Meaning, Objectives, Functions , Uses & Kinds	C2	10/10/22	11/10/22	SP Gupta: Business Statistics
13	L13	Arithmetic Mean	C2	11/10/22	12/10/22	SP Gupta: Business Statistics
14	L14	Methods to find Arithmetic Mean	C2	12/10/22	17/10/22	Sancheti and Kapoor
15	L15	Practical Sums	C2	17/10/22	18/10/22	Sancheti and Kapoor
16	L16	Practical Sums	C2	18/10/22	31/10/22	Sancheti and Kapoor
17	L17	Median: Meaning & Calculation	C2	31/10/22	1/11/22	Sancheti and Kapoor
18	L18	Median: Meaning & Calculation	C2	1/11/22	2/11/22	Sancheti and Kapoor
19	L19	Practical Sums	C2	2/11/22	7/11/22	Sancheti and Kapoor
20	L20	Calculation of Quartile, Quintile, Octile, Decile, Percentile	C2	7/11/22	9/11/22	Sancheti and Kapoor
21	L21	Practical Sums	C2	9/11/22	14/11/22	Sancheti and Kapoor
22	L22	Mode: Meaning & Calculation	C2	14/11/22	15/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
23	L23	Practical Sums	C2	15/11/22	16/11/22	Gupta, Goyal,2Sharma , Biyani,2Jain, Gupta
24	L24	Grouping Method of Mode	C2	16/11/22	21/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
25	L25	Weighted Arithmetic Mean	C2	21/11/22	22/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
26	L26	Combined Mean , Harmonic Mean	C2	22/11/22	23/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
27	L27	Geometric Mean, Quadratic Mean	C2	23/11/22	28/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
28	L28	Practical Sums	C2	28/11/22	29/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
29	L29	Practical Sums	C2	29/11/22	30/11/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
30	L30	Unit III Meaning & Definition of Dispersion & Importance	C2	30/11/22	5/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
31	L31	Methods Of Measurement Of Dispersion: Methods of Limits	C2	5/12/22	6/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
32	L32	Methods Of Measurement Of Dispersion: Quartile Deviation	C2	6/12/22	7/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
33	L33	Methods Of Measurement Of Dispersion: Mean Deviation	C2	7/12/22	14/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta

34	L34	Methods Of Measurement Of Dispersion: Mean Deviation	C2	12/12/22	19/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
35	L35	Methods Of Measurement Of Dispersion: Standard Deviation	C2	13/12/23	19/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
36	L36	Practical Sums	C2	14/12/22	21/12/22	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
37	L37	Meaning & Definition of Skewness, Objectives & test of Skewness	C2	19/12/22	2/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
38	L38	Measures &methods of measuring Skewness	C2	21/12/22	3/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
39	L39	Practical Sums	C2	2/1/23	4/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
40	L40	Unit IV Meaning & Definition ,Types & Degrees Of Correlation	C3	3/1/23	9/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
41	L41	Karl Pearson's Coefficient of Correlation: Characteristics , uses & various Formulas	C3	4/1/23	10/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
42	L42	Practical Sums	C3	9/1/23	11/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
43	L43	Practical Sums	C3	10/1/23	11/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
44	L44	Use & Computation of Spearman's Ranking Method of Correlation	C3	11/1/23	16/1/23	Gupta, Goyal, Sharma , Biyani, Jain, Gupta
45	L45	Practical Sums	C3	16/1/23	17/1/23	Sancheti and Kapoor
46	L46	Use & Computation of Concurrent Deviation Method of Correlation	C3	17/1/23	18/1/23	Sancheti and Kapoor
47	L47	Practical Sums	C3	18/1/23	25/1/23	Sancheti and Kapoor
48	L48	Unit V Meaning & Definition of Index Numbers	C4	23/1/23	30/1/23	Sancheti and Kapoor
49	L49	Methods of Index Numbers	C4	24/1/23	31/1/23	Sancheti and Kapoor
50	L50	Weighted Index Numbers	C4	25/1/23	1/2/23	Sancheti and Kapoor
51	L51	Fisher's Ideal Index Numbers	C4	30/1/23	6/2/23	Sancheti and Kapoor
52	L52	Sum of Fisher's Ideal Index Numbers	C4	31/1/23	7/2/23	Sancheti and Kapoor
53	L53	Practical sums of Index Numbers	C4	1/2/23	8/2/23	Sancheti and Kapoor
54	L54	Practical sums of Index Numbers	C4	6/2/23	13/2/23	Sancheti and Kapoor
55	L55	Meaning & Definition of Interpolation, Necessity of Interpolation	C4	7/2/23	14/2/23	Sancheti and Kapoor
56	L56	Methods of Interpolation	C4	8/2/23	15/2/23	Sancheti and Kapoor

57	L57	Methods of Interpolation	C4	13/2/23	20/2/23	Sancheti and Kapoor
58	L58	Methods of Interpolation	C4	14/2/23	21/2/23	Sancheti and Kapoor
59	L59	Practical Sums of Interpolation	C4	15/2/23	8/3/23	Sancheti and Kapoor
60	L60	Practical Sums of Interpolation	C4	20/2/23	13/3/23	Sancheti and Kapoor
61	L61	Practical Sums of Interpolation	C4	21/2/23	14/3/23	Gupta, Goyal, Sharma, Biyani, Jain, Gupta
62	L62	Remedial Class		22/2/23	14/3/23	
63	L63	Remedial Class		27/2/23	20/3/23	
64	L64	Remedial Class		28/2/23	21/3/23	
65	L65	Remedial Class		1/3/23	21/3/23	
66	L66	Remedial Class		8/3/23	28/3/23	
67	L67	Remedial Class		13/3/23	21/3/23	
68	L68	Remedial Class		14/3/23	21/3/23	

SHRI MAHAVEER COLLEGE, JAIPUR

DEPARTMENT OF COMMERCE & MANAGEMENT

	Class/Section: B.Com Part-I	
Course: B.Com	Year/ Section –I	Date:6/9//22
Name of Faculty: Dr. Khushboo Sogani	Name of Subject: Business Statistics	Code:

COURSE PLAN (Zero Lecture)

Session: 2022-23

1). Name of Subject with Code: **BUSINESS STATISTICS**

2). Self-Introduction:

a). Name: Dr. **Khushboo Sogani**

b). Qualification: Ph.D, MPhil, MCom

c). Designation: Assistant Professor

d). Research Area: EVA & MVA

e). E-mail Id: soganikhushboo@gmail.com

f). Other details*:*

- More than 15 years of teaching experience.

3).Introduction of Students: I year (B.Com)

a). Identifying and keeping records of students based on meritorious/weak in academics.

b). Achievement of students in previous years:- Teaching first time in this class.

4). Instructional Language: 100% English

5). Introduction to subject: - Business statistics is a branch of statistics that focuses on the collection, analysis, interpretation, and presentation of data relevant to business decision-making. It encompasses various techniques and methods to extract valuable insights from data to aid in managerial, operational, and strategic decisions within organizations. Business statistics is crucial for understanding market trends, forecasting future outcomes, assessing risks, optimizing processes, and evaluating performance. It plays a vital role in various domains such as finance, marketing, operations, human resources, and more.

In business statistics, key concepts include probability theory, hypothesis testing, dispersion, skewness, regression analysis, correlation and data visualization. These tools help businesses make informed decisions by providing quantitative evidence and insights into patterns and relationships within data. By leveraging business statistics, organizations can gain a competitive edge, enhance efficiency, mitigate risks, and ultimately achieve their strategic objectives. Moreover, with the

increasing availability of data and advancements in analytics technologies, the importance of business statistics continues to grow, shaping the future of decision-making in the business world.

a) *Relevance to Branch*:

The relevance of business statistics to various branches or sectors is profound. For instance: Finance: Business statistics assists in analyzing financial data, assessing investment risks, predicting market trends, and making informed decisions regarding investments, portfolio management, and risk management.

Marketing: It helps in market research, customer segmentation, understanding consumer behavior, measuring marketing campaign effectiveness, and optimizing pricing strategies based on statistical analysis of data.

Human Resources: It aids in workforce planning, performance evaluation, employee satisfaction analysis, talent management, and identifying factors influencing employee turnover through statistical methods such as regression analysis and hypothesis testing

Healthcare: In healthcare management, business statistics plays a crucial role in analyzing patient data, evaluating treatment outcomes, optimizing resource allocation, and identifying trends to improve healthcare delivery and patient outcomes.

E-commerce: It enables e-commerce businesses to analyze website traffic, customer behavior, conversion rates, and optimize online marketing campaigns for better customer engagement and retention.

Overall, business statistics is relevant to virtually every branch or sector as it provides valuable insights and evidence-based decision-making tools that drive organizational success and competitiveness.

b) *Relevance to Society*:

The relevance of business statistics extends beyond individual organizations and has a significant impact on society as a whole:

Economic Decision Making: Business statistics helps governments, policymakers, and central banks make informed decisions regarding economic policies, fiscal measures, and monetary interventions by providing insights into economic indicators, market trends, and consumer behavior.

Social Welfare: By analyzing data related to income distribution, poverty levels, healthcare access, education attainment, and other socio-economic factors, business statistics contributes to identifying societal needs, formulating social welfare programs, and allocating resources effectively to address social inequalities.

Public Health: Business statistics plays a crucial role in public health by analyzing epidemiological data, tracking disease outbreaks, evaluating healthcare interventions, and identifying risk factors to develop strategies for disease prevention, health promotion, and healthcare resource allocation.

Environmental Sustainability: Through statistical analysis of environmental data, such as air quality measurements, climate change indicators, and ecological trends, business statistics informs environmental policies, sustainability initiatives, and resource management strategies aimed at mitigating environmental degradation and promoting sustainable development.

Education: Business statistics contributes to education policy-making and educational research by analyzing student performance data, evaluating teaching methodologies, identifying factors influencing academic achievement, and informing decisions regarding curriculum development, school funding, and educational reforms.

Overall, business statistics serves as a powerful tool for understanding complex societal issues, informing evidence-based decision-making, and driving positive societal change by enabling informed policy interventions, resource allocations, and strategic initiatives aimed at improving the well-being and prosperity of communities and society at large.

c). *Relevance to Self:*

The relevance of business statistics to oneself is significant in several ways:
Personal Finance: Understanding basic statistical concepts helps in managing personal finances, such as budgeting, saving, investing, and retirement planning. Statistical analysis can aid in evaluating investment options, assessing risk tolerance, and making informed financial decisions.
Career Development: Knowledge of business statistics can enhance career prospects by providing valuable analytical skills sought after in various industries. It enables individuals to analyze data, identify trends, and make data-driven recommendations, which are increasingly valuable in today's data-driven economy.
Decision Making: Whether it's deciding on purchasing a home, selecting an insurance plan, or evaluating job offers, familiarity with statistical concepts empowers individuals to make informed decisions by analyzing relevant data and weighing different factors effectively.
Goal Setting and Tracking: Utilizing statistical tools for setting goals, tracking progress, and measuring performance allows individuals to establish realistic objectives, monitor their achievements, and adjust their strategies accordingly to maximize personal growth and productivity.
Risk Management: Understanding statistical concepts like probability and risk assessment helps individuals in identifying and mitigating potential risks in various aspects of life, whether it's financial investments, career decisions, or personal safety.
In essence, business statistics equips individuals with valuable skills and knowledge that are not only beneficial in professional contexts but also essential for personal growth, decision-making, and overall well-being.

Course: B.COM	Year/Section: I	Date:
Name of Faculty: Dr. KHUSHBOO SOGANI	Name of Subject : Business Statistics	Code:

COURSE OUTCOMES

After completion of course

CO1: Explain various concepts and methods and various statistical tools for data collection

CO2: Determine the various methods of statistical averages for interpreting values of averages and variation.

CO3: Classify the various measures to calculate the correlation between two series of data concerning different types of facts

CO4: Compare the techniques and concepts of different types of Index Numbers & Interpolation of the missing data within the given data series.

MAPPING OF CO WITH PO AND PSO

	After completion of course,	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PSO1	PSO2
CO1	Defining the term Human resource management and understand the concept of managerial effectiveness.	1	2	1	1	2	3	3	1	2	3	1	2
CO2	Describe the conceptual knowledge of HR Planning and selection procedure in an organization	2	3	1	2	1	3	1	2	2	3	1	3
CO3	Demonstrate various training techniques and its importance to the employees	1	2	3	2	3	1	1	3	3	2	3	3
CO4	Analyze and evaluate the best suitable performance appraisal technique and leadership style	3	2	1	3	2	1	3	2	2	2	3	2

PO Strongly Mapped:

PO1: Apply knowledge of management theories and practices to solve business problems

PO Moderately Mapped:

PO2: Foster analytical and critical thinking abilities for data-based decision-making.

PO3: Ability to develop value-based leadership ability.

PO4: Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.

PSO Moderately Mapped:

PSO-1: Exhibit strategic and pro-active thinking towards business decision-making.

SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE AND MANAGEMENT

PRE UNIVERSITY EXAMS: CO-ATTAINMENT LEVELS

Course Category	Level 3	Level 2	Level 1
A	60 % of students getting	50-60 % of students	40-50 % of students

	> 60% marks	getting > 60% marks	getting > 60% marks

END-TERM RU COMPONENT: CO-ATTAINMENT LEVELS

Course Category	Level 3	Level 2	Level 1
A	50 % of students getting > 60% marks	40-50 % of students getting > 60% marks	30-40 % of students getting > 60% marks

CO ATTAINMENT LEVELS FOR THEORY OF COMPUTATION

S. No.	Course Type	Attainment Level=1	Attainment Level=2	Attainment Level=3
1	**Theory Courses** Mid Semester Exams	40-50 % of students getting > 60% marks	50-60 % of students getting > 60% marks	60 % of students getting > 60% marks
2	**Theory Courses** University Exam	30-40 % of students getting > 60% marks	40-50 % of students getting > 60% marks	50 % of students getting > 60% marks
3	**Assignments/Unit Test**	40-50 % of students getting > 60% marks	50-60 % of students getting > 60% marks	60 % of students getting > 60% marks

CO WISE ASSESSMENT ACTIVITIES (AS MENTIONED IN SESSION PLAN)

	Activities			
CO	**Class Test**	**Assignment**	**Mid 1**	**Mid 2**
CO1	Yes	Yes	Yes	Yes
CO2	Yes	Yes	Yes	Yes
CO3	Yes	Yes	Yes	Yes
CO4	Yes	Yes	Yes	Yes

CO-PO/PSO MAPPING AND TARGETS

CO	Avg.			PSO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO Targets	PSO1	PSO2

CO1	3	2	1	2	1	2	2	4	3	**3**	2	2
CO2	2	2	2	1	3	1	2	2	1	**2**	2	2
CO3	4	1	2	2	3	3	3	2	1	**2**	2	2
CO4	4	3	2	2	1	4	2	4	2	**2**	2	2

ACTIVITY WISE ASSESSMENT TOOLS

S.No.	Activity	Assessment Method	Tools	Weightage Marks	Recommendation
1.	**Mid Term 1**	Direct	Marks	50	For CO1,2,3,4
2.	**Class Test**	Direct	Marks	40	For CO1,2,3,4
3.	**Assignment**	Direct	Marks	20	For CO1,2,3,4,
4.	**Mid Term 2**	Direct	Marks	50	For CO1,2,3,4
Note that for every rubric you need to decide on assessment criteria, range of marks or weightage – above values are indicative					

SHRI MAHAVEER COLLEGE, JAIPUR

DEPARTMENT OF COMMERCE & MANAGEMENT

B.Com – I YEAR

B.Com- Business Statistics

Assignment I

Note:- Attempt All Questions

Q1- **"Statistics are the numerical statement of facts but all facts numerically stated are not statistics".**
Clarify this statement.

Q2- **What is skewness ? How will you measure it. What are the various methods of measuring skewness ? Explain.**

Q3- **Frequency distribution of monthly earnings of the workers in a factory is:**

Profits	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	4	8	18	30	15	10	8	7

Find the mean deviation and standard deviation of their earnings.

Q4- . **From the following data calculate mean, median, mode :-**

Size of item	Frequency
Less than 5	7
Less than 10	20
5-15	38
15 & above	55
20-25	20
25 & Above	5
30 & Above	1

.

SHRI MAHAVEER COLLEGE, JAIPUR

DEPARTMENT OF COMMERCE & MANAGEMENT

B.Com – I YEAR

B.Com- Business Statistics

Assignment II

Q1. "Statistics are the numerical statement of facts but all facts numerically stated are not statistics". Clarify this statement.

Q2. **Ten percent of the workers in a farm, employing a total of 2000 men , 10% earn less than Rs. 2.00 per day , 480 earn from Rs 2.00-Rs 2.24 per day, 30% earn from Rs. 2.25 -Rs. 2.49 per day, 370 earn from Rs. 2.50 -Rs. 2.74 per day, 12% earn from Rs. 2.75 -Rs. 2.99 per day and the rest earn Rs. 3.00 or more per day. What is the median wages ?**

Q3. Difference between Primary & Secondary Data.

Q4. The Mean age of a combined group of men and women is 25 years. If the mean age of the group of men =26 and that of the group of women = 21 , find out the % men and women in the group ?

ATTAINMENT OF CO (CLASS TEST) COMPONENT

CO-GAP IDENTIFICATIONS

COs	CO1	CO2	CO3	CO4
Target	1	2	3	4
Achieved	1	2	3	4
Gap	-	-	-	-

OVERALL CO ATTAINMENT TABLE

COs	CO1	CO2	CO3	CO4	
Attainment level as per rules set	**1**	**2**	**3**		
Average CO attainment through internal assessment					

3

ATTAINMENT OF PO THROUGH CO (CLASS TEST) COMPONENT

ATTAINMENT OF POs & PSOs

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10			PSO1	PSO2	
CO1	1	2	3	3	2	3	2	1	2	2			1	2	
CO2	2	3	2	2	3	3	2	3	2	1			2	1	
CO3	3	2	1	3	2	2	3	3	2	1			2	2	
CO4	2	3	2	2	3	1	2	3	2	2			2	1	

PO GAP IDENTIFICATION

	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10			PSO1	PSO2	
Targets	1	3	3	2	3	3	2	3	3	3			1	2	
Achieved	1	2	3	2	3	2.5	2	3	2	3			2	2	
Gap	-	1	2	-	-	0.5	-	-	1	-			-	-	

Gaps in CO through CLASS TEST component: Minor gap.

Action to be taken: Additional Lecture will be taken and Revision of the units will be done to bridge this gap.

SHRI MAHAVEER COLLEGE, JAIPUR

B.Com I

Roll No. _____

Class Test

Code: **Subject Name– Business Statistics**

Max. Time: 1 hrs.   **Date:**   **Max. Marks: 20**

Q.1	CO1	PO1	"Statistics are the numerical statement of facts but all facts numerically stated are not statistics". Clarify this statement.	(5)
Q.2	CO2	PO2	Ten percent of the workers in a farm, employing a total of 2000 men , 10% earn less than Rs. 2.00 per day , 480 earn from Rs 2.00-Rs 2.24 per day, 30% earn from Rs. 2.25 -Rs. 2.49 per day, 370 earn from Rs. 2.50 -Rs. 2.74 per day, 12% earn from Rs. 2.75 -Rs. 2.99 per day and the rest earn Rs. 3.00 or more per day. What is the median wages ?	(5)
Q.3	CO1	PO1	Difference between Primary & Secondary Data.	(5)
Q.4	CO2	PO9	The Mean age of a combined group of men and women is 25 years. If the mean age of the group of men =26 and that of the group of women = 21 , find out the % men and women in the group ?	(5)

ATTAINMENT OF CO (CLASS TEST) COMPONENT

CO-GAP IDENTIFICATIONS

COs	CO1	CO2	CO3	CO4
Target	3	3	3	3
Achieved	2.5	2	2.5	3
Gap	0.5	1	0.5	0

OVERALL CO ATTAINMENT TABLE

COs	CO1	CO2	CO3	CO4
Attainment level as per rules set	**3**	**3**	**3**	**3**
Average CO attainment through internal assessment	10			

ATTAINMENT OF PO THROUGH CO (MID TERM-I) COMPONENT

ATTAINMENT OF POs & PSOs

CO	P										PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO1	1	2	3	3	2	3	2	1	2	2	2	1
CO2	2	3	2	2	3	3	2	3	2	1	1	2
CO3	3	2	1	3	2	2	3	3	2	1	1	2
CO4	2	3	2	2	3	1	2	3	2	2	2	2

PO GAP IDENTIFICATION

	P										PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	
Targets	1	3	3	2	3	3	2	3	3	3	1	2	
Achieved	1	2	3	2	3	2.5	2	3	2	3	1	2	
Gap	-	1	2	-	-	0.5	-	-	1	-			

Gaps in CO through Class test component: Minor gap.

Action to be taken: Class test will be taken and Revision of the units will be done

Course Credit:
Max. Time: 2 hrs.   **Max. Marks: 100**
 NOTE:-   **Read the guidelines given carefully.**

Course Outcomes (CO):
At the end of the course the student should be able to:
CO1: Ability to understand the basic knowledge on data collection and various statistical elementary tools.
CO2: Ability to understand the different statistical averages and to make students familiar with calculation of various types of averages and variation.
CO3: Strengthen the ability to identify the spread of values and apply the suitable measures to calculate Dispersion & Skewness.
CO4: Demonstrate the measures to calculate the mathematical measurement of correlation between two series of data concerning different types of facts.
CO5: Understand the techniques and concepts of different types of Index Numbers.

	PART - A: (All questions are compulsory) Max. Marks (10)				
		Marks	**CO**	**BL**	**PO**
Q.1	Define Statistics. Discuss its functions and importance.	20	1		1
Q.2	• Difference between Primary & Secondary Data. • In a sample survey about the tea habits of Jodhpur and Bhopal the following information was received: Bhopal: Males were 60%, total tea takers were 35 % and female non tea takers were 30%. Jodhpur:Males were 65%, Males non tea takers were 25% and female tea takers were 15% from the above information prepare a neat table.	20	1		1
Q.3	From the following data calculate **mean, median, mode** :-	20	2		2
Q.4	The median of the following incomplete distribution is 28.83. find out the missing frequency:-	20	2		3
Q.5	.Frequency distribution of monthly earnings of the workers in a factory is as follows:-	20	3		6
Q.6	What is skewness ? How will you measure it. What are the various methods of measuring skewness ? Explain	20	3		9
Q.7	Calculate the coefficient of correlation by Karl pearson's coefficient of correlation method for the ages of husband and wife:-	20	4		7

Q.3 table:

Marks	10-20	10-30	10-40	10-50	10-60	10-70	10-80	10-90
No. of Student	4	16	56	97	124	137	146	150

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Q.4 table:

Expenses	1-10	11-20	21-30	31-40	41-50
No. of Students	2	4	**?**	3	3

Q.5 table:

Profits	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	4	8	18	30	15	10	8

Find the **mean deviation and standard deviation** of their earnings.

	Age of Husband	23	27	28	28	29	30	31	33	35		36		
	Age of Wife	18	20	22	27	21	29	27	29	28		29		

Q.8	Explain the term " Regression" and its utility in economic analysis. Distinguish between regression and correlation.?	20	4		4
Q.9	What is index number? What purpose does it serve ?describe briefly the procedure for constructing an index of wholesale prices.	20	5		6
Q.10	**Interpolate** the missing figure in the following table:-	20	5		9

X	2009	2010	2011	2012	2013	2014
Y	1331	1728	2197	?	3375	4096

ATTAINMENT OF CO (Mid Term) COMPONENT

CO-GAP IDENTIFICATIONS

Overall CO Attainments for PO	CO1	CO2	CO3	CO4
Targets	3	3	3	3
Attainments	2.5	2	3	3
Gap	0.5	1	-	-

OVERALL CO ATTAINMENT TABLE

COs	CO1	CO2	CO3	CO4
Attainment level as per rules set	1	2	3	3
Average CO attainment through internal assessment				

ATTAINMENT OF PO THROUGH CO (MID TERM-I) COMPONENT

ATTAINMENT OF POs & PSOs

CO	PO										PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO1	1	2	3	1	2	3	2	1	3	2	2	1
CO2	3	2	1	3	2	1	2	3	1	2	1	2
CO3	3	2	1	2	3	1	2	3	1	2	1	2
CO4	1	2	3	1	2	3	2	3	3	1	2	2

PO GAP IDENTIFICATION

	PO											PSO		
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**		**PSO1**	**PSO2**	
Targets	1	3	3	3	3	2	3	3	3	3	1		2	
Achieved	1	2	2	3	3	2	3	2	2	3	1		2	
Gap	-	1	1	-	-	-	-	1	1	-				

Gaps in CO through Mid Term Component: Minor gap.

Action to be taken: Class test will be taken and Revision of the units will be done

SHRI MAHAVEER COLLEGE, JAIPUR

DEPARTMENT OF COMMERCE & MANAGEMENT

Course: B.Com	Year/Section: 1st	Date:
Name of Faculty: Dr. Khushboo Sogani	Name of Subject : Business Statistics	Code:

ATTAINMENT OF CO (RU) COMPONENT

| CO: Human Resource Management	
Target	3
Achieved	2.5
Gap	0.5

Gaps in CO from University of Rajasthan component: The Gap is very much minor

Action to be taken: Teaching strategy is ok and this gap can be covered by revision

COs	CO1	CO2	CO3	CO4
Target	3	2	2	1
Achieved	1.92	1.61	1.04	3
Gap	1.07	0.38	0.95	0

COs wise Attainm
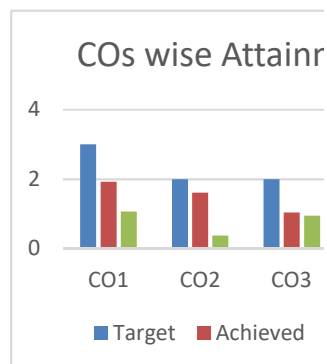
	Activities	Midterm-I	RU exam
Target	3	3	3
Achieved	2.7	2.93	2.96
Gap	0.3	0.07	0.04

Overall COs wise Attainment
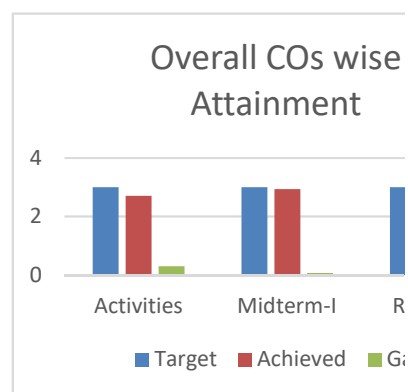
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Targets	3	2	3	2	-	-	-	-
Achieved	2.97	1.42	2.93	0.95	-	-	-	-
Gap	0.03	0.58	0.07	1.19	-	-	-	-

Attainment of Activities
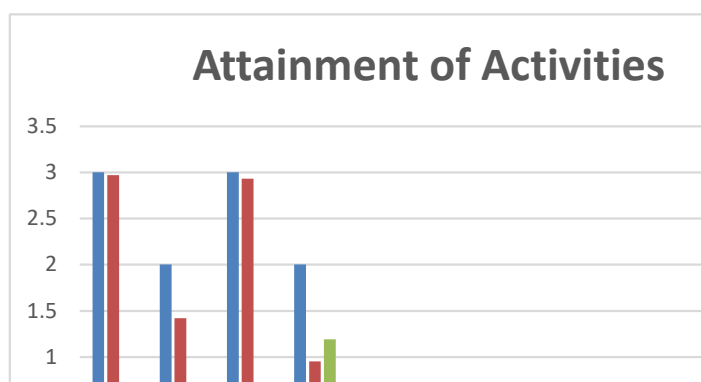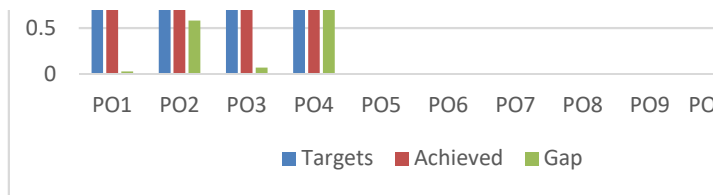
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Targets	3	2	3	2	2	3	5	4
Achieved	2.97	1.32	2.93	0.95	2	2	5	4
Gap	**0.03**	**0.68**	**0.07**	**1.04**	**0**	**1**	**0**	**0**
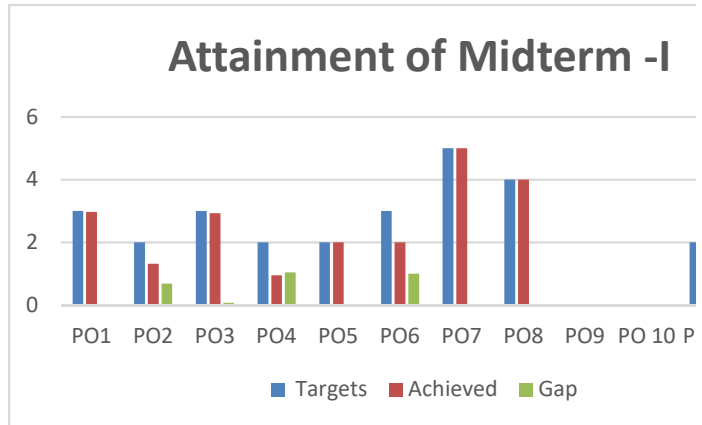
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Targets	3	2		2	1			
Achieved	2.31	1.34		0.66	0.33			
Gap	**0.93**	**0.83**		**1.25**	**0**			
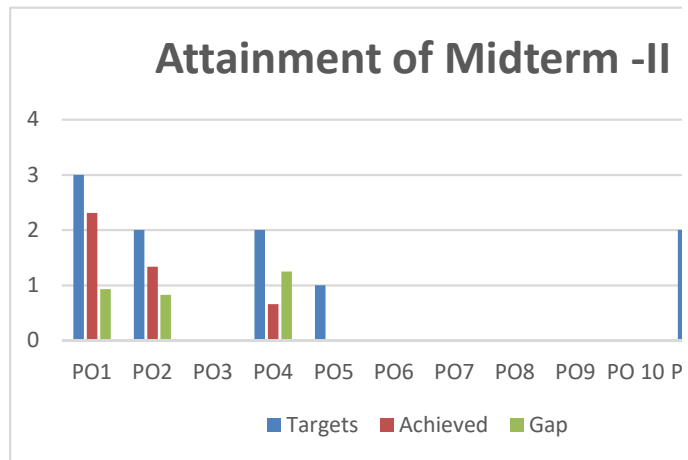
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Targets	3	2	3	2				
Achieved	2.9	1.48	2.93	0.7				
Gap	0.01	0.52	0.07	1.3				

Overall Attainment
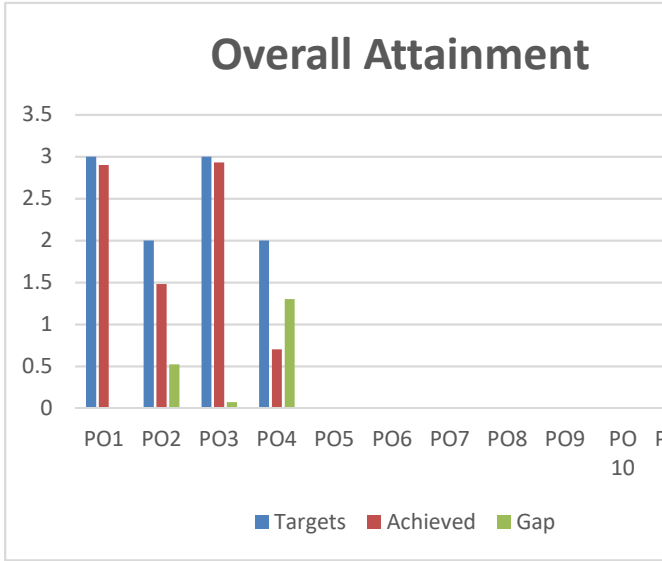
3CS4-06	PO							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Targets	3	2	3	2				
Achieved	2.8	1.5	2.9	0.8				
Gap	0.02	0.5	0.1	1.2				

Attainment o

ment

CO4

■ Gap

RU exam

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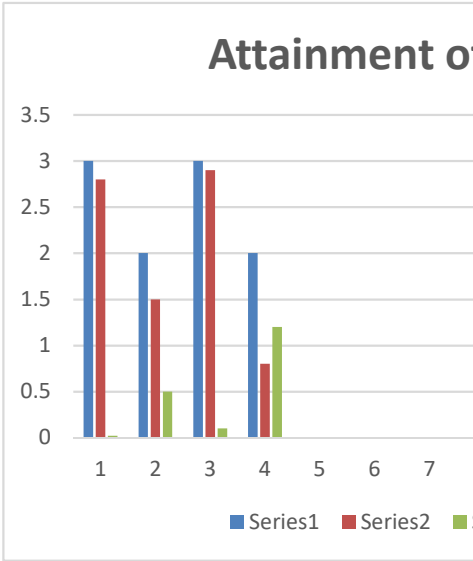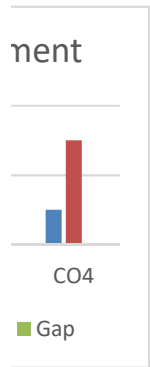
	PO9	PO 10	PSO1	PSO2
	-		2	
	-		1.5	
	-		**0.49**	
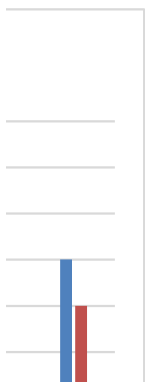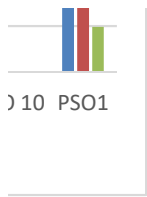
） 10 PSO1

PO9	PO 10	PSO1	PSO2
		2	
		1.36	
		0.64	

0
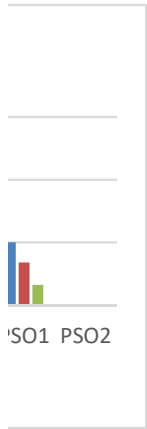
PSO1 PSO2

PO9	PO 10	PSO1	PSO2
		2	
		0.72	
		0	
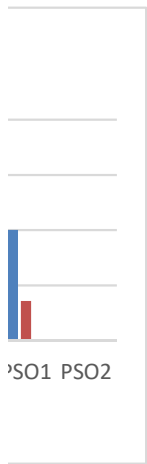
PSO1 PSO2

PO9	PO 10	PSO1	PSO2
		2	
		1.45	
		0.55	

		PSO	
PO9	PO 10	PSO1	PSO2
		2	
		1.45	
		0.55	
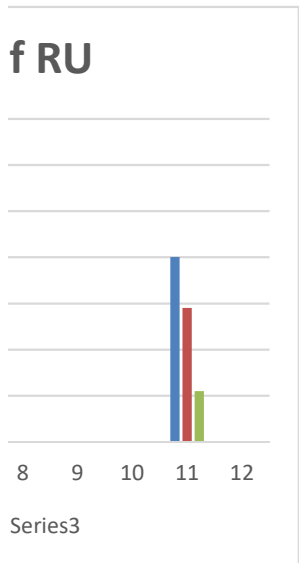
SHRI MAHAVEER COLLEGE, JAIPUR
DEPARTMENT OF COMMERCE & MANAGEMENT

Course: B.Com	**Year/Section: 1st**	**Date:**
Name of Faculty: Dr. Khushboo Sogani	**Name of Subject: Business Statistics**	**Code:**

CO:: Business Statistics	
Target	3
Achieved	2.5
Gap	0.5

ATTAINMENT OF PO THROUGH CO (OVERALL) COMPONENT

Attainment of PO through CO(OVERALL) Component														
	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10			PSO1	PSO2	
Target	1	2	3	2.5	3	3	3	2	1	3			1	2	
Achieve	1	2	3	2.5	3	3	2	2	1	2.5			1	1.5	
Gap	-	-	-	0.5	-	-	1	-	-	0.5			-	0.5	