M.B.A. DEGREE EXAMINATION, NOVEMBER – 2022

First Semester

Logistics and Supply Chain Management

MANAGEMENT CONCEPTS AND ORGANIZATIONAL BEHAVIOUR

(CBCS – 2022 onwards)

		(CBCS	5 – 2022 d	onw	ards)	
Time	Time: 3 Hours			Maximum: 75 Marks		
			Part A		(10	× 1 = 10)
		Answ	ver all qu	esti	ons.	
1.		udy of human	behavio	r in	organizational	settings
	(a)	Individual beh	avior			
	(b)	Group behavio	r			
	(c)	Organizational	l behavio	r		
	(d)	None of these				
2.	"Cog	nitive theory" o	f learnin	g wa	s given by	_·
	(a)	Skinner	(b)	Pav	lov	
	(c)	Tolman	(d)	Piaj	iet	
3.		represe	nt noble	st th	oughts, ideals et	c.
	(a)	Ego	(b)	Sup	er ego	
	(c)	Negative ego	(d)	Id		

4.		ose concept states tions may lead to p		t interpersonal and human tivity?
	(a)	Elton Mayo	(b)	F.W. Taylor
	(c)	Henry Fayol	(d)	Max Weber
5.		ermining how tasks agement function?	are t	to be grouped is part of which
	(a)	Planning	(b)	Controlling
	(c)	Leading	(d)	Organizing
6.	As beha	per Stimulus-laviour process is	_	·
	(a)	Drive	(b)	Organism
	(c)	Stimuli	(d)	Response
7.		is once view o	f real	ity.
	(a)	Attitude	(b)	Outlook
	(c)	Perception	(d)	Personality
8.		is the proces	s of s	creening out information that
	we belie		witł	n or that Contradict to our
	(a)	Perceptual contex	t	
	(b)	Halo effect		
	(c)	Selective perception	on	
	(d)	Stereotyping		
			2	R7760

9.	towa	ards the group or resistance to leave it								
	(a)	Group norms								
	(b)	Group behavior								
	(c)	Group cohesiveness								
	(d)	Group structure								
10.	grou	nmunication that takes place among members of work apps at the same level is known as ———————————————————————————————————								
	(a)	diagonal (b) upward								
	(c)	grapevine (d) lateral								
		Part B $(5 \times 5 = 25)$								
	A	nswer all questions, choosing either (a) or (b).								
11.	(a)	Interpret the Functions of management.								
		Or								
	(b)	Describe Taylor's Scientific Management.								
12.	(a)	Elucidate the Steps in Planning Process.								
		Or								
	(b)	State the Importance of Vision Statement								
13.	(a)	Infer the Benefits of Departmentalization.								
		Or								
	(b)	Examine the need of Coordination in an Organization.								
		3 R7760								

14. (a) Classify the Types of Learners in an Organization.

Or

(b) Evaluate the Components of Attitude
15. (a) Show the Characteristics of Group Behavior.

Or

(b) Elaborate the Stages in Interpersonal Relationship.

Part C $(5 \times 8 = 40)$

Answer any **five** questions.

(each answer should not exceed Two pages)

- 16. Discuss the Contribution of F.W. Taylor towards the Field of Management.
- 17. Explain Elton Mayo's Hawthorne Experiment and its Impact on Management.
- 18. Appraise the Techniques of Decision Making.
- 19. Categorize the Types of Planning Premises. .
- 20. Describe Line and Staff Relationship with a neat Sketch.
- 21. Examine the Factors influencing the Personality.
- 22. Compare Maslow's theory of Motivation with Herzberg's Two Factor Theory.
- 23. Elaborate the Stages of Group Behavior with examples.

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M.B.A. DEGREE EXAMINATION, NOVEMBER – 2022

First Semester

Logistics and Supply Chain Management

MANAGERIAL ECONOMICS

(CBCS - 2022 onwards)

			(,			
Time : 3 H		lours	S			Maximum : 75 Marks			
			Par	rt A				$(10 \times 1 =$	10)
			Answer	all qu	uestio	ns.			
1.	The	basic	economic 	pro	blem	is	the	problem	of
	(a)	Abunda	ance of reso	urces	3				
	(b)	Scarcit	y of resour	ces					
	(c)	Humar	n Resources	1					
	(d)	None o	f the above						
2.	Impl	licit Cos	t refers to _						
	(a)	Margin	nal cost						
	(b)	Total A	verage Cos	st					
	(c)	Opport	unity cost o	of res	ources	3			
	(d)	None o	f the above						
3.			ake greater					change in	the
	(a)	Inelast	ic	(b)	Elast	tic			
	(c)	Perfect	ly elastic	(d)	Perfe	ectly	inela	stic	

		ı	4					
(a)	Law of Diminis	C						
, ,	Law of Increasing Returns							
(c)			ns					
(d)	None of the abo	ve						
In "l	Perfect competition	on" prod	ducts are					
(a)	Heterogeneous	(b)	Homogeneous					
(c)	Differentiated	(d)	Augmented					
	ountry that does		rade with other countries					
(a)	Open	(b)	Closed					
(c)	Independent	(d)	Close ended					
	macpenaem	(4)	close chaca					
In '	-							
	Imperfect compo	etition"						
	Imperfect compo	etition"	, Factors of production a					
(a) (c)	Imperfect composite compos	etition" e (b) (d)	, Factors of production a					
(a) (c)	Imperfect composite compos	etition" e (b) (d) estment	, Factors of production a Perfectly immobile None of the above					
(a) (c) If sa	Imperfect composition Perfectly mobile Both (a) and (b) avings exceed inventional income	etition" e (b) (d) estment	, Factors of production at Perfectly immobile None of the above					
(a) (c) If sa (a)	'Imperfect composition Perfectly mobile Both (a) and (b) avings exceed inventional income	etition" (d) estmenterises e falls	, Factors of production as Perfectly immobile None of the above then					
(a) (c) If sa (a) (b)	'Imperfect composition Perfectly mobile Both (a) and (b) avings exceed inventional income	etition" (d) estmenterises e falls	, Factors of production at Perfectly immobile None of the above then					
(a) (c) If sa (a) (b) (c) (d)	'Imperfect composition Perfectly mobile Both (a) and (b) avings exceed inventional income National income National income No change	etition" (d) estment e rises e falls e is not	, Factors of production a Perfectly immobile None of the above t then					
(a) (c) If sa (a) (b) (c) (d)	'Imperfect composition Perfectly mobile Both (a) and (b) avings exceed inventional income National income National income No change	etition" (d) estment e rises e falls e is not	, Factors of production a Perfectly immobile None of the above t then					

10.	Maxi	imum Profit arises in a
	(a)	Dynamic economy
	(b)	Static economy
	(c)	Neither (a) nor (b)
	(d)	None of the above
		Part B $(5 \times 5 = 25)$
	Ar	nswer all questions, choosing either (a) or (b).
11.	(a)	Examine the Nature of Managerial Economics.
		Or
	(b)	Inspect the Role of Managerial Economics in Business Decisions.
12.	(a)	List the types of Elasticity of demand.
		Or
	(b)	How to calculate the Price Elasticity of Demand? Explain.
13.	(a)	Classify the Types of Cost Function.
		\mathbf{Or}
	(b)	How to avoid Diseconomies of Scale?
14.	(a)	How are Price and Output determined under Monopoly in the short run?
		Or
	(b)	Describe Risk-Bearing-Theory of Profit.
15.	(a)	Name the Factors of Macro Economy.
		Or
	(b)	Mention the Components of Balance of Payment.
		3 R7761

Part C $(5 \times 8 = 40)$

Answer any **five** questions (each answer should not exceed 2 pages)

- 16. "Managerial economics is the integration of economic theory with business practices for the purpose of facilitating decision- making and forward planning by managers". Explain.
- 17. Define the term "Demand" and discuss the factors affecting the demand of a product or service.
- 18. Explain the Concepts of Opportunity Cost.
- 19. Examine the role of Elasticity of Supply in Business Decisions.
- 20. Distinguish between perfect competition and monopoly. Explain price determination under Perfect Competition.
- 21. Illustrate the Properties of Cobb and Douglas Production Function.
- 22. Elaborate the Phases of a Business Cycle with example.
- 23. What is Inflation? Determine the Causes of Inflation.

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M.B.A. DEGREE EXAMINATION, NOVEMBER - 2022

First Semester

Logistics and Supply Chain Management

ACCOUNTING AND FINANCIAL MANAGEMENT

(CBCS - 2022 onwards)

Time: 3 Hours Maximum: 75 Marks

Part A $(10 \times 1 = 10)$

Answer all questions.

Choose the correct answer

- 1. The concept of separate entity is applicable to which of following types of businesses?
 - (a) Sole Proprietorship
 - (b) Corporation
 - (c) Partnership
 - (d) All of them
- 2. Profit and loss account shows the
 - (a) Profit earned or loss suffered by the business
 - (b) Total capital employed
 - (c) Profit and loss through the sale of assets
 - (d) None of the above

3.	Whic	ch of these is not a component of the final accounts?
	(a)	Balance sheet
	(b)	Trading Account
	(c)	Profit and Loss Sheet
	(d)	Transaction receipts
4.	Emp	loyees Stock Option cannot be issued to
	(a)	Managing Director
	(b)	Permanent Employee
	(c)	Contractual Employee
	(d)	All of them
5.	Whice analy	th of the following is technique of financial statement ysis?
	(a)	Common size statement
	(b)	Comparative statement
	(c)	Trend analysis
	(d)	All of the above
6.		technique of converting figures into percentage in common base is called ————
	(a)	Ratio analysis
	(b)	Common size statement analysis
	(c)	Trend percentages
	(d)	None of these
		2 R7762

- 7. Which of the following is not true about Capital Budgeting?
 - (a) Capital Budgeting decisions have an influence on the future stability of an organisation
 - (b) Capital Budgeting decisions include investments to expand the business
 - (c) Capital Budgeting decisions are of an irreversible nature
 - (d) Sunk cost is a part of Capital Budgeting
- 8. Which of the following is true for a project with a shorter payback period?
 - (a) The project will have more Net Present Value
 - (b) The project will have less Net Present Value
 - (c) The project carries a greater amount of risk
 - (d) The project carries a lesser amount of risk
- 9. Which of these is not a part of Capital Structure?
 - (a) Equity Shares
 - (b) Debentures
 - (c) Short-term borrowings
 - (d) Bonds
- 10. The process of financing the assets of a business is known as:
 - (a) Asset Structure
 - (b) Owners Structure
 - (c) Financial Structure
 - (d) Capital Structure

Part B

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) What is Financial Accounting? What are its objectives?

Or

- (b) Sketch the scope of Human Resource Accounting.
- 12. (a) What is Employee Stock Option? Explain the accounting procedures regarding that.

Or

- (b) What do you understand by 'Alteration of Share Capital'?
- 13. (a) What are the limitations of Funds Flow Statement?

Or

- (b) What are the tools used in Analysis of Financial Statement?
- 14. (a) Why money has time value? Explain.

Or

- (b) Point out the advantages and disadvantages of Pay Back Period Method.
- 15. (a) Explain various forms of Dividend.

Or

(b) Point out the issues in Working Capital Management.

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Part C $(5 \times 8 = 40)$

Answer any FIVE questions.

16. The following is the trial balance of Rubika & Co., Ltd., as at 30th June, 2022.

Particulars	Ps.	Ps.
Stock, 30th June, 2021	75,000	
Sales		3,50,000
Purchases	2,45,000	
Wages	50,000	
Discount		5,000
Furniture and fittings	17,000	
Salaries	7,500	
Rent	4,950	
Sundry expenses	7,050	
P & L Appropriation A/c on $30^{\rm th}$ June, 2014		15,030
Dividends paid	9,000	
Share capital		1,00,000
Debtors and Creditors	37,500	17,500
Plant and Machinery	29,000	
Cash and Bank	16,200	
Reserve		15,500
Patents and Trade mark	4,830	
Total	5,03,030	5,03,030

Prepare Trading, P&L A/c P&L Appropriation Ale for the year ended 30th June, 2022 and balance Sheets as on that date. Take into consideration the following adjustments. (a) Stock on 30th June, 2022 was valued at Rs. 82,000. (b) Depreciation on fixed assets @ 10%. (c) Make a provision for income-tax @50%.

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- 17. Explain the differences between Financial, Cost and Management Accounting.
- 18. Shrivathsun Limited was incorporated on 1st March 2015 and received its certificate of commencement of business on 1st April, 2015. The company bought the business of M/s. Shri & Co., with effect from 1st November, 2014. From the following figures relating to the year ending October 31, 2015, find out the profits available for dividends: (a) Sales for the year were Rs. 6,00,000 out of which sales upto 1st March were Rs. 2,50,000. (b) Gross Profit for the year was Rs. 1,80.000. (c) The expenses debited to the P & LA/c were

Rent Rs; 9,000; Salaries Rs. 15.000; Directors' fees Rs. 4,800; interest on debentures Rs. 5,000; Audit fees Rs. 1,500; Discount on sales Rs. 3,600; Depreciation Rs. 24,000; General expenses Rs. 4,800; Advertising Rs. 18,000 Stationery and Printing Rs. 3,600 Commission on sales P.s. 6,000; Bad debts (Rs. 500 relate to debts created prior to incorporation) Rs. 1,500; Interest to vendor on purchase consideration up to 1st May, 2015 Rs. 3,000.

- 19. Explain the procedure for Alteration of Share Capital.
- 20. The following is the trading and profit and loss account of Pani Ltd for the year ending on 31st December 2021, followed by the Balance sheet of the company.

PROFIT AND LOSS ACCOUNT

To Opening Stock	5,80,000	By sales	30,00,000
To Purchases	24,40,000	By closing stock	6,20,000
To Gross Profit	6,00,000		
Total	36,20,000	Total	36,20,000
Liabilities	Rs.	Assets	Rs.
Share Capital	28,00,000	Fixed Assets	22,00,000

Reserve and Surplus	2,00,000	Stock	6,20,000
Bank Overdraft	1,40,000	Debtors	3,20,000
Creditors	6,00,000	Bank	8,00,000
Profit for the year	2,80,000	Cash	80,000
Total	40,20,000	Total	40,20,000

On the basis of the above data, you are required to calculate the following ratios and interpret them as briefly as possible.

- (a) Current Ratio (b) Gross Profit Ratio (c) Quick Ratio (d) stock Turnover Ratio (e) Debtors' Turnover Ratio.
- 21. Explain various techniques of capital budgeting evaluation.
- 22. Discuss the differences between Funds Flow Statement and Cash Flow Statement.
- 23. Prepare an estimate of working capital requirement from the following information of a trading concern.

Projected annual sales 10,000 units

Selling price Rs. 10 per unit

Percentage of net profit on sales 20%

Average credit period allowed to customers 8 Weeks

Average credit period allowed by suppliers 4 Weeks

Average stock holding in terms of sales requirements 12 Weeks

Allow 10% for contingencies.

M.B.A. DEGREE EXAMINATION, NOVEMBER 2022.

First Semester

Logistics and Supply Chain Management

BUSINESS ENVIRONMENT

(CBCS – 2022 onwards)

Time	e:3 F	Hours	Maxim	um : 75 Marks
		Part A		$(10 \times 1 = 10)$
		Answer all qu	uestions.	
1.		axing the restriction iness and industry mean		
	(a)	Privatization (b)	Liberalization	
	(c)	Globalization (d)	None of the ab	oove
2.	prin	is an econoniciple of free enterprise.	omic system b	pased on the
	(a)	Capitalism (b)	Socialism	
	(c)	Mixed Economy (d)	Marxism	
3.		ich among the followin netary policy?	g is not the i	instrument of
	(a)	Cash reserve ratio (b)	Statutory liqu	idity Ratio
	(c)	Deficit financing (d)	Open market	operation
4.	Whi	ich one is not an element	of internal env	ironment?
	(a)	Marketing capabilities		
	(b)	Operational Capabilitie	es	
	(c)	Money and capital mar	ket	
	(d)	Personal Capabilities		

	ne amount claimed by consumer is Rs.89 Lakhs, the under the consumer protection act shall be filed wit
(a)	District Consumer Redressal forum
(b)	State consumer Dispute Redressal Commission
(c)	National consumer Dispute Redressal Commission
(d)	None of the above
Cons	sumer protection in India is ensured by
(a)	Consumer protection Act, 1946
(b)	Consumer protection Act, 1986
(c)	Consumer protection Act, 1990
(d)	Consumer protection Act, 1968
Mar	keting intermediaries are categorized unde
(a)	External (b) Micro
(c)	Macro (d) Remote
Mon	etary policy in India is framed by
(a)	RBI
(b)	Ministry of corporate affairs
(c)	Ministry of finance
(d)	Planning commission
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9.	Export promotion is concerned with						
	(a)	Privatization	(b)	Globalization			
	(c)	Liberalization	(d)	Peak			
10.		Privatization of ownership through sale of equity share is called					
	(a)	Contracting	(b)	Disinvestment			
	(c)	Denationalization	(d)	None of the abo	ve		
		Par	t B		$(5 \times 5 = 25)$		
	An	nswer all questions,	, choo	sing either (a) or	<i>c</i> (b).		
11.	(a)	Show the Importan	nce of	Scanning the E	nvironment.		
			Or				
	(b)	List the Benefits o	f Glol	oalization.			
12.	(a)	Examine the Im Business Environm		of Political	Stability in		
			Or				
	(b)	Inspect the need eE-Governance.	of Pu	blic-Private Par	ticipation in		
13.	(a)	Analyze the GDP Years.	Tren	d of India for th	he past Five		
			Or				
	(b)	Examine the Ro Industrial Develop			titutions In		
14.	(a)	Explain the Eme Society.	rgeno	ce of Entrepren	eurs in the		
			Or				
	(b)	Appraise the Im Innovation in Clea			Policy on		
			3		R7763		

15. (a) Specify the Components of Legal Environment.

Or

(b) Why Renewable Energy is important for the future in India?

Part C $(5 \times 8 = 40)$

Answer any **five** questions. Each answer should not exceed two pges.

- 16. Evaluate the different Dynamic Factors of Environment.
- 17. Elaborate the Fundamental issues captured in PESTLE.
- 18. Examine the role of Government in Business Environment in India.
- 19. Evaluate the Industrial Policies and Promotion Schemes related to Business Environment in India.
- 20. Discuss the role of Central Bank in Economic Development of a Country.
- 21. How do social and cultural factors affects businesses in India? Elaborate
- 22. Describe the types of Technology Transfers adopted by Indian Business Firms.
- 23. Explain the history of Patent Law in India.

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M.B.A. DEGREE EXAMINATION, NOVEMBER – 2022

First Semester

Logistics and Supply Chain Management

(CBCS – 2022 onwards) Time: 3 Hours Maximum: 75 M Part A Answer all questions. 1. Logistics is the part of supply chain involved with forward and reverse flow of	N
Part A $(10 \times 1 = 10)$ Answer all questions. 1. Logistics is the part of supply chain involved with	
Answer all questions. 1. Logistics is the part of supply chain involved with	arks
1. Logistics is the part of supply chain involved with	= 10)
for ward and reverse flow of	the
(a) Goods (b) Services	
(c) Cash (d) All the Above	
2. Which of the following is not a part of supply c management system?	hain
(a) Supplier (b) Manufacturer	
(c) Information flow (d) Competitor	
3. Which of the following is not an area to responsibil for a logistics manager?	ities
(a) Inventory (b) Marketing	
(c) Warehousing (d) Purchasing	

4.	Whi	ich of the following	g is not	a component of	4 PL?			
	(a)	Information						
	(b)	Control room						
	(c)	Resource provide	ers					
	(d)	Recycling						
5.	$\overline{\mathrm{repl}}$	is the enishment order a		hat elapses befeiving the mate	_			
	(a)	Replenishment t	ime					
	(b)	Lead time						
	(c)	Idle time						
	(d)	Replacement Tir	ne					
6.		refers t	to supp	oly chain practic	ces that strive			
	to reduce energy and environmental footprints in terms of freight distribution.							
	(a)	Inbound Logistic	es					
	(b)	Green Logistics						
	(c)	Outbound Logist	tics					
	(d)	SCM						
7.	Bre	ak-Bulk warehous	e perfo	orms	function.			
	(a)	Warehousing	(b)	Collecting				
	(c)	Sorting	(d)	Purchasing				
8.		is conce	erned v	with a firm's ab	ility to satisfy			
	is concerned with a firm's ability to satisfy customer's requirement in timely manner.							
	(a)	Minimum Inven	tory					
	(b)	Quality						
	(c)	Price stabilization	on					
	(d)	Rapid Responses	8					
			2		R7764			

(a)	Inventory (b) Warehouse	
(c)	Safety stock (d) Procuremen	t
—at	are used for vertical terials, generally from one floor to anot	
(a)	Conveyor belts (b) Cranes	
(c)	Elevators (d) Towlines	
	Part B	$(5 \times 5 = 25)$
A	Answer all questions, choosing either (a	a) or (b).
(a)	Describe the Scope of Logistics.	
	Or	
(b)	Infer the Objectives of Logistics Mar	nagement.
(a)	Show the Nature of Supply Chain M	anagement.
	Or	
(b)	Write the four areas in Supply Chair	n Management.
(a)	Examine the Role of Material handli	ing in Logistics.
	Or	
(b)	Interpret the Benefits of Logistic System.	ics Information
(a)	State the Functions of Third-providers.	party logistic
	Or	
(b)	Outline the Critical issues in L Contrast.	ogistics Servic
	3	R7764

15. (a) Why is Benchmarking important in Supply Chain? Describe.

Or

(b) Distinguish between Lean and Agile Supply Chain

Part C $(5 \times 8 = 40)$

Answer any **five** questions each answer should not exceed two pages.

- 16. Describe the Role and Importance of Customer Service in Logistics.
- 17. Elaborate the decision Phases in Supply Chain Management.
- 18. What are the value-added services of a Warehouse? Explain.
- 19. Discuss the Evolution and Growth of Supply Chain Management in India.'
- 20. Categorize the Types of Inventory Management with Applications.
- 21. Illustrate the Components of the Logistics information System.
- 22. Discuss the Pros and Cons of Logistics Outsourcing.
- 23. How a Flexible Supply Chain Delivers Value? Elucidate.

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M.B.A. DEGREE EXAMINATION, NOVEMBER - 2022

First Semester

Logistics and Supply Chain Management OPERATIONS RESEARCH

(CBCS - 2022 onwards)

Time: 3 Hours Maximum: 75 Marks

Part A $(10 \times 1 = 10)$

Answer all questions.

- 1. Operations research analysts do not
 - (a) Predict future operations
 - (b) Build more than one model
 - (c) Collect relevant data
 - (d) Recommend decision and accept
- 2. For analysing a problem, decision makers should normally study its
 - (a) Quantitative aspect
 - (b) Qualitative aspects
 - (c) Both (a) and (b)
 - (d) Neither (a) nor (b)

	(a)	Primal	(b)	Simplex		
	(c)	Integer liner	(d)	Duality		
5.	Whe	en an assignment tion, then it is	pro	blem has more than one		
	(a)	Multiple Optimal s	oluti	on		
	(b)	The problem is unb	alan	ced		
	(c)	Maximization prob	lem			
	(d)	Balanced problem				
6.	An a	assignment problem	will l	have the following solution:		
	(a)	Optimal	(b)	Unique		
	(c)	Multiple	(d)	All of the above		
7.	Which one of these variables is a binomial random variable?					
	(a)	Time it takes a randomly selected student to complete a multiple choice exam				
	(b)	Number of textbooks a randomly selected student bought this term				
	(c)	Number of women taller than 68 inches in a random sample of five women				
	(d)	Number of CDs a randomly selected person owns				
			2	R7765		

3.

4.

(a)

(b)

(c)

(d)

A constraint in a LP model restricts

Value of an objective function

Use of the available resources

The original linear programming problem is known as

Value of a decision variable

All of the above

——— problem.

	(a)	The probability $P(X = k)$ when X is a binomial random variable with large n.						
	(b)	The probability $P(X \le k)$ when X is a binomial random variable with large n.						
	(c)	The probability $P(X = k)$ when X is a normal random variable with small n.						
	(d)	The probability $P(X \le k)$ when X is a normal random variable with small n.						
9.		ank transaction or grocery store checkout counter is xample of ———————————————————————————————————						
	(a)	Single Phase (b) Double Phase						
	(c)	Multiple Phase (d) Entry Exit						
10.	that	is one of the operations research tools can be used to assist management in making sions under uncertainty.						
	(a)	Scheduling (b) Decision tree						
	(c)	Simulation (d) Queuing theory						
		$\mathbf{Part} \; \mathbf{B} \qquad \qquad (5 \times 5 = 25)$						
	A	Part B $(5 \times 5 = 25)$ nswer all questions, choosing either (a) or (b).						
11.								
11.		nswer all questions, choosing either (a) or (b).						
11.		nswer all questions, choosing either (a) or (b). Scan the development of operations research.						
11.12.	(a) (b)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or						
	(a) (b)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management?						
	(a) (b)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management? Write the structure of Linear Programming Model.						
	(a)(b)(a)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management? Write the structure of Linear Programming Model. Or						
	(a)(b)(a)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management? Write the structure of Linear Programming Model. Or Sum up the limitations of Liner Programming.						
	(a)(b)(a)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management? Write the structure of Linear Programming Model. Or Sum up the limitations of Liner Programming.						
	(a)(b)(a)	nswer all questions, choosing either (a) or (b). Scan the development of operations research. Or What are the scope of OR in Management? Write the structure of Linear Programming Model. Or Sum up the limitations of Liner Programming.						

The normal approximation to the binomial distribution is most useful for finding which of the following?

8.

13.	(a) What is unbalanced assignment problem?					
		Or				
	(b)	How is the Hungarian method for obtaining solution if the matrix is rectangular?				
14.	(a)	Explain the advantages of Probability in business management.				
		Or				
	(b)	Explain any ONE of probability distributions.				
15.	(a)	Explain the characteristics of MMI queuing model.				
		Or				
	(b)	Highlight the advantages of simulations.				
		Part C $(5 \times 8 = 40)$				
		Answer any five questions.				
16.		porate various types of mathematical models of rations Research.				
17.	Elal	porate the role of computers in OR.				
18.	Defi	ine and explain the following:				
	(a)	Optimum Solution				
	(b)	Feasible Solution				
	(c)	Unrestricted Variable.				
		4 R7765				

13.

19. A manufacturer of garments plans to add 4 regional warehouses to meet increased demand. The following bids in lakhs of rupees have been for construction of the warehouses.

Contractor	warehouse					
	A	В	\mathbf{C}	D		
1	30	27	31	39		
2	28	18	28	37		
3	33	17	29	41		
4	27	18	30	43		
5	40	20	27	36		

A manufacture of garments plans to add four regional warehouse to meet increased demand. Find the optimum solution.

- 20. Elaborate the steps of MODI method.
- 21. On an average. 6 customers arrive in a coffee shop per hour. Determine the probability that exactly 3 customers will reach in a 30 minute period, assuming that the arrivals follow Poisson distribution.
- 22. After your yearly checkup, the doctor has bad news and good news. The bad news is that you tested positive for a serious disease, and that the test is 99% accurate (i.e. the probability of testing positive given that you have the disease is 0.99, as is the probability of testing negative given you don't have the disease) The good news is that this is a rare disease, striking only I in 10,000 people. Why is it good news that the disease is rare? What are the chances that you actually have the disease?

23. Trucks at a single platform weigh-bridge arrive according to Poisson probability distribution. The time required to weigh the truck follows an exponential probability distribution. The mean arrival rate is 12 trucks per day, and the mean service rate is 18 trucks per day. Determine the following: (a) What is the probability that no trucks are in the system? (b) What is the average number of trucks waiting for service? (c) What is the average time a truck waits for weighing service to begin? (d) What is the probability that an arriving truck will have to wait for service?