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

Question Paper Code: 22MBAP115

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

OPERATIONS RESEARCH

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)	Solve the L.P.P. graphically: $Min.Z = 3x_1 + 5x_2$ Subject to $x_1 \le 4; 2x_2 \le 6; 3x_1 + 2x_2 \le 18; x_1 + x_2 \le 9; x_1, x_2 \ge 0$	10M	1	2
	OR			
Q.1(B)	Solve the L.P.P. by Simplex method: $Max.Z = 5x_1 + 3x_2$ Subject to $x_1 + x_2 \le 2$, $5x_1 + 2x_2 \le 10$, $3x_1 + 8x_2 \le 12$, $x_1, x_2 \ge 0$	10M	1	3
Q.2(A)	Determine the optimum transportation cost for the following Transportation problem:	10M	2	4

	D1	D2	D3	D4	Availability
P1	1	2	1	4	30
P2	3	3	2	1	50
P3	4	2	5	9	20
Requirement	20	40	30	10	

OR

Q.2(B) Solve the following assignment problem to find the maximum total expected sale: 10M 2 3

	1	2	3	4
A	42	35	28	21
B	30	25	20	15
C	30	25	20	15
D	24	20	16	12

Q.3(A) Explain the terms i) Two-Person zero-sum games ii) Pay-off matrix iii) Minimax-Maximin principle and iv) Saddle point and value of the game. 10M 3 2

OR

Q.3(B) Evaluate the optimal strategies of player A & B and Determine value of the game by using dominance property. 10M 3 3

		Player B		
		B1	B2	B3
Player A	A1	1	7	2
	A2	6	2	7
	A3	5	1	6

Q.4(A) Describe the various types of replacement situations 10M 4 2

OR

Q.4(B) A bakery keeps stock of popular brand of bread. Previous experience indicates the daily demand as given below: 10M 4 4

Daily demand:	0	10	20	30	40	50
Probability:	0.01	0.2	0.15	0.5	0.12	0.02

Consider the following sequence of random numbers:
48, 78,19,51,56,77,15,14,68,8
Using above sequence, simulate the demand for the next 10 days.
(i). Find out the stock situation if the owner of the bakery decides to make 30 breads every day.
(ii). Estimate the daily average demand for the bread on the basis of simulated data.

Q.5(A) Explain the following terms: 10M 5 2
(i) Critical path (ii) Total float (iii) Free float
(iv) Interference float and (v) Independent float.

OR

Q.5(B) In a service department manned by one server, on an average 8 customers arrive every 5 minutes while the server can serve 10 customers in the same time assuming Poisson distribution for arrival and exponential distribution for service rate. Determine: 10M 5 3

a) Average number of customers in the system.
b) Average number of customers in the queue.
c) Average time a customer spends in the system.
d) Average time a customer waits before being served.

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

A small project is composed of seven activities whose time estimates in weeks are given below:

Activity	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
t_O	3	2	6	2	5	3	3	1	4
t_M	6	5	12	5	11	6	9	4	19
t_P	15	14	30	8	17	15	27	7	28

Find the critical path. What is the probability that the project will be completed before 41 days?

Where t_O is Optimistic time, t_M is Most likely time, t_P is Pessimistic time

END

'all Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP116

ADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

STRATEGIC MANAGEMENT

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 Part A or Part B only. Q.no 6 which is a case study is compulsory.

Q.No	Question	Marks	CO	BL
Q.1(A)	Discuss the nature and significance of strategic management.	10M	1	2
	OR			
Q.1(B)	Explain the steps involved in Strategic Decision-Making Process.	10M	1	2
Q.2(A)	What is GE McKinsey Model? Distinguish the difference between GE model and BCG Matrix	10M	2	3
	OR			
Q.2(B)	Explain Porter's five forces framework using a suitable example.	10M	2	3
Q.3(A)	Discuss about offensive and defensive strategies with suitable examples.	10M	3	3
	OR			
Q.3(B)	Outline the strategic options at different level of organization.	10M	3	3
Q.4(A)	Discuss resource allocation as a tool of strategy and strategic implementation.	10M	4	2
	OR			
Q.4(B)	Compare the differences between strategy formulation and its implementation?	10M	4	2
Q.5(A)	Explain any three methods/techniques used in strategic control systems, giving examples.	10M	5	3
	OR			
Q.5(B)	Discuss the different ways through which expansion into foreign markets can be achieved.	10M	5	3
Q.6	**Case Study**	10M	5	5

Southwest Airlines has long been one of the stand-out performers in the U.S. airline industry. It is famous for its low fares, which are often some 30% than lower those of its major rivals. These are balanced by an even lower cost structure, enabling it record superior profitability even in bad years as 2002, when the industry faced slumping in the wake of the September 11 terror attacks. Indeed, from 2001 to 2005, quite possibly the worst four years in the history of the airline while every other major airline lost money, Southwest made money every year and earned an ROIC of 5.8 %. Even in 2008, an awful year for airlines, Southwest made a profit and earned ROIC of 4%. Southwest operates somewhat differently from of its competitors. While operators like American Airlines and United Airlines route passengers' through hubs, Southwest Airlines flies point-to-point often through smaller airports. By competing in a way that other airlines do not, Southwest has found that it can capture enough demand to keep its planes full. Moreover, because it avoids many hubs, Southwest has experienced fewer delays. In the first eight months of 2008, Southwest planes arrived schedule 80% of the time, compared to 76% at

United and 74% at Continental. Southwest flies only one type of plane, the Boeing 737. This reduces training costs, maintenance costs, inventory costs while increasing efficiency in crew and flight scheduling. The operation is nearly with no seat assignments, which reduces cost and back-office accounting functions. There are no meals or movies in flight and the airline will not transfer baggage to other airlines, reducing the need for baggage handlers. Southwest also has high employee productivity. One-way airlines measure employee productivity is by the ratio of employees to passengers carried. According to figures from company 10-K statements, in 2008 Southwest had an employee-to-passenger of 1 to 2,400, the best in the industry. By comparison the ratio at United Airlines was 1 to 1,175, at Continental, it was 1 to 1,125. Southwest devotes enormous attention to the people it hires. On average, the company hires only 3% of those interviewed in a year. When hiring, it emphasizes teamwork and a positive attitude.

Southwest rationalizes that skills can be taught, but a positive attitude and wnngness to pitch in cannot. Southwest also creates incentives for 1ts employees to work hard. Al emplovces arc covered by a profit-sharing plan, and at icast 25% of an employee's share of the profit-sharing plan has to be invested 1n Southwest Airlines stock. This gives rise to a simple formula: the harder Cmployees work, the more profitable Southwest becomes, and the richer the employees get. The results are clear. At other airlines, one would never see a pilot nelping to check passengers onto the plane. At Southwest, pilots and flight attendants have been known to help clean the aircraft and check in passengers at the gate. They do this to turn around an aircraft as quickly as possible and get it into the air again because an aircraft does not make money while it is on the gTOund. This flexible and motivated workforce leads to higher productivity and reduces the company's need for more employees. Because Southwest flies point-to-point rather than through congested airport hubs, there is no need for dozens of gates and thousands of employees to handle banks of flights that come in and then disperse within a two-hour window, leaving the hub empty until the next flights a few hours later. The result: Southwest can operate with far fewer employees than airlines that fly through hubs.

Questions:

(a) How would you characterize the business model of Southwest Airlines? How does this differ from the business model used at many other airlines, such as United and American Airlines?

(b) Identify the resources, capabilities and distinctive competencies of South West Airlines. How do South West's resources, capabilities and distinctive competencies translate into superior financial performance?

END

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP505

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

INTERNATIONAL BUSINESS

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 about forces, dimensions and stages in Globalization.	10M	1	2
	OR			
Q.1(B)	Write a short note on (i) Theory of absolute advantage (ii) Heckscher Ohlin theory	10M	1	3
Q.2(A)	Briefly explain the Bretton woods agreement and international liquidity.	10M	2	2
	OR			
Q.2(B)	Discuss the role of the IMF and IBRD in international business.	10M	2	4
Q.3(A)	Examine the impact of the World Trade Organization (WTO)on business.	10M	3	4
	OR			
Q.3(B)	Briefly describe international strategic alliances, and major trade blocks.	10M	3	2
Q.4(A)	Define global structure? What are the ways to achieve global competitiveness?	10M	4	3
	OR			
Q.4(B)	Elucidate strategies and issues in strategic Human Resource Management?	10M	4	5
Q.5(A)	Examine 5 special economic zones in India.	10M	5	3
	OR			
Q.5(B)	Briefly explain the highlights of current foreign trade policy.	10M	5	2
Q.6	**CASE STUDY**	10M	3	5

Toshiba's Corporate Strategy

Toshiba firmly believes that a single company cannot dominate any technology or business by itself. Toshiba's approach is to develop relationships with different partners for different technologies. Strategic alliances form a key element of Toshiba's corporate strategy. They helped the company to become one of the leading players in the global electronics industry. In early 1990s Toshiba signed a co-production agreement for light bulb filaments with GE. Jack Welch, the legendary former CEO of GE, was a Toshiba's admirer. According to him, a phone call to Japan was enough to sort out problems if and when they arise, in no time. Since then, Toshiba formed various partnerships, technology licensing agreements and joint ventures. Toshiba's alliance partners include Apple Computers, Ericsson, GE, IBM, Microsoft, Motorola, National Semi Conductor, Samsung, Siemens, Sun Microsystems and Thomson. Toshiba formed an alliance with Apple Computer to develop

multimedia computer products. Apple's strength lay in software technology, while Toshiba contributed its manufacturing expertise. Toshiba created a similar tie-up with Microsoft for hand held computer systems. In semiconductors, Toshiba, IBM and Siemens came together to pool different types of skills. Toshiba was strong in etching, IBM in lithography and Siemens in engineering. The understanding among the partners was limited to research. For commercial production and marketing the partners decided to be on their own. In flash memory, Toshiba formed alliances with IBM and National Semi Conductor. Toshiba's alliance with Motorola has helped it become a world leader in the production of memory chips. The tie-up with IBM has enabled Toshiba to become a world's largest supplier of color flat panel displays for notebooks. Toshiba believes in a flexible approach because some tension is natural in business partnerships, some of which may also sour over time. Toshiba executives believe that the relationship between the company and its partner should be like friends, not like that of a married couple. Toshiba senior management is often directly involved in the management of strategic alliances. This helps in building personal equations and resolving conflicts.

Question

1. Critically evaluate Toshiba's strategy and measure the results.

*****END*****

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

Question Paper Code: 22MBAP509

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT

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)	Define Entrepreneur. What are the characteristics of successful a entrepreneur?	10M	1	2
	OR			
Q.1(B)	Discuss the problems, which are faced by women entrepreneurs in our country? Discuss the channel help in order to overcomes problems?	10M	1	2
Q.2(A)	What is Business Plan? Explain in detail about Process and its elements.	10M	2	2
	OR			
Q.2(B)	Explain the contributions made by IDBI in providing project financing.	10M	2	2
Q.3(A)	Do you agree with the view that the network of Financial institutions is a boost for entrepreneurship development in India? Justify your answer.	10M	3	3
	OR			
Q.3(B)	What is project management? What are the roles and responsibilities of a project manager?	10M	3	2
Q.4(A)	Describe about the legal requirements and promotion of a venture?	10M	4	2
	OR			
Q.4(B)	State the reasons why India must promote the Entrepreneurship in Agriculture. What are the opportunities and challenges for Agri-entrepreneurship in India?	10M	4	3
Q.5(A)	Briefly elucidate the steps in project implementation?	10M	5	2
	OR			
Q.5(B)	Elucidate the steps in project implementation in detail?	10M	5	2
Q.6	**CASE STUDY**	10M	2	5

Anita Roddick started the body shop in Brighton, England, in 1976. The company was established to sell cosmetics and lotions that were environmental friendly and were not tested on animals. The company caught the 1980s wave of the growing awareness of ecology and the company grew at a phenomenal rate. The rapid growth has not been without problems. Many competitors entered the Market after seeing the success of the body shop. The body shop, which has always relied on publicity instead of advertising, may now need to Change its promotional strategy. In addition, stockholders are not always happy with the Company's philosophy of doing good instead of concentrating profits. Finally, personnel issues have surfaced and the company lost a husband and wife team that was responsible for developing one of the body

shop's most successful product Lines. Amid all of these problems, Anita admits that running a large, Bureaucratic company is like death. The most common criticism is that the company lacked a plan for the future and had no clear sense of direction in its Marketing. By the end of the decade, the company was dramatically.
Restructured, manufacturing was divested, and Roddick took a back seat as a new CEO was brought in. However, Christmas sales in the year 2000 were poor in the early part of 2001, the company showed a decline in sales when compared to the Previous year.

Questions:

(a) In what ways is the body shop experiencing problems similar to those of May rapidly growing companies.

(b) If you were hired as a consultant which problem would you consider most Critical.

(c) In what ways could the company innovate radically? Identify some Adventurous directions the company might consider.

(d) Why are sales in the united states not increasing when sales in other Countries are improving?

(e) What should the body shop do in united states? ****

END

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

Question Paper Code: 22MBAP401

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

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)	Define Investment and Explain the online trading mechanism in detail.	10M	1	2
	OR			
Q.1(B)	Discuss about various functions of capital market in India.	10M	1	3
Q.2(A)	A bond par value is Rs. 1000.Its bear a coupon rate of 12%, maturity period is 3 Years and the required rate of return on bond is 10%.Calculate the value of bond.	10M	2	5
	OR			
Q.2(B)	What is Risk and Elaborate the various kinds of risk.	10M	2	2
Q.3(A)	Discuss and compare the main features of fundamental and technical analysis.	10M	3	3
	OR			
Q.3(B)	What is technical analysis? Elucidate the Dow theory.	10M	3	2
Q.4(A)	Explain Markowitz's portfolio theory and state its assumptions.	10M	4	2
	OR			
Q.4(B)	Consider a portfolio of four securities with the following characteristics:	10M	4	5

Security	Weightage	Alpha (αi)	Beta (βi)	Residual variance (σe^2)
1	0.2	2.0	1.2	320
2	0.3	1.7	0.8	450
3	0.1	-0.8	1.6	270
4	0.4	1.2	1.3	180

Calculate the return and risk of the portfolio under single index model, if the return on market index is 16.4% and the standard deviation of return on market index is 14%.

Q.5(A)	Illustrate Portfolio Selection, Revision and Evaluation.	10M	5	2
	OR			

Q.5(B) The Return and Standard deviation figures of five mutual funds and stock market index are given in the table. 10M 5 2

Fund	Return (%)	Standard deviation (%)	Beta
A	14	18	0.7
B	19	25	1.3
C	17	22	1.2
D	22	15	0.8
E	25	20	0.9
M(Market index)	15	20	1.0

The risk free rate of return is 8%.

You are required to measure the performance of the funds and give the suggestion which fund is better and why? with the following techniques

1. Sharpe Ratio 2. Treynor's Ratio

Q.6 **CASE STUDY** 10M 2 5

Rates of return and probabilities of three companies' i.e., X, Y & Z are given below.

Event	X		Y		Z	
	Probability	Return	Probability	Return	Probability	Return
1	0.24	-20	0.15	20	0.20	-20
2	0.35	10	0.35	40	0.24	10
3	0.45	40	0.45	30	044	40
4	0.05	80	0.05	10	0.20	80
5	0.18	24	0.08	12	0.40	90

Calculate Expected Return ,risk (Standard deviation) of three stocks and comment on case study.

END

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

Question Paper Code: 22MBAP408

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

HR ANALYTICS

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)	HR analytics is a data driven approach to manage people at work. In context to this statement how data can be used in the HR decision making process? How HR analytics is different from tradition HR?	10M	1	2
	OR			
Q.1(B)	How big data and cloud computing has revolutionized the HR decision making function. Support your answer with real life examples from the contemporary business world.	10M	1	3
Q.2(A)	Discuss Organization Intelligence Model (OIM) with proper demonstration. What is the role of OIM in HR intelligence implementation?	10M	2	2
	OR			
Q.2(B)	Explain the following HR effectiveness techniques briefly; a) Engagement rate b) Employee turnover rate	10M	2	2
Q.3(A)	How can you relate turnover rate and turnover cost with the performance of the company? Support you answer with proper illustrations.	10M	3	4
	OR			
Q.3(B)	What is the relationship between promotion rate and employee retention? Explain their significance.	10M	3	2
Q.4(A)	Discuss training participation rate and competency rate. Assume a hypothetical data to estimate the training participation rate and competency rate with possible interpretation of the estimated results.	10M	4	5
	OR			
Q.4(B)	Comment on the organization level employee performance metrics with reference to employees job satisfaction and employee retention.	10M	4	3
Q.5(A)	Elucidate the different components of CTC. How CTC is estimated for a job and how it varies across different jobs?	10M	5	4
	OR			
Q.5(B)	Comment on the legal provision of payroll systems in India and compare it with US payroll system.	10M	5	5
Q.6	**CASE STUDY**	10M	3	5

Optimizing Work Planning and Staffing in a Technology Company

Introduction:

Murthy Tech Solutions is a rapidly growing technology company that specializes in developing innovative software solutions. The company has recently secured several large projects, and the demand for its services is increasing. However, the current work planning and staffing processes are struggling to keep up with the rising workload, leading to concerns about project delays and employee burnout.

Challenges:

1. **Inadequate Work Planning:** The current work planning system is manual and lacks precision. Project timelines are frequently extended, affecting client satisfaction and profitability.
2. **Staffing Issues:** There is a mismatch between the current staff strength and the increased workload. Some teams are overloaded, while others have excess capacity.
3. **Employee Burnout:** Due to the increased workload and tight deadlines, employees are experiencing higher levels of stress and burnout. This is impacting their productivity and job satisfaction.

Proposed Solutions:

1. **Implement Project Management Software**: Introduce a robust project management software system to streamline work planning, improve task allocation, and provide real-time visibility into project progress.
2. **Conduct Workload Analysis:** Conduct a thorough workload analysis to identify teams with excess capacity and those overwhelmed with work. Adjust team sizes and redistribute tasks accordingly.
3. **Employee Wellness Programs**: Introduce employee wellness programs to address stress and burnout. This may include mental health support, flexible work hours, and initiatives promoting work-life balance.
4. **Cross-Training:** Implement cross-training programs to enhance flexibility within teams. This ensures that employees can contribute to different projects, reducing dependencies on specific individuals.

Questions:

1. How can the implementation of project management software improve work planning and overall project efficiency?
2. In what ways can employee wellness programs contribute to a healthier work environment, and how might they impact employee productivity and job satisfaction?
3. How can the company balance the need for meeting project deadlines with the importance of preventing employee burnout?

Discuss the long-term implications of optimized work planning and staffing on the company's reputation, client satisfaction, and overall profitability.

*****END*****

SET-1

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

Question Paper Code: 22MBAP429

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BUSINESS ANALYTICS AND DATA MINING

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)	What is Business Analytics? What are the Benefits of Business Analytics? Also specify various challenges need to be considered by Business Analyst.	10M	1	2
	OR			
Q.1(B)	(i). Which are the three most important What-If Analysis tools come with Excel? Explain about it.	4M	1	4
	(ii). In the below table how will you apply these tools. Explain in detail.	6M		

S. No.	Roll Number	MID-1 (20)	AGN-1 (5)	Mid-2 (20)	Int (40)	Grade Point	Letter Grade
1	20693103	23	5	26	35	10	O
2	20693104	17	5	26	34	8	A
3	20693105	19	5	20	30	8	A
4	20693106	12	5	22	30	8	A
5	20693107	27	5	25	37	10	O

Q.2(A)	i. Construct box plot for the data: 12, 5, 22, 30, 7, 36, 14, 42, 15,53, 25	4M	2	3
	ii. Differentiate the following a) Dependent & Independent variables Funnel chart and Gantt Chart c) Correlation & Causation	6M		
	OR			
Q.2(B)	Find Skewness and Kurtosis values along with insights for the give set of business data.	5M	2	4
	Sales of product 'X' :₹350, ₹450, ₹550, ₹750, ₹800, ₹850	5M		
Q.3(A)	(i). Explain various Statistical forecasting Techniques.	6M	3	2
	(ii). What does a regression model aim to predict?	4M		
	OR			
Q.3(B)		10M	3	4

Year	2011	2012	2013	2014	2015	2016	2017	2018
Price	68	78	71	80	74	66	74	82

The approximate petrol prize in '₹' is given for a period of time. By using linear regression method forecast petrol price for the year 2023 and measure performance this model.

Q.4(A)	(i). Give Data Points: A (2, 3), B (3, 5), C (5, 8), D (8, 2), E (6, 6), F (9, 7), G (7, 4). H(6,5) Suppose these points have been clustered into three	6M	4	4

Cluster 1: A, B, C Cluster 2: D, E Cluster 3: F, G, H
Calculate Inertia(Within Cluster Sum of Squares) of this clustering

(ii). Write short note on the terms a) Confusion Matrix b) AUC-ROC Curve — 4M

OR

Q.4(B) (i). Explain the differences between "Explorative Data Mining" and "Predictive Data Mining" and give one example of each. — 6M — 4 — 2

(ii). How can Data Mining help business analyst? — 4M

Q.5(A) (i). What is a Decision Tree. What are the various elements used for constructing a Decision Tree. — 6M — 5 — 2

(ii). What is the role and the use of decision trees in business analytics? — 4M

OR

Q.5(B) A person is riding a perfectly maintained car without on a clear weather through bad road with in high traffic. Will he met with an accident? answer on the basis of given dataset with the support of Bayes theorem. — 10M — 5 — 5

SNo.	Weather condition	Road condition	Traffic condition	Engine problem	Accident
1	Rain	bad	high	no	yes
2	snow	average	normal	yes	yes
3	clear	bad	light	no	no
4	clear	good	light	yes	yes
5	snow	good	normal	no	no
6	rain	average	light	no	no
7	rain	good	normal	no	no
8	snow	bad	high	no	yes
9	clear	good	high	yes	no

Q.6 **CASE STUDY** — 10M — 5 — 5

You are a data scientist working for a retail company, and your goal is to segment customers into three clusters based on their behavior using the k-Means algorithm. The company has provided you with a dataset containing the following features for a sample of customers:

Purchase Frequency: Number of purchases made by the customer in the last six months.
Time Spent Online: Average time spent by the customer on the company's online platform per visit (in minutes).
Purchase_Frequency: [5, 2, 8, 1, 9, 3, 4, 7, 2, 6]
Time_Spent_Online: [7, 15, 25, 10, 22, 18, 5, 28, 14, 8]

END

SET-2

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP429

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BUSINESS ANALYTICS AND DATA MINING

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 how to analyze the uncertainty and assumptions of variables that are used in decision-making problems. Also explain various classes of assumptions for statistical inference.	10M	1	2
	OR			
Q.1(B)	Explain in detail about various types of tools available for "what-if – Analysis" in excel with your own example.	10M	1	3
Q.2(A)	(i) As a Business Analyst when? Where? Why? You will use the following graphs: (a)Funnel Chart (b) Gantt Chart (c) Waterfall graph (ii) Differentiate following terms: (a) Correlation & Causation (b) Dependent & Independent variables	10M	2	2
	OR			
Q.2(B)	(i) List down the key differences existing among Descriptive statistics and Inferential statistics (ii) Construct box plot for the data: 15, 25, 32, 20, 17, 26, 12, 32, 35,63, 45	10M	2	2
Q.3(A)	(i). Explain different types of Regression Models. (ii). What are the applications of various Regression Models.	10M	3	2
	OR			
Q.3(B)	i. Define time-series and write a short note on the applications of time series. ii. Compute three-period moving average and forecasting errors for the following time-series. Period(t) : 1 2 3 4 5 6 Value(X_t) : 15 24 28 16 22 12	10M	3	2
Q.4(A)		10M	4	5

Height(Cms)	158	170	165	162	150	160	172	155
Weight (Kgs)	62	74	68	60	55	66	74	50
T-Shirt Size	M	L	M	M	S	M	L	S

(i) By considering the above given table, predict T-shirt size of the customer named 'Ganesh' who has height 163cm and wight 61Kg. Use K-Nearest Neighbour algorithm and Manhattan Distance.
(ii) Write short note on the following terms:
(a) Precision & Recall (b) Sensitivity and Specificity

OR

Q.4(B)	(i) Provide a comprehensive explanation of the distinct stages encompassed in the process of data mining. (ii). Write short note on the following terms: (a) Silhouette Score (b) Precision& recall	6M 4M	4	2
Q.5(A)	Provide a straightforward, step-by-step method for creating a decision tree.	10M	5	2

OR

Q.5(B)	A person is riding a perfectly maintained car without on a clear weather condition through bad road with in high traffic. Will he met with an accident? Give your answer on the basis of given dataset with the support of Bayes theorem.	10M	5	5

SNo.	Weather condition	Road condition	Traffic condition	Engine problem	Accident
1	Rain	bad	high	no	yes
2	snow	average	normal	yes	yes
3	clear	bad	light	no	no
4	clear	good	light	yes	yes
5	snow	good	normal	no	no
6	rain	average	light	no	no
7	rain	good	normal	no	no
8	snow	bad	high	no	yes
9	clear	good	high	yes	no

Q.6	**CASE STUDY**	10M	4	5

As a business analyst in a bank what will you recommend to the Bank branch Manager about housing loan for a young person with Good credit rating and no house. Use below given dataset and apply CART algorithm with GINI index as splitting criteria.

Age	House	Credit	Loan Approved
Young	No	Fair	Yes
Young	No	Good	No
Young	Yes	Fair	Yes
Young	No	Excellent	No
Middle	No	Excellent	No
Middle	Yes	Good	Yes
Middle	Yes	Good	Yes
Old	Yes	Excellent	No
Old	No	Fair	No

END

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

Question Paper Code: 22MBAP402

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

FINANACIAL DERIVATIVES

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 term "Financial Derivatives". Explain different types of derivatives.	10M	1	2
	OR			
Q.1(B)	"Options and Futures are Zero-Sum-Game". Explain this statement.	10M	1	3
Q.2(A)	The payoff for a person who buys a futures contract is similar to the payoff for a person who holds an asset. Discuss with suitable example.	10M	2	3
	OR			
Q.2(B)	Assume that an investor enters into a six-month forward contract on a non-dividend paying stock when the stock price is Rs. 50 and risk free rate of interest is 10% p.a. Compute forward price.	10M	2	4
Q.3(A)	Explain the Black-Scholes model for the valuation of European call option. How is this different from valuation of put option?	10M	3	2
	OR			
Q.3(B)	With the help of the following data in a European call option, calculate the value of call by applying B-S model. Stock price = Rs. 90. Months to expiration = 3 months S.D. (σ) of stock = 0.35 Risk-free interest = 10% p.a. Exercise price = Rs. 96	10M	3	4
Q.4(A)	Write notes on the following: (a) Putable swap (b) Debt-equity swap (c) Plain vanilla swap	10M	4	2
	OR			
Q.4(B)	Microsoft company and Intel companies enter in to swap agreement for three years initiated on march 5th of 2018. Microsoft agrees to pay to initial on interest rate of 5 percent Per annum on Principal of Rs. 100 million (Fixed rate of interest) and in return initial agrees to pay Microsoft the six months LIBOR on the same notional Principal. Microsoft Fixed rate payee, Intel is the floating rate payer. The floating rate expected to revalue as below for every semiannual period. On March 15th 2020 4.20% On September 15th 2020 4.80% On March 15th 2021 5.30% On September 15th 2021 5.50% On March 15th 2022 5.60% On September 15th 2022 5.90% The calculation of Floating rate is at the beginnings of semiannual period. 1. Show the Swap agreement between the two companies. 2. Calculate net income or cash flows receivable or payable by Microsoft and Intel.	10M	4	4
Q.5(A)	Write a short notes on: a) Hazard rates b) credit spreads.	10M	5	2

OR

Q.5(B)	Define Credit Derivatives and its types.	10M	5	2

CASE STUDY 10M 1 5

Q.6 Maria Gilbert is a principal in the firm of Orion Financial Management. For twenty years she was chief investment officer with Reliance Investments, the pension management arm of the Second National Bank of South Bend, Indiana. She left the bank in May 1995 in an attempt to turn her expertise into greater personal rewards Two portfolios under management for medium-sized pension funds were on the top of her current agenda. The first portfolio was an index fund representing a cross section of the S & 500 stocks. This portfolio had been established as a core portfolio for the South Bend Firefighters, currently $10 million. The second portfolio was an actively managed fund for the Ryan Country Public Employees Retirement Fund, which aggregated $2.75 million. The firefighters portfolio was put in a cross section of S & P 500 stocks on December 23, 1995, when the S & P 500 Stock Index was at 500. One year later, on December 20, 1996, the S & P 500 Index closed at 595. On the same day the S & P 500 March/1997 futures contract closed at 600. The March/600 call on the S & P 500 Index carried a premium of 18.75 points, and the March/600 put was at 8.50. The Ryan Country fund was allocated as follows: cash equivalents, 9 percent; fixed income securities, 36 percent; equities, 55 percent, Treasury-bond futures were priced at 95. On December 20,1996, Maria arrived at the office determined to adjust these two portfolios. However, she had mixed feelings about the stock market. On the one hand, she believed the market might continue its advance from an S & P 500 level of 595 to an index level of 640 during the next three months if corporate profits continued there upward surge. On the other hand, she worried that a downward correction could take the market to 545 if interest rates moved sharply higher as some were predicting. After pondering her options she decided to look more closely at alternative strategies for both funds, ignoring taxes and transaction costs for simplification of her task.

Question

Suppose Gilbert thought the stock market would weaken and she wanted to lighten, but not eliminate her equity position and increase the fixed income part of the Ryan portfolio. Indicate specific actions she could take in the futures markets to shift the allocation of the Ryan portfolio to Zero cash, $1.6 million fixed-income, and $1.15 million equities.

A stock is expected to pay a dividend of $1 per share in 2 months and in 5 months. The stock price is $50, and the risk-free rate of interest is 8% per annum with continuous compounding for all maturities. An investor has just taken a short position in a 6-month forward contract on the stock.

(a) What are the forward price and the initial value of the forward contract?

(b) Three months later, the price of the stock is $48 and the risk-free rate of interest is still 8% per annum. What are the forward price and the value of the short position in the forward contract?

END

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP409

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

INDUSTRIAL RELATIONS AND LABER CODES

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)	Examine the Duties of Employer regarding the upkeep of health, safety, and working conditions as outlined in the Occupational Safety, Health, and Working Conditions Code of 2020.	10M	1	3
	OR			
Q.1(B)	Elaborate on the specific provisions designed for contract labor and inter-state migrant workers as stipulated in the Occupational Safety, Health, and Working Conditions Code of 2020.	10M	1	3
Q.2(A)	Formulate a framework for enhancing social security measures for unorganized workers, gig workers, and platform workers, integrating the Code on Social Security, 2020, with contemporary employment trends.	10M	2	4
	OR			
Q.2(B)	Evaluate the role of the Employees State Insurance Corporation in the context of the Code on Social Security, 2020, and assess its impact on healthcare access for employees.	10M	2	4
Q.3(A)	Discuss the procedures for fixing and revising the minimum wages for the workers.	10M	3	2
	OR			
Q.3(B)	Examine how do the qualifications and skills essential for Inspector-Cum-Facilitator to enhance effectiveness in overseeing and facilitating compliance in various sectors?	10M	3	2
Q.4(A)	Discuss the process of collective bargaining. How does effective collective bargaining enhance workplace relationships and productivity?	10M	4	2
	OR			
Q.4(B)	Analyze the components of Industrial Relations as outlined in The Industrial Relations Code, 2020.	10M	4	3
Q.5(A)	Analyze the mechanisms defined in The Industrial Relations Code, contribute to dispute resolution and workplace harmony?	10M	5	3
	OR			
Q.5(B)	Assess how the provisions related to lay-off, retrenchment, and closure in The Industrial Relations Code, 2020 balance the needs of employers and the job security of workers?	10M	5	4

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

The workers of a soft drinks company are stressing for a hike in salary, bonus and other incentives. But the entry of multinational companies has increased the competition, resulting in the reduction in the company's profit and turnover. The company is also not able to agree to the terms and conditions of the works due to the existing problems. Besides, they decided to stop some of the labour welfare works.

Question:

1. Discuss the different ways of solving the problems.
2. Offer your suggestions by referring to labour legislations.

*****END*****

SET-1

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

Question Paper Code: 22MBAP430

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

DATA VISUALIZATION 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)	Explain the key concepts in the introduction to data visualization, emphasizing how mapping data onto aesthetics, coordinate systems, and axes contribute to effective communication of information.	10M	1	2
	OR			
Q.1(B)	Analyse the process of creating a simple bar chart on sales forecasts using Tableau, highlighting the significance of selecting appropriate data types and utilizing data analytics features to enhance the visual representation of the information.	10M	1	4
Q.2(A)	Describe how color scales contribute to encoding both quantitative and qualitative information, offering viewers a rapid and intuitive comprehension of patterns, trends, and variations within the data.	10M	2	2
	OR			
Q.2(B)	Compare the features and advantages of the directory of visualizations, focusing on how it assists users in selecting appropriate visualizations for different data scenarios.	10M	2	4
Q.3(A)	List the key considerations and techniques for visualizing many distributions at once, emphasizing the benefits and challenges associated with this approach.	10M	3	2
	OR			
Q.3(B)	Identify the methods and best practices for effectively visualizing proportions in data, highlighting the visual elements that aid in conveying proportional relationships.	10M	3	3
Q.4(A)	How can you utilize the principle of proportional link to effectively convey relationships between variables in data visualization, and what impact does this principle have on enhancing the viewer's understanding?	10M	4	3
	OR			
Q.4(B)	Evaluate the common pitfalls associated with the use of color in data visualization, emphasizing how redundant coding and inappropriate color choices can negatively impact the interpretation of visualized information.	10M	4	4
Q.5(A)	What are some of the most commonly used image formats, and recall their recall their characteristics and applications in digital media?	10M	5	2
	OR			
Q.5(B)	Develop a dashboard for the COVID-19 dataset using Tableau and Power BI, integrating multiple visual elements to provide a comprehensive view of the data.	10M	5	2

Q.6	**CASE STUDY**	10M	4	4

Predictive Crime Analytics Dashboard Creation

Scenario: A law enforcement agency aims to enhance crime prediction capabilities for better resource allocation and strategic planning.

Task: Utilize Tableau and Power BI to create a predictive analytics dashboard for the crime information dataset, facilitating the identification of areas with a higher likelihood of increased crime cases.

*****END*****

SET-2

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP430

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

DATA VISUALIZATION 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)	Explain the significance of data analytics in Tableau and its role in deriving meaningful insights from sales forecast data presented in the bar chart.	10M	1	2
	OR			
Q.1(B)	Determine the steps involved in installing Tableau and discuss the different data types available within the Tableau platform, outlining their respective applications and advantages.	10M	1	3
Q.2(A)	Discuss the methods for visualizing amounts and distributions in data, specifically exploring the use of histograms, density plots, empirical cumulative distributions, and q-q plots in providing insights into dataset characteristics	10M	2	2
	OR			
Q.2(B)	Elaborate on the installation process of Microsoft Power BI, highlighting key steps and considerations for users looking to implement this tool for data visualization.	10M	2	3
Q.3(A)	Discuss the various approaches to visualizing associations in datasets, including the types of plots and graphs that are most suitable for revealing patterns and connections between variables.	10M	3	2
	OR			
Q.3(B)	Differentiate between visualizing time series and visualizing trends, outlining the distinctive features and applications of each technique in data visualization.	10M	3	4
Q.4(A)	Critically assess the importance of balancing data and context in the creation of multi-panel figures, titles, captions, and tables within a visualization, highlighting the potential consequences of an imbalance in this regard.	10M	4	4
	OR			
Q.4(B)	Design a data visualization strategy using Tableau and Power BI to predict higher numbers of crime cases based on the crime information dataset, considering the appropriate graphical elements and techniques to effectively communicate insights.	10M	4	5
Q.5(A)	Analyze the techniques and considerations involved in effective story telling and making a point through data visualization. How does the structure contribute to conveying insights in a compelling manner?	10M	5	3

OR

Q.5(B)	Develop a dashboard for the COVID-19 dataset using Tableau and Power BI, integrating multiple visual elements to provide a comprehensive view of the data.	10M	5	5
Q.6	**CASE STUDY**	10M	2	5

Housing Price Distribution Visualization for California

Scenario: A real estate agency seeks insights into the distribution of housing prices in California to better understand market trends and client preferences.

Task: Utilize Tableau and Power BI to design a histogram illustrating the distribution of housing prices in the California housing dataset, providing a visual representation that aids in identifying pricing patterns and market dynamics.

END

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

Question Paper Code: 22MBAP403

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

CORPORATE TAX PLANNING

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 about the Residential Status of a company.	10M	1	2
	OR			
Q.1(B)	Discuss about Incomes exempt from Tax applicable to Corporate Assessee?	10M	1	2
Q.2(A)	Explain the Deduction in respect of donations for scientific research and rural development [Section 80GGA]	10M	2	2
	OR			
Q.2(B)	Sahasra textiles company Ltd Provides the following details related to Capital Assets of the Company. Company sold a house property on 25th March-2023 for Rs 25,00,000.It was bought 22nd April-2017with Rs.12,00,000.In the month of September-2019,the company spent Rs.200,000 for improvement of an asset, company paid 1% commission on selling price. Company Received Rs.15,00,000 through sale of TCS Shares on 14th march,2022. It was bought in the year September,2014. Paid 1% commission on sale value. Company Sold Jewellery on 25th February 2023 for Rs.40,00,000. It was bough on 15th October,2015 with Rs.18,50,000. Paid 1.5% commission on sale value. You are required to compute the income from capital gains on sale of capital assets for the previous year 2022-23. In the assessment year 2023-2024	10M	2	5
Q.3(A)	Illustrate in detail the provision of set-off and carry forward of losses.	10M	3	4
	OR			
Q.3(B)	The Following details extracted from Blue star group of Companies. 1. Income From Business Steel – Rs. 6,35,000 Hardware – Rs. 2,67,500 Cement – Rs.(3,95,500) 2. Income From Capital Assets Short Term Capital Gains on Sale of Jewellery – Rs. 1,95,000 Short Term Capital Losses on sale of Shares – Rs.(1,35,000) Long Term Capital Gains on Sale of Shares – Rs. 3,95,750 Long Term Capital Losses on Sale of Shares – Rs. (4,75,000) 3. Income From Other Sources Interest on fixed deposits – Rs.1,75,000 Card games – Rs.45,000 Income From Maintenance of Horse Races – Rs.(1,05,000) 4. Income from Speculation Business – Rs. 75,000 You are required to compute the Gross Income of Blue star Co.ltd for the Assessment year 2022-23 and taken Into Consideration	10M	3	5

the Following

- Brought down Business 1 loss from Assessment year 2020-21 Rs.75,000
- Brought down Long term capital Loss from Assessment year 2020-21 Rs.15, 000.

Q.4(A)	Explain about the Strategies of Tax avoidance.	10M	4	2
	OR			
Q.4(B)	Discuss the Corporate Tax Planning Strategies in respect of Capital Structure?	10M	4	2
Q.5(A)	Explain the Corporate Tax Planning in respect of Mergers and Amalgamations.	10M	5	2
	OR			
Q.5(B)	Examine the Corporate Tax planning in respect of foreign collaborations.	10M	5	2
Q.6	**CASE STUDY**	10M	2	5

The following profit and loss account belongs to Sri Durga company ltd at the end of 31st march 2023.

Particulars	Amount	Particulars	Amount
To Salaries	1,20,000	By Gross profit	10,65,000
To Printing & stationery	40,000	By Gift from	2,700
To Advertisement	1,20,000	friends	
To Repairs	60,000	By Interest on	
To Fire insurance premium	30,000	Bank deposits	30,000
To Life insurance premium	60,000		
To Provision for bad debts	5,000		
To Provision for income tax	4,000		
To Travelling charges	30,000		
To Depreciation on plant and machinery	60,000		
To Depreciation on land and buildings	50,000		
To Electricity bill	70,000		
To Mobile charges	30,000		
To Internet services	50,000		1097700
To Baddebts	10,000		
To Net Profit	358,700		
	1097700		

Additional information

1. In the repair expenditure80% for office Buildings
2. Depreciation on plant and machinery allowed on 40,000
3. Depreciation on furniture disallowed by income tax authority Rs.20,000
4. In the electricity bill Rs. 15,000 related to Company CEO guest house.
5. In Bad debts 50% accepted by Income tax authorities.
6. You are required to compute the Income from Business for the previous year 2022-2023

END

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

Question Paper Code: 22MBAP410

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

HUMAN RESOURCE PLANNING

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)	Analyze the process of human resource planning in the organization?	10M	1	4
	OR			
Q.1(B)	Explain the factors that influence Human resource planning in changing context.	10M	1	2
Q.2(A)	Write detailed notes on tools and techniques of forecasting demand.	10M	2	2
	OR			
Q.2(B)	Analyze the procedure of Work measurement in detail.	10M	2	4
Q.3(A)	Discuss in detail about the sources of HR supply?	10M	3	2
	OR			
Q.3(B)	Analyze the Staffing and Mapping table?	10M	3	3
Q.4(A)	Explain the process of recruitment with a neat diagram.	10M	4	2
	OR			
Q.4(B)	Write about the following: (i) Lay off (ii) Retrenchment (iii) VRS	10M	4	2
Q.5(A)	Explain the barriers of Human Resource Planning in detail.	10M	5	2
	OR			
Q.5(B)	Discuss the various implications of HR audit in detail.	10M	5	2
Q.6	**CASE STUDY**	10M	4	5

Integrated solution was a growing organization in telecom industry. It's Phenomenal growth in the recent led to a huge man power requirements in the company . Recruiting was a challenging task for HR department as there was a dearth of talent in human resource in the market with too many companies vying for the same talent, The meeting was called and CEO invited suggestion about the innovative idea of recruiting.
It was then decided that team of member from HR department will study the way employees in organization sought for new opportunities in the job market. The team studied the various factors to understand how passive job seeker can be attracted and concluded that person possessing a job would approach another organization if invited by the friends. Based on the suggestion, integrated solution initiated a new scheme called INVITE a friend, where by any candidate gets selected, an employee who referred would be rewarded, Around 40 -50 % of the employees got recruited through this scheme. The company also used hired in-house head hunter who were completely devoted to the process

of hiring talented people which reduced the cycle time involved during the hiring process Integrated solution linked their website to the sites which are likely visited by the more number of the candidates which helped to attract passive job seeker Thus the innovative way helped the firms to attract nearly top 10 percent of the talent in the industry. They also helped reduce the cost involved in the hiring process to a substantial extent. Soon the company gains a strong competitive edge over its rivals in the industry through the strength of its human capital. Reinforced the belief that if an organization manages to get the best talent present in the industry and succeed in retaining it, then it would remain the leader in the Industry, merely on the strength of its human resources.

Question:

1. Integrated solution initiated a number of steps to attract the top talents in the industry as discussed in the case. Briefly describe the factor that are to be considered by the company before framing its recruitment policy.

2. Evaluate the success of recruitment process initiated by the integrated solution.

*****END*****

SET-1

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

Question Paper Code: 22MBAP431

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BUSINESS FORECASTING

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)	Analyze the significance of qualitative and quantitative methods in Business Forecasting.	10M	1	4
	OR			
Q.1(B)	Examine the steps in the Forecasting Process.	10M	1	4
Q.2(A)	Differentiate Partial Correlation and Autocorrelation with examples.	10M	2	4
	OR			
Q.2(B)	Analyze the Multiple Regression between Quantity Sold (Output) and Advertising for the given dataset **Q 2B**. Find the output using E-views and forecast the values for the period 2016-17 to 2023-24.	10M	2	4
Q.3(A)	Apply the Box-Jenkins model for the given data set **Q 3A** and Forecast the GDP growth rate for the period 2024 to 2026.	10M	3	3
	OR			
Q.3(B)	Illustrate the different types of Data Smoothing Trends in detail.	10M	3	3
Q.4(A)	Discuss the methods of determining the Non-linear trends.	10M	4	2
	OR			
Q.4(B)	Explain about short term and long term forecasting in detail.	10M	4	2
Q.5(A)	Analyze the Quantity to be sold influencing with price and advertising by Using VAR Model to the dataset **Q.5A**.	10M	5	4
	OR			
Q.5(B)	Examine the role of VAR model in macro economic forecasting.	10M	5	4
Q.6	**CASE STUDY** Evaluate an ARIMA method for the given Question 6 dataset and interpret your results in E-views.	10M	3	5

END

SET-2

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

Question Paper Code: 22MBAP431

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BUSINESS FORECASTING

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)	Outline a brief description and utility of the e-Views software in forecasting.	10M	1	2
	OR			
Q.1(B)	Describe the types and sources of data in making forecasting decisions.	10M	1	2
Q.2(A)	Differentiate Homoscedasticity and Heteroscedasticity with examples.	10M	2	4
	OR			
Q.2(B)	Analyze the auto correlation for both Nifty and Dr.Reddy's price for the given dataset of **Q.2B** and interpret your results in E-views.	10M	2	4
Q.3(A)	Illustrate Univariate Time Series Modelling in forecasting in detail.	10M	3	3
	OR			
Q.3(B)	Differentiate the ARMA and ARIMA Models.	10M	3	4
Q.4(A)	How logistic function does help to model Saturation Curve? Analyze.	10M	4	4
	OR			
Q.4(B)	Examine the errors that occur in combined forecasts in detail.	10M	4	4
Q.5(A)	Assess the characteristics of a VAR Model in better forecasting decisions .	10M	5	5
	OR			
Q.5(B)	Evaluate the Nifty price influencing with Bajaj and TCS price by Using VAR model to the dataset **Q.5B**.	10M	5	5
Q.6	**CASE STUDY** Evaluate an ARIMA method for the given Question 6 dataset and interpret your results in E-views.	10M	3	5

END

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

Question Paper Code: 22MBAP419

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

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 importance of Supply chain management	10M	1	2
	OR			
Q.1(B)	Discover the various phases in a Supply chain	10M	1	4
Q.2(A)	Illustrate the various factors influencing distribution network design	10M	2	2
	OR			
Q.2(B)	Define the role of E-Business technology in distribution network of Supply chain	10M	2	2
Q.3(A)	Determine the role of Information technology in forecasting the Supply chain.	10M	3	5
	OR			
Q.3(B)	Explain the various stages of Supplier risk management in forecasting	10M	3	2
Q.4(A)	Explain the Role of safety inventory in Supply chain management.	10M	4	2
	OR			
Q.4(B)	Interpret the role of economies of scale and quantity discount in Supply chain	10M	4	2
Q.5(A)	Identify the role of transportation in Supply chain	10M	5	3
	OR			
Q.5(B)	Define Supplier scoring and Explain the various stages involved in the supplier performance assessment.	10M	5	3
Q.6	**CASE STUDY**	10M	5	5

Sleepwell Limited is the largest mattress manufacturer in India and an ISO9001certified company, generating sales of Rs 100 crore. Sleepwell holds approximately a 5% market share in the branded rubberized coir mattress market. The company experienced rapid growth in sales and market share in the mid-nineties. However, the sales and market share stagnated, and profitability declined. In 1998, Sleepwell became concerned about increased competition from other mattress brands, both branded and unbranded, and the challenges of offering a greater variety to customers.

Currently, Sleepwell offers 126 configurations of mattresses, with plans for an additional 75 configurations after entering into a joint venture with DuPont. The managing director of the firm is worried that the current system of operations and supply chain may not be efficient enough to handle the growing demands in an increasingly competitive market. There is also concern about the extended inventory lead times compared to more efficient European firms. Managing a diverse range of

products is complicated by the unorganized nature of the furniture business in the country.

Questions:

1. Evaluate performance of Sleepwell supply chain. What are the causes of problems faced at Sleepwell?
2. What is your evaluation of company's planning processes?
3. What specific actions do you recommend to Narendra Kudvato address the supply chain performance problems?

END

SET-1

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

Question Paper Code: 22MBAP433

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BISINESS DECISIONS USING DATA

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)	(i) What is the significance of data mining? (ii) Data mining as a step in the process of knowledge discovery. Justify.	3M 7M	1 1	3
	OR			
Q.1(B)	Explain how Similarity and Dissimilarity measures applied in data mining.	10M	1	2
Q.2(A)	Discuss the Construction of decision tree in business decision making.	10M	2	2
	OR			
Q.2(B)	Distinguish between Supervised and Unsupervised learning with examples.	10M	2	3
Q.3(A)	Discuss the applications of classifier to business problems with an example.	10M	3	3
	OR			
Q.3(B)	What is Rule based classification and explain how it is applied in decision making.	10M	3	2
Q.4(A)	Define clustering and explain the significance of K-means clustering in business decision making.	10M	4	4
	OR			
Q.4(B)	(i) Explain the concept of factor analysis (ii) Discuss any two types of factor analysis techniques	3M 7M	4 4	2
Q.5(A)	(i) Discuss the concept of multiple regression analysis (ii) List out the assumptions to perform multiple regression analysis	4M 6M	5 5	2
	OR			
Q.5(B)	(i) Write a short note on statistical inference (ii) Explain the procedure for statistical inference for multiple regression	3M 7M	5 5	2
Q.6	**CASE STUDY** Illustrate in detail the applications of decision tree in Business decision making	10M	2	5

END

SET-2

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

Question Paper Code: 22MBAP433

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BISINESS DECISIONS USING DATA

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)	Illustrate the significance of Data Processing and Data Cleaning.	10M	1	2
	OR			
Q.1(B)	Explain data visualization and discuss any three objectives of data visualization in detail.	10M	1	2
Q.2(A)	Discuss how construction of decision tree classifier helps in decision making	10M	2	3
	OR			
Q.2(B)	Explain any two applications of decision tree in the domain of management with examples of your choice	10M	2	2
Q.3(A)	Illustrate the general approach to solve a classification problem	10M	3	3
	OR			
Q.3(B)	Explain nearest-neighbor classifier algorithm and its application in business decision making	10M	3	3
Q.4(A)	Define clustering and explain the significance of Bayesian classifier in business decision making with the suitable example.	10M	4	3
	OR			
Q.4(B)	(i) Explain multidimensional scaling. (ii) Illustrate any example of your choice on multidimensional scaling for decision making.	3M 7M	4	2
Q.5(A)	Distinguish between linear regression and multiple regression analysis with an example of each of your choice.	10M	5	3
	OR			
Q.5(B)	Illustrate Predictive modelling with examples.	10M	5	4
Q.6	**CASE STUDY** Analyze the anomaly detection in credit card operations in classifications	10M	2	5

END

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

Question Paper Code: 22MBAP420

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

BRAND MANAGEMENT

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 functions and significance of branding with suitable examples.	10M	1	2
	OR			
Q.1(B)	Discuss the various challenges and opportunities involved in branding for Rural Markets.	10M	1	2
Q.2(A)	Examine the option and tactics required for successful brand elements.	10M	2	3
	OR			
Q.2(B)	Analyse the importance of Uniqueness and strength of association in shaping brand image.	10M	2	3
Q.3(A)	Brand equity can be measured through various ways. Discuss various price based method used in measuring brand equity.	10M	3	3
	OR			
Q.3(B)	Illustrate the similarities & differences between "product-focused organization" and "market-focused organization".	10M	3	4
Q.4(A)	Analyse the criteria required for the successful Integrated Marketing Communication program.	10M	4	3
	OR			
Q.4(B)	List out and explain the steps involved in measuring brand performance.	10M	4	2
Q.5(A)	Describe various qualitative technique used in measuring brand performance.	10M	5	2
	OR			
Q.5(B)	Discuss the role of brand ambassadors and celebrities in brand image.	10M	5	2
Q.6	**CASE STUDY** Yet even a well-researched and manufactured product can lead to a brand disaster. An already classic example is the introduction of Persil Power by Unilever in 1994. The competition between the two leading companies within the fabric washing sector, Unilever and Procter & Gamble, was intense and led to a quest for more and more and more innovative brand offerings. Unilever introduced this washing powder as a revolution in stain removal. However, when the product hit the market place in May 1994, it proved so powerful that under certain conditions it didn't only destroy stains, it destroyed clothes as well. For the first few weeks though, Persil Power proved successful. Indeed, for a brief period, the product overtook its main rival Ariel. The only problem was, the brand's key asset – a patented manganese component called an 'accelerator' which was put in the powder – also proved to be its fatal flaw. Unilever had thoroughly researched and	10M	3	4

tested the new product before launching it with a lot of fanfare. Unfortunately Unilever had failed to test the product at temperatures other than those recommended to consumers. Used at higher temperatures, Persil Power not only removed stains effectively but also destroyed fabrics efficiently. Consumers soon understood that the product could damage materials at high temperatures, and that if they bought Persil Power they risked destroying their clothes. As soon as stories of disintegrated clothes started to emerge, Procter & Gamble ploughed their resources into an accusation-laden publicity campaign which not only damaged Persil Power, but also had implications for Unilever itself. Procter and Gamble, who got wind of this product fault, were quick to advertise the destructive force of Persil Power with ads showing shredded pieces of clothing that had been washed in Persil Power. Sales of Persil Power collapsed, and it took Persil several years to regain ground lost to Procter and Gamble's Ariel. Even when on the face of it a product or service is not shoddy, the experience can still fall well below expectation.

Questions:

1. Highlight the main issues of the case.
2. Propose an amicable solution.
3. What are the lessons from Persil Power? Explain with reference to the case.

*****END*****

SET-1

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

Question Paper Code: 22MBAP434

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

PREDICTIVE ANALYSIS AND MODELING

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 uses and tools of Predictive Analytics in detail.	10M	1	2
	OR			
Q.1(B)	How can predictive analytics be used in marketing to identify potential customers and target them with personalized advertisements?	10M	1	2
Q.2(A)	Explain the difference between simple random sampling, systematic sampling, and stratified random sampling. When might each be most appropriate?	10M	2	2
	OR			
Q.2(B)	Discuss the different types and significance of validity in research.	10M	2	2
Q.3(A)	What are the steps involved in conducting a structural equation modeling analysis? Discuss in detail.	10M	3	2
	OR			
Q.3(B)	Analyse the correlation between the variables of given dataset and interpret the result, framing the hypothesis?	10M	3	4
Q.4(A)	Analyze the process of validating the assumptions in simple linear regression.	10M	4	4
	OR			
Q.4(B)	How Simple linear regression helps in predictive analysis. Interpret the result for the given data set with the equation?	10M	4	4
Q.5(A)	Analyze the significance of time series forecasting method with suitable example.	10M	5	4
	OR			
Q.5(B)	Predict the Jan 2012 Sales from the given data using Exponential moving average method and also discuss other time series methods?	10M	5	4
Q.6	**CASE STUDY** Results obtained from the Multiple Regression Analysis are shown below where Total cost is taken as a dependent variable and variable cost and fixed cost are taken as independent variables.	10M	3	5

Multiple Regression for Overhead					
Summary	Multiple R	R-Square	Adjusted R-square	S.E. of Estimate	
	0.9308	0.8664	0.8583	4108.9	
ANOVA Table	Degrees of freedom	Sum of Squares	Mean of Squares	F-Ratio	P-Value
Explained Unexplained	2 33	3614020661 557166199.1	1807010330 16883824.22	107.0261	< 0.0001

Regression Table	Coefficient	Standard Error (S.E.)	t-Value	p-Value
Constant	3996.7	6603.6	0.6052	0.5492
Variable cost	43.5	3.59	12.1289	0.0001
Fixed cost	883.6	82.2	10.7429	0.0001

a) Interpret the output obtained in the above table in detail.
b) Formulate the regression equation for total cost when explanatory variables, variable and fixed cost. Predict the total cost if variable cost considered 10, and fixed cost is 20.

*****END*****

SET-2

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

Question Paper Code: 22MBAP434

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MBA II Year I Semester (R22) Regular End Semester Examinations, February - 2024

PREDICTIVE ANALYSIS AND MODELING

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 types of predictive analytics in detail.	10M	1	2
	OR			
Q.1(B)	Outline the role of machine learning in predictive analytics.	10M	1	2
Q.2(A)	Elaborate the methods of estimating reliability and its impact on the quality of research.	10M	2	3
	OR			
Q.2(B)	Illustrate probability and non-probability sampling methods.	10M	2	3
Q.3(A)	Why do you think structural equation modelling is one of the best analysis to analyze the relationship between variable and latent constructs? Discuss with its type.	10M	3	4
	OR			
Q.3(B)	What is the procedure to perform factor analysis using SPSS. From the given data interpret the common factors in the dataset?	10M	3	4
Q.4(A)	Analyze the concept of outliers and coefficients relevance in multiple linear regression.	10M	4	4
	OR			
Q.4(B)	What are the types of regression analysis? Use Multiple linear regression analysis to analyze the given data and interpret the result specifying independent and dependent variables?	10M	4	4
Q.5(A)	Examine the significance of Autoregressive Integrated Moving Average (ARIMA)in predictive analytics.	10M	5	4
	OR			
Q.5(B)	Predict the Jan 2012 Sales from the given data using Simple moving average method and also discuss other time series methods?	10M	5	4
Q.6	**CASE STUDY**	10M	3	5

As you know, Predictive analytics looks at current and historical data patterns to determine if those patterns are likely to emerge again. This allows businesses and investors to adjust where they use their resourc advantage of possible future events. Predictive analysis can also be used to improve operational efficiencies and reduce risk.
Here are the test scores of sales employees of XYZ company and their weekly sales performance.The organization wants to predict the performance of the employees through the history of the scores recorded

in HR department. The scores and performance are mentioned below:

Sales man	A	B	C	D	E	F	G	H	I
Scores	50	60	50	60	80	50	80	40	70
Weekly Sales	30	60	40	50	60	30	70	50	60

(a) Obtain the regression equation of sales on intelligence test scores of the salesmen?
(b) If the intelligence test score of a salesman is 65, what would be his expected weekly sales?

END