

Hall Ticket Number :

--	--	--	--	--	--	--	--	--	--	--

R-17

Code: 7P1A26

M.B.A. II Semester Supplementary Examinations January 2019

Research Methodology

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. Define research, explain different types of research. 12M

OR

2. Explain the process of research in detail. 12M

UNIT-II

3. What is research design? Compare and contrast among exploratory, descriptive and causal research designs. 12M

OR

4. Distinguish between probability and non-probability sampling methods. 12M

UNIT-III

5. a) Outline the differences between interview and schedule. 6M
b) What are the issues involved in designing multiple choice questions? 6M

OR

6. Design a mystery shopper observation form to evaluate facility and signage aspects of a retail store environment. 12M

UNIT-IV

7. Define scaling, discuss about Likert scale of rating scale. 12M

OR

8. Explain about paired comparison and rank order method of ranking scales. 12M

UNIT-V

9. Describe the process of research report preparation. Summarize the guidelines for report writing. 12M

OR

10. a) What is a pie chart? For what type of information is it suitable? For what type of information is it not suitable? 6M
b) Explain the role of technology and internet in research work. 6M

Hall Ticket Number :										
----------------------	--	--	--	--	--	--	--	--	--	--

R-15

Code: 5P1A22

M.B.A. II Semester Supplementary Examinations January 2019

Financial Management

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. Write a detailed note on the meaning and functions of financial management. 12M

OR

2. "Wealth maximization is more important than profit maximization." Justify. 12M

UNIT-II

3. Write a detailed note on discounted cash flow techniques of capital budgeting. 12M

OR

4. ABC limited proposes to acquire a machine for Rs 6,00,000 and the particulars are as follows.

- a) Life of the machine = 4 years
- b) Salvage value of the machine at the end of 4 years = Rs 1,00,000 /-
- c) Income per annum before depreciation and tax = Rs 4,00,000/-
- d) Tax rate = 50%
- e) Cost of capital = 20%
- f) Present value factor(PVF) = 20%

Year	Present Value factor(PVF)
1	0.883
2	0.694
3	0.579
4	0.482

12M

UNIT-III

5. Write a detailed note on inventory management. 12M

OR

6. Write a detailed note on receivables management. 12M

UNIT-IV

7. Write a detailed note on NOI theory of capital structure. 12M

OR

8. Write a detailed note on operating and financial leverages. 12M

UNIT-V

9. Write a detailed note on the factors influencing the dividend policy. 12M

OR

10. Write a detailed note on Walter Model of dividend policy. 12M

Hall Ticket Number :

R-17

Code: 7P1C27

M.B.A. II Semester Supplementary Examinations January 2019

Operations Research

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. a) Explain the history of operations research. 4M

- b) Solve the following LP graphically:

$$\text{Maximize } z = 8000x_1 + 7000x_2$$

Subject to

$$3x_1 + x_2 \leq 66$$

$$x_1 + x_2 \leq 45$$

$$x_1 \leq 20$$

$$x_2 \leq 40$$

$$x_1, x_2 \geq 0$$

8M

OR

2. a) Define O.R. and discuss its scope 4M

- b) Use penalty (Big M) method to maximize: $z = 3x_1 - x_2$

Subject to

$$2x_1 + x_2 \geq 2$$

$$x_1 + 3x_2 \leq 3$$

$$x_2 \leq 4$$

$$x_1, x_2 \geq 0$$

8M

UNIT-II

3. a) What is degeneracy in transportation problems? How is it resolved? 4M

- b)

	W1	W2	W3	W4	Supply
F1	19	30	50	10	7
F2	70	30	40	60	9
F3	40	8	70	20	18
Demand	5	8	7	14	

Obtain the optimal solution to above TP.

8M

OR

4. a) What is the difference between Assignment Problem and Transportation Problem? 4M

- b) Find optimal solution to the following TP using VAM-MODI method each cell value being the unit cost

	D ₁	D ₂	D ₃	D ₄	D ₅	supply
C ₁	35	41	28	16	20	285
C ₂	14	21	28	30	15	145
C ₃	45	18	17	29	26	165
Demand	125	125	100	100	175	

8M

UNIT-III

5. a) Write the steps for solving a A.P. by Hungarian method 4M
 b) A medical representative has to visit five stations A, B, C, D and E. He does not want to visit any station before completing his tour of all the stations and wishes to return to the starting Station. Costs of going from one station to other station are given below. Determine the optimal route.

	A	B	C	D	E
A	∞	2	4	7	1
B	5	∞	2	8	2
C	7	6	∞	4	6
D	10	3	5	∞	4
E	1	2	2	4	∞

8M

OR

6. a) What is an Assignment Problem? 4M
 b) Solve the following Assignment Problem

	P	Q	R	S
A	5	3	4	7
B	2	3	7	6
C	4	1	5	2
D	6	8	1	2

8M

UNIT-IV

7. a) Explain the difference between pure strategy and mixed strategy. 4M
 b) A and B play a game in which each has three coins a 5p, a 10p and a 20p. Each player selects a coin without the knowledge of the other's choice. If the sum of the coins is an odd amount, A and B's coin; if the sum is even, B wins A's coin. Find the best strategy for each player and the value of the game. 8M

OR

8. In a bank 4 cash counters are opened for drawing money. On average 50 persons arrive in 5 hour a day. Each cashier has to spend 15 minutes on the average on an arrival. If the arrivals are poissonally distributed and service times are according to exponential distribution. Determine
- Average number of customers in the system
 - Average number of customers waiting in the system.
 - Average time of a customer's spend in the system.
 - The probability that a customer has to wait before he gets service. 12M

UNIT-V

9. a) Write applications of PERT/CPM techniques. 4M
 b) Describe the role of network models of operations research the managerial decision making. 8M

OR

10. a) State Rules for Network Diagram 4M
 b) A project schedule has the following characteristics. Construct the PERT network and find the critical path and time duration of the project.
- | | | | | | | | | | | | |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Activity | 1-2 | 1-4 | 1-7 | 2-3 | 3-6 | 4-5 | 4-8 | 5-6 | 6-9 | 7-8 | 8-9 |
| Time | 2 | 2 | 1 | 4 | 1 | 5 | 8 | 4 | 3 | 3 | 5 |
- 8M

Code: 5P2C23

M.C.A. II Semester Supplementary Examinations January 2019

Numerical Methods

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. a) Perform four iterations of the Newton-Rapson method to obtain the approximate value of $(17)^{\frac{1}{3}}$ starting with the initial approximation $x_0=2$. 6M
- b) Use the Secant method to determine the root of the equation $\cos x - xe^x = 0$. 6M

OR

2. Perform two iterations with the Muller method for the equation $\ln x - x + 3 = 0$, $x_0 = 1/4, x_1 = 1/2, x_2 = 1$. 12M

UNIT-II

3. a) Solve the following equations by using the Gauss elimination method. 6M
 $2x + 2y + z = 1, 4x + 2y + 3z = 2, x + y + z = 3$.
- b) Solve the following equations by using the Gauss seidal method. 6M
 $4x + y + z = 2, x + 5y + 2z = -6, x + 2y + 3z = -4$.

OR

4. Find the largest Eigen value and its Eigen vector of $A = \begin{bmatrix} 1 & 2 & -2 \\ 1 & 1 & 1 \\ 1 & 3 & -1 \end{bmatrix}$ by using power method. 12M

UNIT-III

5. Find the least squares approximation of second degree for the discrete data 12M
- | | | | | | |
|--------|----|----|---|---|----|
| x | -2 | -1 | 0 | 1 | 2 |
| $f(x)$ | 15 | 1 | 1 | 3 | 19 |

OR

6. Find the correlation coefficient between x and y from the given data: 12M
- | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| x | 78 | 89 | 97 | 69 | 59 | 79 | 68 | 57 |
| y | 125 | 137 | 156 | 112 | 107 | 138 | 123 | 108 |

UNIT-IV

7. State appropriate interpolation formula which is to be used to calculate the values of $\sqrt{7.5}$ from the following data and hence evaluate it from the given data 12M
- | | | | | |
|----------------|-------|-------|-------|-------|
| x | 5 | 6 | 7 | 8 |
| $y = \sqrt{x}$ | 2.236 | 2.449 | 2.646 | 2.828 |

OR

8. Use Gauss backward interpolation formula to find $f(32)$ given that $f(25)=0.2707, f(30)=0.3027, f(35)=0.3386, f(40)=0.3794$. 12M

UNIT-V

9. Find the value of y for $x = 0.4$ by Picard's method, given that $\frac{dy}{dx} = x^2 + y^2, y(0) = 0$. 12M

OR

10. Apply the fourth order R-K method to find $y(0.1)$ and $y(0.2)$, given $y' = xy + y^2, y(0) = 1$. 12M

Hall Ticket Number :

--	--	--	--	--	--	--	--	--	--	--

R-15

Code: 5P1A24

M.B.A. II Semester Supplementary Examinations January 2019

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)

UNIT-I

1. Define production and operations management and write about nature and scope of production and operations management.

OR

2. Explain the types of manufacturing systems.

UNIT-II

3. What is production planning and control? What are its different stages? Explain.

OR

4. What is break down maintenance? How is it different from preventive maintenance? Explain.

UNIT-III

5. What are the material handling principles?

OR

6. Discuss the types of layouts.

UNIT-IV

7. Define productivity. Also explain the ways and means of improving the productivity.

OR

8. What are the different recording techniques used in the method study? Explain each of them in brief.

UNIT-V

9. Explain about the Just in-Time production.

OR

10. What is control chart? Bring out the steps involved in the construction of X-chart and R - chart.
