

**Code: 7P1C27**

M.B.A. II Semester Supplementary Examinations January 2020

**Operations Research**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. a) What is Operations Research? Write various characteristics of Operations Research 6M  
 b) Solve the following LPP using graphical method.

Maximize (Z) =  $40X_1 + 35X_2$

Subject to  $2X_1 + 3X_2 \leq 60,$

$4X_1 + 3X_2 \leq 96,$

$X_1, X_2 \geq 0$

6M

**OR**

2. a) Write a brief note on 'sensitivity analysis'. 4M  
 b) Solve the following LPP using Simplex Method.

Maximize (Z) =  $10X_1 + 15X_2 + 20X_3$

Subject to  $2X_1 + 4X_2 + 6X_3 \leq 24,$

$3X_1 + 9X_2 + 6X_3 \leq 30,$

$X_1, X_2, X_3 \geq 0$

8M

**UNIT-II**

3. a) Explain the mathematical model of transportation problem 6M  
 b) What is unbalanced Transportation Problem? Explain the procedure for converting unbalanced transportation problem to balanced problem. 6M

**OR**

4. Find IBFS to the following transportation problem using (i) North-West Corner Method; (ii) Matrix Minima method; and (c) Vogel's Approximation Method.

	Destinations				
Sources	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	Supply
S <sub>1</sub>	23	27	16	18	30
S <sub>2</sub>	12	17	20	51	40
S <sub>3</sub>	22	28	12	32	53
Demand	22	35	25	41	123

12M

**UNIT-III**

5. a) Write the mathematical model of assignment problem. 4M  
 b) In a manufacturing firm, four different jobs can be done on four different machines. The matrix shown in the following table gives the costs (in rupees) of processing job 'i' on machine 'j'. How should the jobs be assigned to the various machines so that the total cost is minimized?

Job	Machines			
	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	M <sub>4</sub>
J <sub>1</sub>	5	7	11	6
J <sub>2</sub>	8	5	9	6
J <sub>3</sub>	4	7	10	7
J <sub>4</sub>	10	4	8	3

8M

**OR**

6. A salesman wants to visit four cities A, B, C and D. He does not want to visit any city twice before completing the tour of all the cities and wishes to return to his home city, the starting station. Cost of going from one city to another in rupees is given in the following table. Find the least cost route.

		To city			
		1	2	3	4
From city	1	0	30	80	50
	2	40	0	140	30
	3	40	50	0	20
	4	70	80	130	0

12M

Important Note: 1. On completing your answers. Compulsorily draw diagonal cross line on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8=50, will be treated as malpractice.

UNIT-IV
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7. a) Explain the 'Dominance property'. 4M  
 b) Using the algebraic method, find the best strategy and value of game given below:

Payoff matrix for Problem

		Player - B		
		I	II	III
Player - A	I	-1	-2	8
	II	7	5	-1
	III	6	0	12

8M

OR

8. a) Explain the basic queuing process. 4M  
 b) At a one-man barber shop, customers arrive according to Poisson distribution with a mean arrival rate of 5 per hour and the hair cutting time is exponentially distributed, with an average haircut taking 10 minutes. It is assumed that because of his excellent reputation, customers are always willing to wait. Calculate the following.  
 (i) Average number of customers in the shop and the average number of customers waiting for a haircut.  
 (ii) The per cent of time an arrival can walk right in without having to wait.  
 (iii) The percentage of customers who have to wait prior to getting into the barber's chair. 8M

UNIT-V
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9. Draw a network corresponding to the following information. (i) Obtain the Early Start Time (EFT), Latest Finishing Time (LFT) of the activities; (ii) Identify the Critical Path (iii) Determine total project length.

Activity	1-2	1-3	2-6	3-4	3-5	4-6	5-6	5-7	6-7
Duration	4	6	8	7	4	6	5	19	20

12M

OR

10. The following table shows the activities and other characteristics of a project.

Activity	Predecessor	Time in Weeks		
		$T_o$	$T_m$	$T_p$
A	--	4	7	16
B	--	1	5	15
C	A	6	12	30
D	A	2	5	8
E	C	5	11	17
F	D	3	6	15
G	B	3	9	27
H	E,F	1	4	7
I	G	4	19	28

- (i) Draw the PERT Network.  
 (ii) Identify the critical path.  
 (iii) Determine the mean project completion time.  
 (iv) Find the probability that the project is completed in 36 weeks. 12M

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Hall Ticket Number :

**R-17**

**Code: 7P1A22**

M.B.A. II Semester Supplementary Examinations January 2020

**Financial Management**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. What is Financial Management? Explain the role of the Finance manager

**OR**

2. What is the Objective in Financial Management? Explain in detail.

**UNIT-II**

3. Explain different DCF techniques of Capital Budgeting

**OR**

4. Compute PBP and ARR for the projects P & Q

End of the Year	Cash Flows (Rs.)	
	Project P	Project Q
0	(2000)	(2000)
1	500	1300
2	800	800
3	3000	2000

**UNIT-III**

5. What is Working Capital Management? Explain the need for efficient Working Capital management

**OR**

6. What is Receivables management? Explain its importance

**UNIT-IV**

7. Explain MM Theory of Capital Structure

**OR**

8. Find out the cost of debt in case of the following debenture issue

FV	Coupon	TTM	Issue	Redemption
100	9.15%	3	@ a discount of 10%	@ a premium of 10%

**UNIT-V**

9. Explain different types of Dividends with examples.

**OR**

10. Explain Walter and Gordon Dividend theories

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Hall Ticket Number :

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**R-17**

**Code: 7P1A21**

M.B.A. II Semester Supplementary Examinations January 2020

## **Human Resource Management**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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### **UNIT-I**

1. Define human resource management. Explain the nature and scope of human resource management.

**OR**

2. Describe the changing roles and Responsibilities of HR Department

### **UNIT-II**

3. Diagrammatically represent steps in human resource planning and explain them.

**OR**

4. Explain factors affecting Human Resource Planning.

### **UNIT-III**

5. Describe various techniques related to training.

**OR**

6. What is performance management? Explain the steps in performance management.

### **UNIT-IV**

7. What is Industrial Relation? Explain its objectives and principles.

**OR**

8. Explain various stages of person's career?

### **UNIT-V**

9. Explain about work-life balance and talent management?

**OR**

10. Write short notes on
  - a) Employee Retention
  - b) Learning Organizations

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Hall Ticket Number :

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**R-17**

**Code: 7P1A25**

M.B.A. II Semester Supplementary Examinations January 2020

## **Management Information System**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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### **UNIT-I**

1. Explain objectives and components of management information system

**OR**

2. Explain Information System Architecture with suitable example

### **UNIT-II**

3. Describe how computers process data into useful information for problem solving and decision making.

**OR**

4. Discuss about the business benefits of artificial intelligence systems.

### **UNIT-III**

5. Detail various stages of SDLC Highlight the use of computers in every phase of it

**OR**

6. Examine the system engineering methodologies for MIS problem solving.

### **UNIT-IV**

7. Define Business Intelligent Systems. Explain the characteristics and capabilities of Business Intelligent Systems.

**OR**

8. Explain in detail about value chain model.

### **UNIT-V**

9. Write short notes on the following

- a) Worms
- b) Trojan horse
- c) Virus
- d) Spyware

**OR**

10. Describe the roles of firewalls, intrusion detection systems, and antivirus software in promoting security.

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Hall Ticket Number :									
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**R-17**

**Code: 7P1A23**

M.B.A. II Semester Supplementary Examinations January 2020

**Marketing Management**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. List out the approaches to Marketing with examples.

**OR**

2. Discuss modern Marketing Information System.

**UNIT-II**

3. What are the bases of segmenting business market?

**OR**

4. How do you develop and establish a brand positioning?

**UNIT-III**

5. Write short notes on

- a) Product Mix
- b) Product Line

**OR**

6. Explain branding decision with examples.

**UNIT-IV**

7. What are the characteristics of Marketing Communication Mix?

**OR**

8. Examine the channel design decisions.

**UNIT-V**

9. Write short notes on:

- a) Green Marketing
- b) Mobile Marketing

**OR**

10. What are the different types of Marketing Control?

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Hall Ticket Number : 

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**R-17**

**Code: 7P1A24**

M.B.A. II Semester Supplementary Examinations January 2020

**Production and Operations Management**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. Elucidate the nature and scope of Production and Operations Management

**OR**

2. Explain the Role of Production and Operations Manager

**UNIT-II**

3. Elucidate the role of PPC in different types of manufacturing.

**OR**

4. Explain the need and procedure of Industrial safety

**UNIT-III**

5. Explain the different types of layouts.

**OR**

6. Elucidate the material handling principles.

**UNIT-IV**

7. Explain the various factors affecting productivity.

**OR**

8. Elucidate Work Measurement with suitable illustrations.

**UNIT-V**

9. Explain the various costs associated with inventory

**OR**

10. Ten pieces of cloth out of different rolls of equal length contained the following number of defects: 1, 3, 5, 0, 6, 0, 9, 4, 4, 3. Draw a control chart for the number of defects and state whether the process is in a state of statistical control.

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Hall Ticket Number :

**R-17**

**Code: 7P1A26**

M.B.A. II Semester Supplementary Examinations January 2020

**Research Methodology**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. What are the types of research? Explain any FOUR types of research and their uses in business decisions 12M

**OR**

2. Define hypothesis. How hypotheses are formulated? Briefly describe about null and alternate hypothesis. 12M

**UNIT-II**

3. What is research design? Differentiate between before-after without control group and before-after with control group of experimental designs with a suitable illustration. 12M

**OR**

4. What is sample? Explain about the following:  
a) Stratified sampling technique  
b) Clustered sampling technique  
c) Systematic sampling technique 12M

**UNIT-III**

5. Define measurement and scaling. Elucidate the importance of measurement in business research with an illustration. 12M

**OR**

6. Illustrate any TWO methods of scaling techniques and list merits and demerits of each method. 12M

**UNIT-IV**

7. Distinguish between primary data and secondary data. Explain various sources under each type of data. 12M

**OR**

8. What is classification? Narrate the importance of classification and tabulation of data. List different methods of tabulation of the data. 12M

**UNIT-V**

9. Define research report. Explain the principles of making a good research report. 12M

**OR**

10. What is research report presentation? Describe different methods of presentation 12M

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