

Hall Ticket Number :

R-15

Code: 5P1A27

M.B.A. II Semester Supplementary Examinations January 2018

**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 are the advantages and disadvantages of operation research models? 6M  
 b) Explain the scope and methodology of operation research? 6M

**OR**

2. a) Discuss the importance of operations research in the decision making process. 6M  
 b) Explain the steps involved in the solution of operation research problem. 6M

**UNIT-II**

3. a) What is meant by a feasible solution of LP problem? 6M  
 b) Use the graphical method to solve the following LP problem  
 Maximize  $Z=15x_1 + 10x_2$   
 Subject to its constraints  
 (i)  $4x_1 + 6x_2 \leq 360$  (ii)  $3x_1 + 0x_2 \leq 180$  (iii)  $0x_1 + 5x_2 \leq 200$  6M

**OR**

4. Find the initial basic feasible solution of LP problem by using simplex method  
 Max  $z= 16 x_1 + 17 x_2 + 10 x_3$   
 Subject to its constraints  
 $x_1+x_2+4x_3 \leq 2000$ ,  $2x_1 + x_2+x_3 \leq 3600$ ,  $x_1+2x_2+2x_3 \leq 2400$  12M

**UNIT-III**

5. a) Explain the mathematical model of transportation problem. 6M  
 b) What are the characteristics of transportation problem of linear programming? 6M

**OR**

6. a) What is an assignment problem? Give two applications. 6M  
 b) Five men are available to do five different jobs. From past records, the time (in hours) that each man taken to do each job is known and is given in the following table

	jobs					
	I	II	III	IV	V	
Men	A	2	9	2	7	1
	B	6	8	7	6	1
	C	4	6	5	3	1
	D	4	2	7	3	1
	E	5	3	9	5	1

6M

<b>UNIT-IV</b>
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7. a) Define (i) payoff matrix (ii) Pure and mixed strategies (iii) Saddle point (iv) Optimal strategy (v) two-person zero sum game. 6M
- b) Solve the game by using algebraic method whose pay off matrix is given below.

	Player B			
Player A	B1	B2	B3	B4
A1	3	2	4	0
A2	3	4	2	4
A3	4	2	4	0
A4	0	4	0	8

6M

**OR**

8. a) Explain the theory of dominance in the solution of rectangular games. 6M
- b) Explain the principle of dominance in the game theory and solve the following game.

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

6M

<b>UNIT-V</b>
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9. a) Explain the following in the context of project management  
(i) activity variance (ii) Project variance 6M
- b) Explain the following terms in PERT  
(i) three time estimates (ii) expected time (iii) Activity variance  
(iv) Optimistic time (v) pessimistic time (vi) most likely time 6M

**OR**

10. The time and cost estimates and precedence relationship of the different activities constituting a project are given below

activity	predecessor activity	Time(in weeks)		Cost(in Rs.)	
		normal	crash	normal	Crash
A	--	3	2	8,000	19,000
B	--	8	6	600	1,000
C	B	6	4	10,000	12,000
D	B	5	2	4,000	10,000
E	A	13	10	3,000	9,000
F	A	4	4	15,000	15,000
G	F	2	1	1,200	1,400
H	C,E,G	6	4	3,500	4,500
I	F	2	1	7,000	8,000

- a. Draw a project network diagram and find the critical path.
- b. If a dead line of 17 weeks is imposed for completion of the project, what activities will be crashed. What would be the additional cost and what would be critical activities of crashed network after crashing. 12M

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**R15**

**Code: 5P1A24**

M.B.A. II Semester Supplementary Examinations January 2018

**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. 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. Explain about the aggregate planning in production planning and control.

**OR**

4. Draw the Gantt charts with explanation in production planning and control.

**UNIT-III**

5. What are the material handling principles?

**OR**

6. Discuss the types of layouts.

**UNIT-IV**

7. Explain about the factors affecting in productivity.

**OR**

8. Discuss about the work measurements in productivity.

**UNIT-V**

9. Explain about the Just in-Time production.

**OR**

10. Elucidate total quality management.

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**R-15**

**Code: 5P1A22**

M.B.A. II Semester Supplementary Examinations January 2018

### **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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Note: PV & FV tables are to be provided

#### **UNIT-I**

1. Write a brief note on organization of finance function of a hypothetical company. 12M

**OR**

2. Compute the present value of the following future cash inflows, assuming a required rate of 10% p. a.
- a) Rs.100 a year for years 5 through 10 and
  - b) Rs.100 a year for years 1 through 3, nil in years 4 through 5 and Rs.100 a year for years 6 through 10. 12M

#### **UNIT-II**

3. What is NPV? How is it different from Pay back period method? 12M

**OR**

4. Sulabh International evaluating a project whose expected cash flows are as follows:

Year	Cash Flows (Rs.)
0	-10,00,000
1	1,00,000
2	2,00,000
3	3,00,000
4	6,00,000
5	3,00,000

- What is the NPV of the project if the discount rate is 12% for year 1 and rises every year by 1%? 12M

#### **UNIT-III**

5. What is cost of equity? What are the ways of calculating and How? 12M

**OR**

6. The shares of a chemical company are selling at Rs.20 per share. The firm had paid dividend at Rs.2 per share last year. The estimated growth of the company is approximately 5% p.a.
- a. Determine the cost of equity capital of the company
  - b. Determine the estimated market price of the equity shares if the anticipated growth rate of the firm i.Rises to 8%, & ii. Falls to 3%. 12M

<b>UNIT-IV</b>
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7. What is leverage? Explain various types of leverages with their significance 12M

**OR**

8. A firm's sales, variable costs and fixed cost amount to Rs.75,00,000 Rs.42,00,000 and Rs.6,00,000 respectively. It has borrowed Rs.45,00,000 at 9% and its equity capital totals Rs.55,00,000.
- a. What is the firm's ROI?
  - b. Does it have favorable FL
  - c. If the firm belongs to an industry whose asset turnover is 3, does it have a high or low asset turnover?
  - d. What are the OL, FL and CL of the firm?
  - e. If the sales drop to Rs.50,00,000 what will the new EBIT be?
  - f. At what level of sales, will the EBT of the firm equal to zero? 12M

<b>UNIT-V</b>
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9. The assumptions underlying the dividend irrelevance hypothesis of Modigliani Miller are unrealistic. Explain 12M

**OR**

10. Expedent Ltd. Had 50,000 equity shares of Rs.10 each outstanding on January 1. The shares are currently being quoted at par in the market. The company now intends to pay a dividend of Rs.2 per share for the current calendar year. It belongs to a risk class whose appropriate capitalization rate is 15%. Using Modigliani Miller model and assuming no taxes, ascertain the price of the company's share as it is likely to prevail at the end of the year a. when dividend is declared, and b. when no dividend is declared. C. Also, find out the number of new equity shares that the company must issue to meet its investment needs of Rs.2 lakh, assuming a net income of Rs.1.1 lakh and also assuming that the dividend is paid. 12M

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**R-15**

**Code: 5P1A21**

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### **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 HRM? Explain the functions of Human Resource Management?

**OR**

2. What are the characteristics of an effective HR manager in the present business scenario?

#### **UNIT-II**

3. Briefly explain the concept of human resource planning. Describe human resource planning process.

**OR**

4. Briefly explain the process of selection?

#### **UNIT-III**

5. What are various levels of participative management? Describe the techniques of participative management.

**OR**

6. Define Performance Management? What are the approaches to performance management?

#### **UNIT-IV**

7. Explain various stages of person's career?

**OR**

8. What is 3P compensation system? Discuss recent developments in compensation management in Indian business organizations.

#### **UNIT-V**

9. What is knowledge management? Briefly explain the process of knowledge management in learning organizations.

**OR**

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

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**Code: 5P1A25**

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**Management Information Systems**

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. Define system. Explain the importance of human resource information system in the changing industrial scenario.

**UNIT-II**

3. What is GDSS? How it works on the decision making of the management?

**OR**

4. What is Artificial Intelligence? Differentiate between Knowledge work system and Expert system

**UNIT-III**

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

**OR**

6. Define system. Explain its features and types.

**UNIT-IV**

7. Explain various components of Strategic Information Planning.

**OR**

8. Define value chain and explain its application to management.

**UNIT-V**

9. What is vulnerability? Briefly explain the classification and consequences of vulnerabilities.

**OR**

10. What is meant by Firewalls? Explain in detail

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