Hall Ticket No: | | | | | | | | | | | Question Paper Code: 24MBAP101

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

MANAGEMENT PERSPECTIVES AND ORGANIZATIONAL BEHAVIOR

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	Discuss in detail the general principles of management as laid down by Henry Fayol. Is his list of principles exhaustive?	10M	1	2
	OR			
Q.1(B)	Explain the principles and contributions of F.W.Taylor to Management	10M	1	2
Q.2(A)	Explain the steps in Planning process and how does it assist the managers to overcome the problems?	10M	2	2
	OR			
Q.2(B)	"Planning is looking forward and controlling is a looking back function" justify the statement	10M	2	4
Q.3(A)	Critically evaluate the factors influencing personality?	10M	3	5
	OR			
Q.3(B)	Explain the Johari window	10M	3	2
Q.4(A)	Elaborate the various factors influencing employee perceptions in modern organization?	10M	4	5
	OR			
Q.4(B)	Explain the leadership styles in three-dimensional managerial grid	10M	4	2
Q.5(A)	Organization culture can powerfully shape an organization's long-term success. Discuss	10M	5	4
	OR			
Q.5(B)	Distinguish organizational climate vs culture	10M	5	4
Q.6	**CASE STUDY**	10M	3	4

Priyasingh continued to drum her fingers on her desk. She had a real problem and wasn't sure what to do next. She had a lot of confidence in Jack Reed, but she suspected she was about the last person in the office who did. Perhaps if she ran through the entire story again in her mind she would see the solution.

Priyasingh had been distribution manager for software company for almost twenty years. An early brush with the law and a short stay in prison had made her realize the importance of honesty and hard work. Henry Clarkston had given her a chance despite her record, and Priyasingh had made the most of it. She now was one of the most respected managers in the company. Few peoples knew her background.

Priyasingh had hired Jack Reed fresh out of prison six months ago. Priyasingh understood how Jack felt when Jack tried to explain his past and asked for another chance. Priyasingh decided to give him that chance just as Henry Clarkston had given her one. Jack eagerly accepted a job on the loading docks and could soon load a truck as fast as anyone in the crew.

Things had gone well at first. Everyone seemed to like Jack, and he made several new friends. Priyasingh had been vaguely disturbed about two months ago, however, when another dock worker reported his wallet missing. She confronted Jack about this and was reassured when Jack understood her concern and earnestly but calmly asserted his innocence. Priyasingh was especially relieved when the wallet was found a few days later.

The events of last week, however, had caused serious trouble. First, a new personnel clerk had come across records about Jack's past while updating employee files. Assuming that the information was common knowledge, the clerk had mentioned to several employees what a good thing it was to give ex-convicts like Jack a chance. The next day, someone in bookkeeping discovered some money missing from petty cash. Another worker claimed to have seen Jack in the area around the office strongbox, which was open during working hours, earlier that same day.

Most people assumed Jack was the thief. Even the worker whose wallet had been misplaced suggested that perhaps Jack had indeed stolen it but had returned it when questioned. Several employees had approached Priya singh and requested that Jack be fired. Meanwhile, when Priya singh had discussed the problem with Jack, Jack had been defensive and sullen and said little about the petty-cash situation other than to deny stealing the money.

To her dismay, Priyasingh found that rethinking the story did little to solve his problem. Should she fire Jack? The evidence, of course, was purely circumstantial, yet everybody else seemed to see things quite clearly. Priyasingh feared that if she did not fire Jack, she would lose everyone's trust and that some people might even begin to question her own motives.

Questions

(i) Explain the events in this case in terms of perception and attitudes. Does personality play a role?

(ii) What should Priyasingh do? Should she fire Jack or give him another chance.

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP102

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

MANAGERIAL ECONOMICS AND BUSINESS ENVIRONMENT

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	Discuss the role of managerial economics in today's business world? Why is it important for both consumers and firms?	10M	1	2
	OR			
Q.1(B)	Critically analyze the statement "No free lunch for anyone" and explain the role and importance of optimization in economics.	10M	1	4
Q.2(A)	Elaborate on the law of demand. Elucidate three instances where its presence is conceived to be essential	10M	2	3
	OR			
Q.2(B)	Summarize Elasticity of Supply? Explain the concept and factors on which it depends.	10M	2	2
Q.3(A)	Distinguish between short-run and long-run concepts for a firm and how they relate to different market structures.	10M	3	3
	OR			
Q.3(B)	Paraphrase Break-even point assumptions and importance.	10M	3	2
Q.4(A)	List the transmission mechanism of a monetary policy	10M	4	3
	OR			
Q.4(B)	Simplify with suitable illustration on the need for considering the business environment.	10M	4	2
Q.5(A)	List the advantages and disadvantages of Trade blocs.	10M	5	3
	OR			
Q.5(B)	Describe the stages of a business cycle	10M	5	2
Q.6	**CASE STUDY**	10M	3	4

Kodak, a dominant player in the film photography industry for much of the 20th century, was once synonymous with traditional film photography. By the 1990s, Kodak controlled a significant share of the global film market, benefiting from economies of scale, brand recognition, and extensive distribution networks. The company earned substantial profits as a near-monopoly in film photography, with limited competition from smaller players like Fujifilm.

However, technological advancements in the late 1990s and early 2000s brought about the rapid rise of digital photography. Digital cameras, initially seen as a niche product, quickly became mainstream as their quality improved and prices dropped. Digital photography eliminated the need for traditional film, significantly reducing demand for Kodak's core product.

By the mid-2000s, smartphones with built-in cameras further disrupted the market, making photography more accessible and

eliminating the need for dedicated cameras for many consumers. Despite being an early innovator in digital photography, Kodak struggled to adapt its business model to the changing technology and consumer preferences.

The transition to digital photography marked a shift from Kodak's near-monopoly in the film market to a more competitive environment where new players, such as Canon, Nikon, and later smartphone manufacturers, dominated. This technological disruption significantly reduced Kodak's market share and profitability.

Questions:

1. How does the case study highlight changes in market structures?
2. How could Kodak have responded to technological advancements to remain competitive?

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP103

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

ACCOUNTING FOR MANAGERS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	How can knowledge of accounting concepts and conventions assist Managers in managerial decision-making?	10M	1	3
	OR			
Q.1(B)	B Mart furnishes the following information: Transactions during April 2023 are as under: Journalize the following transactions and prepare Bank and Sales ledger	10M	1	3

Date	Particulars
1-4-2023	The business started with cash Rs 1,50,000.
1-4-2023	Deposited into Bank Rs 50,000
1-4-2023	Purchased goods worth Rs 12,000; paid via bank transfer.
2-4-2023	Paid office rent Rs 18,000 via online banking.
2-4-2023	Sold goods for Rs 25,000; received through cheque
3-4-2023	Paid Rs 7,000 for transportation expenses in cash.
5-4-2023	Purchased office furniture for Rs 30,000 via bank cheque.
8-4-2023	Paid salaries to staff totaling Rs 22,000 through bank transfer.
10-4-2023	Received Rs 20,000 from a customer, Vignesh Ltd., via NEFT, (Bank transfer) for goods sold.
14-4-2023	Withdrew Rs 15,000 from Bank for personal expenses
18-4-2023	Paid electricity bill Rs 5,000 via online payment.
24-4-2024	Sold goods worth of Rs 4000 in cash

Q.2(A) From the following Trial Balance of Mr. Amer, prepare the Trading and Profit & Loss account and Balance Sheet for the year ended 31-3-2020 — 10M | 2 | 4

	Debit Rs.	Credit Rs.
Drawings	5,000	
Insurance	600	
General expenses	3,000	
Debtors and Creditors	14,500	6,300
Furniture	7,500	
Plant & machinery	20,000	
Building	40,000	
Stock (1-4-2019)	5,800	
Carriage inwards	2,000	
Carriage outwards	3,200	
Salary & wages	15,000	
Power & fuel	4,000	
Productive wages	10,500	
Returns	600	500
Purchases and Sales	41,000	98,800
Cash in hand & at bank	3,900	-
Amer's capital -		71,000
	1,76,600	**1,76,600**

Adjustment:

1. Stock on 31-3-2020 was valued at Rs.7,000.
2. Goods purchased worth Rs.5,000 were received and included in closing stock but were not entered in the purchases book.
3. Prepaid insurance amounted to Rs.170.

4. Salaries and advertisement bills are outstanding to the extent of Rs.500 and Rs.1,000 respectively.
5. Building, Machinery and Furniture are to be depreciated by Rs.2,000, Rs.3,000 and Rs.1,500 respectively.

OR

Q.2(B)	"What are the major provisions of the Companies Act, 2013 related to the preparation of financial statements? How do they impact financial reporting?"	10M	2	4
Q.3(A)	What is the importance of financial statement analysis, and could you elucidate the different types of analysis involved?	10M	3	3

OR

Q.3(B)	The following information is given by a company from its books of accounts on March 31, 2017: **Particulars** **(Rs.)** Inventory 1,00,000 Total Current Assets 1,60,000 Shareholders' funds 4,00,000 13% Debentures 3,00,000 Current liabilities 1,00,000 Net Profit Before Tax 3,51,000 Cost of revenue from operations 5,00,000 (cost of goods sold) Calculate: i) Current Ratio ii) Quick Ratio iii) Debt Equity Ratio iv) Interest Coverage Ratio v) Inventory Turnover Ratio	10M	3	5
Q.4(A)	What is meant by Cost-Volume-Profit Analysis? Explain its application in managerial decision-making.	10M	4	4

OR

Q.4(B)	ABC Manufacturers Ltd. has supplied you the following information in respect of one of its products: Total fixed costs 1,80,000 Total variable costs 1,50,000 Total sales 6,00,000 Units sold 20,000 Find out (a) contribution per unit, (b) break-even point, (c) margin of safety, (d) profit, and (e) volume of sales to earn a profit of Rs.5,00,000.	10M	4	5
Q.5(A)	What is Tally? Explain its key features and how it helps in recording business trar	10M	5	4

OR

Q.5(B)	Compare and contrast the Manual Accounting System and the Computerized Accounting System. Highlight the key differences with examples.	10M	5	4
Q.6	**CASE STUDY** A garment retail dealer currently selling 24, 000 shirts annually. He supplies the following details for the year ended 31st March 2007. Selling price per shirt: Rs.800 Variable cost per shirt: Rs.600 **Fixed Cost:** Staff salaries: Rs.24, 00, 000 General Office Cost: Rs.8, 00, 000 Advertising Cost: Rs.8, 00, 000 As a Finance Manager, you are required to answer the following each part independently: a. Calculate Break Even Point and margin of safety in sales revenue and the number of shirts sold. b. Assume that 30, 000 shirts were sold during the year, and find out the net profit of the firm. c. Assuming that in the coming year, an additional staff salary of Rs.10, 00, 000 is anticipated, and the price of shirts is likely to be increased by 15%, what should be the break-even point in the number of shirts and sales?	10M	4	5

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP105

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

DESIGN THINKING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	A close friend strongly disagrees with your viewpoint on a sensitive social issue. How would you apply open-mindedness to have a constructive conversation while maintaining your relationship?	10M	1	3
	OR			
Q.1(B)	You have been given a leadership role in a project, but you are unsure about how to best utilize your strengths while managing your weaknesses. Perform a **SWOC analysis** on yourself. Explain how you would use the insights to enhance your performance as a leader.	10M	1	2
Q.2(A)	Describe the key steps in the empathy process. How do these steps help in improving relationships?	10M	2	2
	OR			
Q.2(B)	Construct a detailed research report, including components like data analysis and conclusion.	10M	2	2
Q.3(A)	Analyze how role-playing can be used as an ideation technique to develop innovative solutions. Provide an example from a real-world scenario.	10M	3	4
	OR			
Q.3(B)	Examine how can mind-mapping help in organizing creative thoughts and developing new business strategies.	10M	3	4
Q.4(A)	How can businesses achieve competitive uniqueness through innovation? Provide real-world examples.	10M	4	3
	OR			
Q.4(B)	Illustrate how leaders can encourage creative problem-solving by adopting a coaching mindset.	10M	4	3
Q.5(A)	Analyze how can entrepreneurs use the "Connecting the Dots" approach to refine their business idea.	10M	5	4
	OR			
Q.5(B)	Examine how does design thinking foster innovation and adaptability in startups.	10M	5	4
Q.6	**CASE STUDY** Airbnb, founded in 2008 by Brian Chesky, Joe Gebbia, and Nathan Blecharczyk, started as a small idea: renting out air mattresses in their apartment to make extra money. However, the company initially struggled to attract users and gain trust. By applying Design Thinking, Airbnb transformed from a failing startup into a global hospitality giant worth over $100 billion. In its early days, Airbnb faced three major challenges like low bookings, lack of trust, and unattractive listings. To understand why customers weren't booking, the Airbnb founders personally met with hosts and guests. They discovered first guests were hesitant to book because listing photos looked unprofessional and uninviting. Second, hosts didn't have the skills or equipment to take high-quality pictures. **Questions** a) Assess why was Airbnb struggling in its early days? Discuss the trust issues that prevented users from booking listings. b) How did Airbnb use the 'Empathy' phase to understand user needs? Provide real insights from their research.	10M	1	5

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP106

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

INDIAN ETHOS AND BUSINESS ETHICS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain the role of Indian Ethos in managerial practices. Give examples.	10M	1	2
	OR			
Q.1(B)	Discuss the concept of stress and analyze the significance of yoga and meditation in handling the stress.	10M	1	4
Q.2(A)	Explain the management lessons to be learnt from Mahabarata.	10M	2	2
	OR			
Q.2(B)	Elaborate how can Indian ethos contribute to improving workplace culture and employee motivation?	10M	2	4
Q.3(A)	Discuss the merits and demerits of karma in decision making and leadership. How does it impact managerial responsibilities?	10M	3	4
	OR			
Q.3(B)	Explain the concept of Gurukul system of Learning.	10M	3	2
Q.4(A)	Evaluate the role of ethical values in business and how they help in shaping corporate culture?	10M	4	5
	OR			
Q.4(B)	Define ethical codes and discuss their significance in maintaining integrity and trust within an organization.	10M	4	2
Q.5(A)	Analyze the role of ethical dilemma in finance and HR.	10M	5	4
	OR			
Q.5(B)	What are the key characteristics of ethical decision making and how do they influence managerial choices?	10M	5	3
Q.6	**CASE STUDY**	10M	5	5

Infosys, one of India's largest IT companies, has a whistleblower policy that encourages employees to report any unethical behavior or misconduct. The policy provides a safe and confidential channel for employees to report their concerns and ensures that they are protected from retaliation. Infosys's whistleblower policy is designed to promote transparency and accountability within the company. The policy is communicated to all employees through various channels, including the company's intranet and training programs. The policy also provides for an independent investigation of all reports and ensures that action is taken against anyone found guilty of misconduct.

a) What is the purpose of Infosys's whistleblower policy?
b) Do you think whistle blower policy bring more transparency and accountability. Discuss?

END

SET-1

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP104

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

BUSINESS STATISTICS FOR MANAGERS USING SPSS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	The mean annual salaries paid to 100 employees of a company was Rs. 5,000. The mean annual salaries paid to male and female employees were Rs.5,200 and Rs.4,200 respectively. Determine the percentage of males and females employed by the company.	10M	1	3
	OR			
Q.1(B)	The ages of residents of Twin Lakes Retirement Village have this frequency distribution:	10M	1	3

Class	Frequency
47–51.9	4
52–56.9	9
57–61.9	13
62–66.9	42
67–71.9	39
72–76.9	20
77–81.9	9

Estimate the modal value of the distribution.

Q.2(A)	A Study by Peter D. Hart Research Associates for the Nasdaq Stock Market revealed that 43% of all American adults are stockholders. In addition, the study determined that 75% of all American adult stockholders have some college education. Suppose 37% of all American adults have some college education. An American adult is randomly selected. **a.** What is the probability that the adult does not own stock? **b.** What is the probability that the adult owns stock and has some college education? **c.** What is the probability that the adult owns stock or has some college education?	10M	2	2
	OR			
Q.2(B)	A Gallup survey found that 65% of all financial consumers were very satisfied with their primary financial institution. Suppose that 25 financial consumers are sampled and if the Gallup survey result still holds true today, what is the probability that exactly 19 are very satisfied with their primary financial institution? Verify the same in SPSS.	10M	2	3
Q.3(A)	A student was interested in examining whether there was a relationship between the amount of time studying (in minutes) and the grade received on an exam (on a 0 to 100 scale). The amount of time spent studying **(examprep)** and the final grade on the exam **(grade)** for 12 students is reported in Figure.	10M	3	3

examprep (in minutes)	grade
450	90
65	50
120	75
240	82
100	55
490	85
200	79
400	83
55	60
40	48
280	74
180	96

Enter the data in SPSS, and perform the appropriate analyses to answer the questions below. Name the variables **examprep** and **grade**.

a. State the null and alternative hypotheses.

b. State a research question for the data.

c. Calculate the correlation coefficient between the two variables in SPSS. What is the value of the correlation?

d. Is the correlation significant? Test at $\alpha = 0.05$.

OR

Q.3(B) To determine whether any correlation exists between the price of stocks of airlines, an analyst sampled six days of activity of the stock market. Using the following prices of Delta stock and Southwest stock, compute the coefficient of correlation. Stock prices have been rounded off to the nearest tenth for ease of computation. Verify the same in SPSS. 10M 3 3

Delta	Southwest
47.6	15.1
46.3	15.4
50.6	15.9
52.6	15.6
52.4	16.4
52.7	18.1

Q.4(A) A researcher was interested in investigating the influence of eye size on attraction. Photos of two different people (who were determined by experts to be of similar attractiveness and eye size) were used in the study. The photos were manipulated prior to the study so that one of the two people in the photos had moderately larger eyes (the photos were counterbalanced so that one person had larger eyes for half of the participants and the other person had larger eyes for the other half of the participants). Eighty people viewed both photos, indicating which of the two they found more attractive. The data are presented in Figure 10M 4 3

Large eyes	Small eyes
60	20

Enter the data into SPSS and perform the appropriate analyses to answer the questions below. Name the variables' **eye size** and **frequency** (be sure to weight the cases prior to analysing the data). For **eye size**, code large eyes a "1" and small eyes a "2."

a. State the null and alternative hypotheses.

Is there a preference for one of the photos? Test at $\alpha = 0.05$.

OR

Q.4(B) A researcher investigated whether there was a relationship between the type of feeding received as a baby (classified as breastfed—yes/no) and weight in first grade (classified as overweight—yes/no). The parental report of the type of feeding provided as a baby and the body mass index (BMI) of 300 first graders was ascertained. Based on the BMI scores, the first graders were classified as either being overweight or not. The data are provided in Figure 10M 4 3

		Overweight		
		Yes	No	Total
Breastfed	Yes	16	84	100
	No	56	144	200
	Total	72	228	300

Enter the data into SPSS and perform the appropriate analyses to answer the
questions below. Name the variables **breastfed**, **overweight**, and **frequency**. For **breastfed** and **overweight**, code yes a "1" and no a "2."

A. State the null and alternative hypotheses.
B. Is there a significant relationship between the type of feeding received as a baby and weight in first grade? Test at $\alpha = 0.05$.

Q.5(A) A researcher investigated the impact of gender and cell phone usage on driving performance. Each of the 24 people (12 males and 12 females) who agreed to participate in the study drove a car on a closed course where their driving accuracy was assessed (driving accuracy was measured on a 0 to 50 scale, with higher scores indicating better driving performance). While driving on the closed course, half of the participants (6 males and 6 females) spoke on a cell phone, while the other half did not. The data are provided in Figure

10M 5 4

Gender	Cellphone	Driving score	Gender	Cellphone	Driving score
1	1	34	2	1	35
1	1	29	2	1	32
1	1	38	2	1	27
1	1	34	2	1	26
1	1	33	2	1	37
1	1	30	2	1	24
1	2	45	2	2	48
1	2	44	2	2	47
1	2	46	2	2	40
1	2	42	2	2	46
1	2	47	2	2	50
1	2	40	2	2	39

For gender, 1 = "male" and 2 = "female" For cell phone, 1 = "spoke on cell phone" and 2 = "didn't speak on cell phone."
Enter the data in SPSS and perform the appropriate analyses to answer the questions below. Name the variables gender, cellphone, and driving score.

a. State the null and alternative hypotheses for each test of interest
b. Test for main effects of gender, cell phone use, and for a gender * interaction (use for $\alpha = 0.05$ each test). Which tests, if any, are significant? Which tests, if any, are not significant?

OR

Q.5(B) A medical researcher wanted to investigate the effect of different pain medications on people suffering from migraine headaches. Twenty-one people who had recently seen a doctor for migraine headaches were randomly assigned to receive one of three pills: drug A, drug B, or a placebo. While taking the appropriate pill, each participant recorded their pain level three times a day at regular intervals for one week (pain was recorded on a 1 to 10 scale, with higher scores indicating greater pain). The average pain level over the one-week period was calculated for each participant and is reported in Figure

10M 5 4

Drug	Pain
A	5.2, 4.1, 5.8, 6.85, 4.75, 1.75, 4
B	3.05, 6.15, 5.5, 6.15, 1.85, 6.4, 3.1
C	8.15, 7.15, 6.2, 7.85, 9.45, 9.25, 6.3

Enter the data in SPSS and perform the appropriate analyses to answer

The questions below. Name the variables **drug** and **pain**.

a. State the null and alternative hypotheses.
b. Is there a significant difference in the reported pain levels between the groups? Test at $\alpha = 0.05$

Q.6	**CASE STUDY**	10M	5	5

Perform the appropriate test for the given data. This database is composed of fictitious data created to explore how the bank might reduce the number of loan defaults. The database consists of 850 past and prospective customers.

Questions:

1. How many components (*latent* variables) might be identified among the 10 *manifest* variables that are being analyzed.
2. If components are identified, how might they be interpreted?

*****END*****

SET-2

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 24MBAP104

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA I Year I Semester (R24) Regular End Semester Examinations, March - 2025

BUSINESS STATISTICS FOR MANAGERS USING SPSS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	Suppose Procter & Gamble sells about 20 million bars of soap per week, but the demand is not constant and production management would like to get a better handle on how sales are distributed over the year. Let the following sales figures given in units of million bars represent the sales of bars per week over one year. Construct a histogram to represent these data. What do you see in the graph that might be helpful to the production (and sales) people?	10M	1	3

17.1	19.6	15.4	17.4	15.0	18.5	20.6	18.4
20.0	20.9	19.3	18.2	14.7	17.1	12.2	19.9
18.7	20.4	20.3	15.5	16.8	19.1	20.4	15.4
20.3	17.5	17.0	18.3	13.6	39.8	20.7	21.3
22.5	21.4	23.4	23.1	22.8	21.4	24.0	25.2
26.3	23.9	30.6	25.2	26.2	26.9	32.8	26.3
26.6	24.3	26.2	23.8				

Create Histogram for the frequency distribution using SPSS.

OR

Q.1(B)	A local hotel offers ballroom dancing on Friday nights. A researcher observes the customers and estimates their ages. Discuss the skewness of the distribution of ages if the mean age is 51, the median age is 54, and the modal age is 59.	10M	1	3
Q.2(A)	Samreen, an owner of a big business house, is considering to purchase one of the two pumping stations. The cost of purchase of both is same but the main concern is chances of failure of the pumping stations under consideration. Each station is susceptible to two kinds of failure: pump failure and leakage. When either (or both) occur, the station must be shut down. The data at hand indicate that the following probabilities prevail: owns stock?	10M	2	4

Station	P(Pump Failure)	P(Leakage)	P(Both)
1	0.07	0.10	0
2	0.09	0.12	0.06

Recommend, which pumping station, should be purchased by Samreen. Justify your answer.

OR

Q.2(B)	Three machines A, B and C manufacture respectively 0.4,0.5 and 0.1 of the total production. The percentage of defective items produced by A, B and C is 2,4 and 1 per cent respectively. For an item chosen at random, what is the probability that it is defective?	10M	2	2

Q.3(A) A researcher investigated whether a father's level of optimism was predictive of his son's optimism as a young adult. Twenty fathers and sons who agreed to participate in the study were each administered a scale measuring their current level of optimism (the scale ranged from 10 to 50, with higher scores indicating greater optimism). The data are provided in Figure. Enter the data in SPSS and perform the appropriate analyses to answer the questions below. Name the variables **father** and **son,** respectively. 10M 3 3

a. State the null and alternative hypotheses.
b. State a research question for the data.
c. Is the predictor significant?
d. Write a regression equation for the data.

Father	40	30	25	29	20	25	46
Son	45	35	20	35	22	35	22

OR

Q.3(B) A specialist in hospital administration stated that the number of FTEs (full-time employees) in a hospital can be estimated by counting the number of beds in the hospital (a common measure of hospital size). A healthcare business researcher decided to develop a regression model to predict the number of FTEs of a hospital by the number of beds. She surveyed 12 hospitals and obtained the following data. The data are presented in sequence, according to the number of beds.(Execute the analysis in SPSS) 10M 3 3

Number of Beds	FTEs	Number of Beds	FTEs
23	69	50	138
29	95	54	178
29	102	64	156
35	118	66	184
42	126	76	176
46	125	78	225

a. State the null and alternative hypotheses.
b. State a research question for the data.
c. Is the predictor significant?
d. Write a regression equation for the data

Q.4(A) For a research project, a student wanted to test whether people who claim to be successful at picking winning teams in football are able to select "winners" at different than chance levels (i.e., picking winners more or less than 50% of the time). She identifies 10 people who advertise their ability to pick "winners" and records the percentage of correct picks for each person over an entire football season. The percentage of correct picks for the 10 "prognosticators" is presented in Figure: 10M 4 4

Prognosticator	Percentage of correct picks
1	45
2	46
3	47
4	52
5	51
6	43
7	47
8	38
9	53
10	51

Enter the data in SPSS and perform the appropriate analyses to answer the questions below (name the variable **success**).

A. State the null and alternative hypotheses.
B. Do the prognosticators pick winners at a rate different from

50%? Test at $\alpha = 0.05$.

OR

Q.4(B) Suppose that for years the mean of population 1 has been accepted to be the same as the mean of population 2, but that now population 1 is believed to have a greater mean than population 2. Letting $\alpha = 0.05$ and assuming the populations have equal variances and x is approximately normally distributed, use the following data to test this belief. — 10M — 4 — 4

Sample 1		Sample 2	
43.6	45.7	40.1	36.4
44.0	49.1	42.2	42.3
45.2	45.6	43.1	38.8
40.8	46.5	37.5	43.3
48.3	45.0	41.0	40.2

Q.5(A) A manager of LED Bulbs company wants to compare the life span of three Brands of LED bulbs available in the market. The manager collected the data of life span of the LED bulbs of brand A, B, and C measured in hu hours during three six-month period as shown below. The purpose whether the lifetimes of three brands of electric bulbs are equal or not. (in SPSS) — 10M — 5 — 4

A	B	C
21	12	11
18	14	14
12	9	19

a. State the null and alternative hypotheses.
b. Is there a significant difference in the life span between the groups? Test at $\alpha = 0.05$

OR

Q.5(B) The researcher wants to investigate whether the type of detergent and type of the water influences the whiteness of the clothes. From the given dataset, there are two detergents. Values for detergent should *be 1= Mighty Good and 2= Super Max, whereas values for water should be 1=Hot and 2 = Cold.* Perform proper test, to analyze the main effects and interaction effects on the whiteness of clothes. — 10M — 5 — 4

Q.6 **CASE STUDY** — 10M — 5 — 5

Perform the Perform appropriate test to identify the key constructs of students' attitudes toward statistics based on the responses collected from the students.
SD = Strongly Disagree (1), D = Disagree (2), N = Neither (3), A = Agree (4), SA = Strongly Agree (5).

Questions:

1. How many components (latent variables) might be identified among the 22 manifest variables that are being analyzed?
2. If components are identified, how might they be interpreted?

*****END*****