

MBA III Semester Regular Examinations, November-2025

R24

Sub Code: R24MBA301

STRATEGIC MANAGEMENT
(MBA)

Time: 3 hours

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Answering the question from Part-A is compulsory (1x10M=10M)

1. CASE STUDY

Meters Limited is a company engaged in the designing, manufacturing, and marketing of instruments like speed meters, oil pressure gauges, and so on, that are fitted into two and four wheelers. Their current investment in assets is around Rs. 5 crores and their last year turnover was Rs. 15 crores, just adequate enough to breakeven. The company has been witnessing over the last couple of years, a fall in their market share prices since many customers are switching over to a new range of electronic instruments from the range of mechanical instruments that have been the mainstay of Meters Limited. The Company has received a firm offer of cooperation from a competitor who is similarly placed in respect of product range.

The offer implied the following: (i) transfer of the manufacturing line from the competitor to Meters Limited; (ii) manufacture of mechanical instruments by Meters Limited for the competitor to the latter's specifications and brand name; and (iii) marketing by the competitor. The benefits that will accrue to Meters Limited will be better utilization of its installed capacity and appropriate financial compensation for the manufacturing effort. The production manager of Meters Limited has welcomed the proposal and points out that it will enable the company to make profits. The sales manager is doubtful about the same since the demand for mechanical instruments is shrinking. The chief Executive is studying the offer.

Read the above case and answer the following questions:

- 1) What is divestment strategy? Do you see it being practised in the given case? Explain.
- 2) What is stability strategy? Should Meters Limited adopt it?
- 3) What is expansion strategy? What are the implications for Meters Limited in case it is adopted?

PART-B

Note: Answer All FIVE Questions. All Questions Carry Equal Marks (5X12=60M)

Q.N o	Questions	KL	CO	Marks
2	Unit – I			
	a Define strategic management. List the core objectives of strategic management. Explain about kind of factors that shape a company's strategy.	K1	CO1	[12M]
	OR			
	b Write on the nature and significance of strategic management. State the steps involved in developing a strategic vision.	K1	CO1	[12M]
3	Unit – II			
	a Define environmental scanning. Discuss the techniques used for environmental analysis in strategic management?	K2	CO2	[12M]
	OR			
	b Distinguish between GE 9-Cell matrix and BCG matrix. Write the strategic implications of GE 9 cell matrix for modern business organizations.	K4	CO2	[12M]
4	Unit – III			
	a Discuss the contemporary relevance of Porter's value chain analysis with benefits and examples.	K3	CO3	[12M]
	OR			
	b Formulate a strategy at corporate level? Explain it with an example.	K6	CO3	[12M]
5	Unit – IV			
	a "Resource Allocation is a vital part of strategy" why this is vital? Discuss.	K3	CO4	[12M]
	OR			
	b Write a note on strategic leadership? Explain the role of leader in strategic implementation.	K3	CO4	[12M]
6	Unit – V			
	a Discuss the most appropriate methodology for evaluation of strategy?	K3	CO5	[12M]
	OR			
	b List the functions under strategic surveillance? Describe types of strategic audits.	K1	CO5	[12M]

MBA III Semester Regular Examinations, November-2025

Sub Code: R24MBA302

OPERATIONS RESEARCH

R24

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

The following table shows the jobs of a network along with their time estimates.

Job	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
Optimistic(days)	1	2	2	2	7	5	5	3	8
Most Likely(days)	7	5	14	5	10	5	8	3	17
Pessimistic(days)	13	14	26	8	19	17	29	9	32

Draw the project network and find the probability of the project completing in 40 days.

$[\phi(0.8) = 0.2881]$

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No	Questions					KL	CO	M																															
2	Unit-I																																						
	a	Use the graphical method to interpret the following LP problem. $Minimize\ Z=20x_1+10x_2$ subject to the constraints $x_1+2x_2 \leq 40$ $3x_1+x_2 \geq 30, 4x_1+3x_2 \geq 60$ and $x_1, x_2 \geq 0$.					K3	1	12M																														
	OR																																						
	b	Use Simplex method to solve the LPP. $Max\ Z=3x_1+2x_2$ Subject to, $4x_1+3x_2 \leq 12, 4x_1+x_2 \leq 8, 4x_1-x_2 \leq 8, x_1, x_2 \geq 0$					K3	1	12M																														
3	Unit-II																																						
	a	Find the initial solution of the following transportation problem by Least Cost Method and Vogel's Approximation Method. <table border="1"><thead><tr><th></th><th>D₁</th><th>D₂</th><th>D₃</th><th>D₄</th><th>Supply</th></tr></thead><tbody><tr><td>O₁</td><td>2</td><td>2</td><td>2</td><td>1</td><td>3</td></tr><tr><td>O₂</td><td>10</td><td>8</td><td>5</td><td>4</td><td>7</td></tr><tr><td>O₃</td><td>7</td><td>6</td><td>6</td><td>8</td><td>5</td></tr><tr><td>Demand</td><td>4</td><td>3</td><td>4</td><td>4</td><td>15</td></tr></tbody></table>						D ₁	D ₂	D ₃	D ₄	Supply	O ₁	2	2	2	1	3	O ₂	10	8	5	4	7	O ₃	7	6	6	8	5	Demand	4	3	4	4	15	K3	2	12M
		D ₁	D ₂	D ₃	D ₄	Supply																																	
O ₁	2	2	2	1	3																																		
O ₂	10	8	5	4	7																																		
O ₃	7	6	6	8	5																																		
Demand	4	3	4	4	15																																		
OR																																							
	b	A company has three production facilities S ₁ , S ₂ and S ₃ with production capacity of 7, 9 and 18 units (in 100s) per week of a product, respectively.					K3	2	12M																														

		These units are to be shipped to four warehouses D1, D2, D3 and D4 with requirement of 5, 8, 7 and 14 units (in 100s) per week, respectively. The transportation costs (in rupees) per unit between factories to warehouses as you can see in the table:																																	
		<table><tr><td></td><td>D₁</td><td>D₂</td><td>D₃</td><td>D₄</td><td>Supply</td></tr><tr><td>S₁</td><td>19</td><td>30</td><td>50</td><td>10</td><td>7</td></tr><tr><td>S₂</td><td>70</td><td>30</td><td>40</td><td>60</td><td>9</td></tr><tr><td>S₃</td><td>40</td><td>8</td><td>70</td><td>20</td><td>18</td></tr><tr><td>Demand</td><td>5</td><td>8</td><td>7</td><td>14</td><td>34</td></tr></table>		D ₁	D ₂	D ₃	D ₄	Supply	S ₁	19	30	50	10	7	S ₂	70	30	40	60	9	S ₃	40	8	70	20	18	Demand	5	8	7	14	34			
	D ₁	D ₂	D ₃	D ₄	Supply																														
S ₁	19	30	50	10	7																														
S ₂	70	30	40	60	9																														
S ₃	40	8	70	20	18																														
Demand	5	8	7	14	34																														
		Apply MODI method to obtain optimal solution of transportation problem																																	
		Unit-III																																	
4	a	i) Use dynamic programming to solve Minimize $Z = Y_1^2 + Y_2^2 + Y_3^2$ Subject to, $Y_1 + Y_2 + Y_3 \geq 15$, $Y_1, Y_2, Y_3 \geq 0$.	K3	3	6M																														
		ii) Solve the following Integer programming problem using the branch and bound method. Maximize $Z = 3x_1 + 5x_2$ subject to the constraints (i) $2x_1 + 4x_2 \leq 25$, (ii) $x_1 \leq 8$, (iii) $2x_2 \leq 10$ and $x_1, x_2 \geq 0$ and integers.	K5	3	6M																														
	OR																																		
	b	i) Use dynamic programming to solve Maximum $Z = Y_1, Y_2, Y_3$ Subject to constraints, $Y_1 + Y_2 + Y_3 = 5$ and $Y_1, Y_2, Y_3 \geq 0$	K3	3	6M																														
ii) Solve the following Integer programming problem using the branch and bound method. Minimize $Z = 3x_1 + 2.5x_2$ subject to the constraints $x_1 + 2x_2 \geq 20$, $3x_1 + 2x_2 \geq 50$ and $x_1, x_2 \geq 0$ and integers		K5	3	6M																															
		Unit-IV																																	
5	a	i) For the game with payoff matrix: <table><tr><td></td><td colspan="3">Player B</td></tr><tr><td>Player A</td><td>B₁</td><td>B₂</td><td>B₃</td></tr><tr><td>A₁</td><td>-1</td><td>2</td><td>-2</td></tr><tr><td>A₂</td><td>6</td><td>4</td><td>-6</td></tr></table> determine the optimal strategies for players A and B. Also determine the value of game. Is this game (i) fair? (ii) strictly determinable?		Player B			Player A	B ₁	B ₂	B ₃	A ₁	-1	2	-2	A ₂	6	4	-6	K2	4	12M														
		Player B																																	
	Player A	B ₁	B ₂	B ₃																															
A ₁	-1	2	-2																																
A ₂	6	4	-6																																
OR																																			
b	i) Two competitors are competing for the market share of the similar product. The payoff matrix in terms of their advertising plan is shown below: <table><tr><td></td><td colspan="3">Competitor B</td></tr><tr><td>Competitor A</td><td>No Advertising</td><td>Medium Advertising</td><td>Heavy Advertising</td></tr><tr><td>No Advertising</td><td>10</td><td>5</td><td>-2</td></tr><tr><td>Medium Advertising</td><td>13</td><td>12</td><td>13</td></tr><tr><td>Heavy Advertising</td><td>16</td><td>14</td><td>10</td></tr></table> Suggest optimal strategies for the two firms and the net outcome thereof.		Competitor B			Competitor A	No Advertising	Medium Advertising	Heavy Advertising	No Advertising	10	5	-2	Medium Advertising	13	12	13	Heavy Advertising	16	14	10	K2	4	12M											
	Competitor B																																		
Competitor A	No Advertising	Medium Advertising	Heavy Advertising																																
No Advertising	10	5	-2																																
Medium Advertising	13	12	13																																
Heavy Advertising	16	14	10																																
		Unit-V																																	
6	a	A manufacturing firm is planning a new production line setup with the following schedule:																																	
		<table><tr><td>Activity</td><td>1-</td><td>1-3</td><td>2-</td><td>3-5</td><td>4-6</td><td>5-</td><td>6-7</td><td>5-</td><td>7-8</td></tr></table>	Activity	1-	1-3	2-	3-5	4-6	5-	6-7	5-	7-8	K4	5	12M																				
Activity	1-	1-3	2-	3-5	4-6	5-	6-7	5-	7-8																										



NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

MBA III Semester Regular Examinations, November-2025

R24

Sub Code: R24MBA303F1 INVESTMENT & PORTFOLIO MANAGEMENT

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

Mr. Arun invested in a diversified equity portfolio (Portfolio P) and wants to evaluate its performance for the last financial year. The following information is available:

Given Data

Portfolio Return (R_p) = 16%

Risk-free Rate (R_f) = 6%

Market Return (R_m) = 12%

Standard Deviation of Portfolio (σ_p) = 10%

Standard Deviation of Market (σ_m) = 8%

Portfolio Beta (β_p) = 1.2

Questions

1. Calculate the Sharpe Ratio of the portfolio. (3 marks)
2. Calculate the Treynor Ratio of the portfolio. (3 marks)
3. Calculate Jensen's Alpha of the portfolio. (4 marks)

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No		Questions	KL	CO	M
2	Unit-I				
	a	i) Explain the differences between Investment and Speculation. Also distinguish between Security Investment and Non-Security Investment with suitable examples.	K5	1	6M
		ii) Describe the Investment Process in detail. What are the major sources of investment information available to investors in India?	K4	1	6M
	OR				
	b	i) Write a detailed note on the Indian Security Markets. Explain the functioning of Primary and Secondary Markets, types of securities traded, and how market indices like SENSEX and NIFTY are calculated.	K5	1	6M
		ii) Discuss the various types of securities available in the Indian capital market. Explain the significance of market indices and describe the key features of SENSEX and NIFTY.	K6	1	6M
3	Unit-II				
	a	i) Explain the concept of security returns. Discuss the different types of returns and how security returns are measured.	K5	2	6M
		ii) What is security risk? Differentiate between systematic and non-systematic risk. Explain the major factors that influence security risk.	K5	2	6M
	OR				
	b	i) Describe the methods used to measure total risk in investments. How does variance and standard deviation help in understanding investment risk?	K4	2	6M
		ii) Explain the Intrinsic Value approach to valuation. How are bonds, preference shares, and equity shares valued using the intrinsic value method?	K5	2	6M

4	Unit-III				
	a	i) Analyze how different stages of the economic cycle influence investment decisions. Explain which economic indicators an investor should evaluate during each stage and justify their importance.	K4	3	6M
		ii) Evaluate the usefulness of industry life cycle analysis in selecting investment opportunities. Compare industries at different life cycle stages and assess which stage offers the best investment potential with reasons.	K5	3	6M
	OR				
	b	i) Critically evaluate the effectiveness of Technical Analysis tools in predicting stock price movements. Compare Technical Analysis with Fundamental Analysis and justify which approach is more reliable for long-term investment.	K5	3	6M
		ii) Develop an investment decision framework that integrates Fundamental Analysis (Economy-Industry-Company) and the Efficient Market Hypothesis (EMH). Propose how an investor should modify their strategy under weak, semi-strong, and strong forms of market efficiency.	K6	3	6M
5	Unit-IV				
	a	i) Analyze how the Markowitz Model helps an investor construct an efficient portfolio. Using the concept of the Efficient Frontier, explain how an optimal portfolio is selected based on return-risk preferences.	K4	4	6M
		ii) Evaluate the use of the Sharpe Single Index Model in portfolio construction. How does it simplify measurement of portfolio return and risk compared to the Markowitz Model? Assess the advantages and limitations.	K5	4	6M
	OR				
	b	i) Using the Capital Asset Pricing Model (CAPM), evaluate how securities are classified as underpriced or overpriced. Explain the investment action an investor should take and justify with CAPM logic.	K5	4	6M
		ii) Develop an investment strategy integrating CAPM and Arbitrage Pricing Theory (APT). Propose how an investor should decide between the two models while constructing a diversified portfolio under different market conditions.	K6	4	6M
6	Unit-V				
	a	i) Analyze how Sharpe, Treynor, and Jensen's performance measures differ in evaluating portfolio performance. Explain in which situations each model is most appropriate and why.	K4	5	6M
		ii) Evaluate the effectiveness of the Jensen's Alpha model in assessing fund manager performance. Compare it with the Treynor Ratio and justify which measure provides a better indication of managerial skill in different market conditions.	K5	5	6M
	OR				
	b	i) Critically evaluate the Fama Decomposition Model. Discuss how it breaks down portfolio performance into selectivity, diversification, and market timing components, and assess its usefulness for investors.	K5	5	6M
		ii) Create a framework to evaluate a mutual fund by integrating the Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and Fama Decomposition Model. Propose how an investor should interpret conflicting results across these models.	K6	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M: Marks

MBA III Semester Regular Examinations, November-2025**R24**

Sub Code: R24MBA303F2

FINANCIAL MARKETS & SERVICES

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

Fincorp India Ltd. is a diversified financial services company operating in capital markets, merchant banking, microfinance, credit services, and mutual fund distribution. To expand its operations, the company plans to raise ₹800 crore through a public issue and has appointed Alpha Merchant Bankers, a SEBI-registered merchant banker, to manage the entire process.

To support the development of a new fintech lending subsidiary, Fincorp is also exploring **venture capital funding** of ₹150 crore. Two venture capital firms have shown interest:

- **TechVentures**, preferring equity participation with active involvement in management,
- **Innovate Capital**, offering convertible preference shares with limited management interference.

Fincorp's microfinance division uses both the **SHG-NABARD model** and the **Grameen model** to expand rural lending. The company is planning to merge the strengths of both models to improve operational efficiency.

To enhance working capital management, Fincorp uses a **non-recourse factoring arrangement** for its receivables and also uses bank **bill discounting** for short-term finance needs.

For its proposed debt issue, Fincorp approached **CRISIL** for a rating and received an **A+ rating**, reflecting strong financial health but noting concerns about rising NPAs in microfinance.

Finally, Fincorp plans to launch a **mutual fund scheme** in the debt and hybrid categories while adhering to SEBI mutual fund guidelines, and is integrating **NSDL and CDSL** systems to improve demat services.

Questions:

1. Analyze the role of Alpha Merchant Bankers in managing Fincorp's public issue and explain why their functions are critical for regulatory compliance and investor confidence.
2. Evaluate the venture capital financing options offered by TechVentures and Innovate Capital. Which option is more appropriate for Fincorp's fintech subsidiary and why?
3. Compare the SHG-NABARD microfinance model and the Grameen model used by Fincorp. How can integrating both models improve the company's rural financial outreach?
4. Evaluate the suitability of a non-recourse factoring arrangement for Fincorp's receivables management. How does it impact liquidity and risk?
5. Design an appropriate mutual fund structure for Fincorp (debt/hybrid scheme) in line with SEBI guidelines, and justify why your design is suitable for its investor base.

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No	Questions	KL	CO	M
2	Unit-I			
	a i) Analyze how the structure of the financial system supports economic development in emerging economies like India.	K4	1	6M
	ii) Evaluate the effectiveness of SEBI's regulations in strengthening primary and secondary market operations in India	K5	1	6M
	OR			
	b i) Compare and analyze the functioning of capital markets and money markets in terms of instruments, participants, and risks.	K4	1	6M
3	ii) Design a set of reforms that could resolve current problems in the Indian financial services sector and justify how they would improve market efficiency	K6	1	6M
	Unit-II			
	a i) Analyze the scope of financial services in India and explain how regulatory frameworks influence their growth.	K4	2	6M
	ii) Evaluate the role of merchant bankers in issue management and their impact on capital market efficiency.	K5	2	6M
	OR			
4	b i) Examine the responsibilities of different types of merchant bankers and how they differ in practice.	K4	2	6M
	ii) Assuming you are a regulator, propose new guidelines to strengthen the merchant banking system in India and justify your recommendations.	K6	2	6M
	Unit-III			
	a i) Analyze the growth of venture capital in India and identify the key factors contributing to its expansion.	K4	3	6M
	ii) Evaluate the effectiveness of the financing patterns used under venture capital funding for early-stage startups.	K5	3	6M
5	OR			
	b i) Compare and contrast major microfinance models (SHG, Grameen, Cooperative, NABARD SHG model, SIDBI model, SGSY model, Grameen Bangladesh model, Credit Unions).	K4	3	6M
	ii) Develop a new microfinance model combining the strengths of SHG and Grameen approaches and justify its potential effectiveness.	K6	3	6M
	Unit-IV			
	a i) Analyze the credit rating methodologies of CRISIL, ICRA, and CARE, highlighting their similarities and differences.	K4	4	6M
6	ii) Evaluate the role of credit rating in reducing information asymmetry in debt markets.	K5	4	6M
	OR			
	b i) Compare factoring, forfaiting, and bill discounting with respect to their operations, risk, and suitability for different businesses.	K4	4	6M
	ii) Design a factoring arrangement suitable for a medium-sized manufacturing firm and justify your structure.	K6	4	6M
	Unit-V			
	a i) Analyze the organizational structure and management of mutual funds in India and how they influence investor returns.	K4	5	6M
7	ii) Evaluate the role of SEBI guidelines in improving transparency and governance in the mutual fund industry.	K5	5	6M
	OR			
	b i) Analyze the process and benefits of debt securitization for financial institutions.	K4	5	6M
	ii) Propose a demat service model that enhances efficiency for retail investors, incorporating the role of NSDL and CDSL.	K6	5	6M



NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

MBA III Semester Regular Examinations, November-2025

R24

Sub Code: R24MBA303M2

RETAIL MANAGEMENT

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

A major retail chain is facing intense competition from online retailers, with customers shifting to e-commerce due to convenience and discounts. As a retail manager, analyze the challenges faced by the chain and propose strategies such as store layout redesign, omni-channel retailing, and personalized services to sustain competitive advantage.

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No		Questions	KL	CO	M
2	Unit-I				
	a	i) Explain the different types of retailing formats with suitable examples.	K2	1	6M
		ii) Discuss recent trends in the Indian retailing industry and their impact on retail strategy.	K3	1	6M
	OR				
	b	i) Analyze the legal, social, and economic issues impacting retailing in India.	K4	1	6M
		ii) Describe the components of a retail strategy to achieve competitive advantage.	K3	1	6M
3	Unit-II				
	a	i) What are the factors influencing store location selection? Explain with examples.	K2	2	6M
		ii) Analyze the importance of visual merchandising in store design and layout.	K4	2	6M
	OR				
	b	i) Explain the process of country-region and trade area analysis for retail location.	K2	2	6M
		ii) Describe the elements of exterior and interior store design with examples.	K3	2	6M
4	Unit-III				
	a	i) Explain different merchandise pricing strategies used in retailing.	K2	3	6M
		ii) What is assortment planning? Explain its significance in merchandise management.	K3	3	6M
	OR				
	b	i) Discuss the methods for determining inventory evaluation and price strategies.	K2	3	6M
		ii) Explain buyer-vendor relations and psychological pricing in retailing.	K3	3	6M

5	Unit-IV				
	a	i) Explain the retail promotion mix with examples from Indian retailers.	K2	4	6M
		ii) Discuss the steps involved in the retail selling process.	K3	4	6M
	OR				
	b	i) Describe the role of publicity and sales promotion in retailing.	K2	4	6M
		ii) Explain the importance and components of retail customer service.	K3	4	6M
6	Unit-V				
	a	i) Evaluate multinational retail strategies for India market entry.	K5	5	6M
		ii) Discuss the impact of online retailing and new customized retail formats in India.	K3	5	6M
	OR				
	b	i) Analyze market entry strategies for international retail chains in India.	K4	5	6M
		ii) Describe new retail formats and technologies influencing global retail.	K3	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M: Mark

MBA III Semester Regular Examinations, November-2025

R24

Sub Code: R24MBA303M4 ADVERTISING & BRAND MANAGEMENT

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

Your agency, Boston-based Arnold Communications, won the Volkswagen account in 1995 and you're on the VW creative team. You have helped reverse VW's sales dip with the line, "On the road of life there are passengers and there are drivers. Drivers wanted." The award-winning campaign helped increase sales, brand awareness, favorable brand opinion, and ad recall. But what do you do next?

As creative director Alan Pafenbach explains, the original campaign "with its alternative music tracks, quirky photography and 'MTV style' editing was being copied by a lot of other car companies." So the creative team decided to shift gears, take a new direction, create a message that would get talked about.

One particular car model, the VW Golf, needed a new focus for its first-time car-buying target market of young, ad-savvy people. Arnold's research found that this target despises being marketed to, especially by automobile manufacturers. These consumers said over and over that they were tired of automotive advertising that was full of clichés and exaggerated claims.

Arnold saw this target as a little out of the mainstream, perhaps even in the jaded and cynical generation X. However, these people enjoy driving and living life to the fullest but they live it on their own terms. Because they are young and in college or just starting their careers, they want to spend less than \$24,000 for a new car. Simmons data identified the mind-set of the target audience as efficient, outspoken, adventurous and nonconformist.

Questions:

1. What directions should VW take next?
2. What would you do to connect with the younger consumer and sell cars to them?

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No		Questions	KL	CO	M
2	Unit-I				
	a	i) Define Advertising? What is the nature and importance of Advertising?	K3	1	6M
		ii) Discuss briefly about the persuasion process.	K4	1	6M
	OR				
	b	i) What are the major Advertising decisions? Discuss.	K2	1	6M
		ii) Determine the objectives of Advertising?	K2	1	6M
3	Unit-II				
	a	i) Discuss how to develop an Advertising Campaign?	K5	2	6M
		ii) Briefly explain various Advertising Appeals?	K2	2	6M
	OR				
	b	i) Discuss briefly about the creative styles and advertising appeals?	K4	2	6M
		ii) What is Media planning? Discuss in brief?	K2	2	6M

4	Unit-III				
	a	i) Write a brief note on in-house arrangements for Ad Creation?	K3	3	6M
		ii) Explain the process of evaluating Advertising Effectiveness?	K3	3	6M
	OR				
	b	i) Discuss about the brand equity and brand Loyalty?	K5	3	6M
		ii) What are the major Branding decisions?	K4	3	6M
5	Unit-IV				
	a	i) Discuss the process in identifying and selecting brand name?	K3	4	6M
		ii) Explain the steps in building Brand personality?	K3	4	6M
	OR				
	b	i) Write about the Brand positioning and re-launch.	K3	4	6M
		ii) Discuss how to enhance brand image through sponsorship?	K3	4	6M
6	Unit-V				
	a	i) Explain about brand building in different sectors?	K2	5	6M
		ii) How to build brands through Internet?	K3	5	6M
	OR				
	b	i) Write a note on pre-requisites and process for International Branding?	K4	5	6M
		ii) Discuss on building Indian brands for global markets?	K4	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M: Mark



NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

MBA III Semester Regular Examinations, November-2025

R24

Sub Code: R24MBA303A2

PYTHON PROGRAMMING

Time: 3 hours

(MBA)

Max. Marks: 70

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

A grocery store wants to create a small Python-based Bill Calculator to help customers know the total amount they must pay. The store sells items like rice, sugar, oil, and biscuits. Each item has a fixed price per unit.

The program should:

1. Store the items and their prices using a dictionary.
2. Allow the user to enter the item name and quantity for 4 items.
3. Calculate the total bill amount and display it using a function.

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No		Questions	KL	CO	M
2	Unit-I				
	a	i) Illustrate the use of different operator types in Python with suitable code snippets.	K2	1	6M
		ii) write a program to determine the grading of a student based on marks in 5 subjects.	K3	1	6M
	OR				
	b	i) Write a Python program to display all prime numbers within a given interval. Explain the logic and flow of execution step by step.	K3	1	12M
3	Unit-II				
	a	i) Demonstrate various string slicing techniques and explain how negative indexing works with examples.	K3	2	6M
		ii) Write a Python program using functions to count vowels, consonants, digits, and special characters in a string.	K3	2	6M
	OR				
	b	i) Apply list operations to build a program that performs insertion, deletion, searching, sorting, and slicing on a list of student names.	K3	2	6M
		ii) Analyze the difference between mutable and immutable objects in Python using lists and strings. Show how this affects function behaviour.	K4	2	6M
4	Unit-III				
	a	i) Explain the features of tuples, and discuss how they differ from lists. Provide examples of situations where tuples are more suitable.	K2	3	6M
		ii) Apply the concept of tuples and create a program that stores employee records, then extracts employees above a certain age using slicing.	K3	3	6M

	OR				
	b	i) Describe various set operations with suitable examples.	K2	3	6M
		ii) Explain in detail about Dictionaries in Python. Discuss how to create, access, and modify key-value pairs.	K2	3	6M
5	Unit-IV				
	a	i) Explain different file modes with examples.	K2	4	6M
		ii) Write a Python program to read a CSV file containing student marks, compute total and average, and write the results into a new CSV file.	K3	4	6M
	OR				
	b	i) Write a Python program to create a class that represents a shape. Include methods to calculate its area and perimeter. Implement subclasses for different shapes like Circle, Triangle, and Square. Explain the logic used in the program.	K3	4	12M
6	Unit-V				
	a	i) Describe the features of NumPy arrays and explain how they differ from Python lists.	K2	5	6M
		ii) Using Pandas, write a program to load a CSV file, handle missing values, filter rows, and compute summary statistics.	K3	5	6M
	OR				
	b	i) Explain the structure of JSON and XML formats. Compare their syntax and usage in data exchange.	K2	5	6M
		ii) Create a NumPy array, perform basic operations, and convert it into a Pandas Data Frame. Explain each step.	K3	5	6M

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PART-A

Note: Answering the question from Part-A is compulsory (1 x 10M = 10M)

1. CASE STUDY

A small online store wants to understand customer purchasing behaviour and predict whether a customer will make a purchase during a special discount week. The store has collected the following data:

Customer-ID	Age	Income (in thousand)	Visits per Month	Avg. Time on Site (min)	Purchased (0/1)
1	22	18	5	12	0
2	28	25	8	15	1
3	35	40	6	18	1
4	42	52	4	10	0
5	30	33	7	17	1
6	26	22	5	11	0
7	48	60	3	9	0
8	36	45	6	16	1
9	29	29	8	14	1
10	40	55	4	13	0

Using the dataset provided, answer the following:

- Identify a suitable classification algorithm to predict whether a customer will purchase (0/1). Justify your answer.
- Based on the dataset, list two features that you think have the strongest influence on purchasing behavior and explain why.
- Using any two features of your choice, manually show one step of how a decision tree would split the data (you may choose a simple threshold).
- Explain in 2-3 lines how the store can use the model's prediction results to improve marketing strategies.

PART-B

Answer either 'a' or 'b' from each question of PART-B (5 x 12M=60M)

Q.No		Questions	KL	CO	M
2		Unit-I			
	a	i) Describe the difference between simple linear regression and multiple linear regression with suitable examples.	K2	1	6M
		ii) Illustrate how the VC dimension influences the choice of hypothesis space.	K3	1	6M
		OR			
	b	i) Compare and contrast learning multiple classes using One-vs-Rest and One-vs-One strategies.	K4	1	6M
		ii) Apply Bayesian classification to a two-class problem and explain how posterior probabilities guide final decisions.	K3	1	6M

3	Unit-II				
	a	i) Explain Maximum Likelihood Estimation and derive the MLE for the Bernoulli distribution.	K2	2	6M
		ii) Apply the concept of Bayes estimator to a regression problem and explain its advantages.	K3	2	6M
	OR				
	b	i) Discuss bias and variance of an estimator and explain how they affect model performance.	K2	2	6M
		ii) Evaluate different model selection procedures and justify which one you would choose for a parametric classifier.	K4	2	6M
4	Unit-III				
	a	i) Explain Principal Component Analysis (PCA) and describe how it reduces dimensionality.	K2	3	6M
		ii) Demonstrate the steps involved in the FP-growth algorithm with a simple example.	K3	3	6M
	OR				
	b	i) Describe the Apriori algorithm and explain how support and confidence are used in association rule mining.	K2	3	6M
		ii) Analyze the difference between subset selection and feature extraction techniques.	K4	3	6M
5	Unit-IV				
	a	i) Explain the Expectation-Maximization algorithm and describe its two major steps.	K2	4	6M
		ii) Apply the k-Means algorithm to a simple dataset and demonstrate one full iteration of cluster assignment and update.	K3	4	6M
	OR				
	b	i) Describe the Self-Organizing Map learning process with the help of its algorithm.	K2	4	6M
		ii) Analyze the differences between hierarchical clustering and partitional clustering methods.	K4	4	6M
6	Unit-V				
	a	i) Explain how a decision tree performs classification and regression with suitable illustrations.	K2	5	6M
		ii) Examine the process of rule extraction from trees and explain how it improves model interpretability.	K2	5	6M
	OR				
	b	i) Describe the pruning process in decision trees and explain why it is necessary.	K2	5	6M
		ii) Apply the Random Forest algorithm and explain how multiple trees contribute to final prediction.	K3	5	6M

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