MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)

Gundlapochampally (H), Maisammaguda (V), Medchal (M). Medchal-Malkajgiri (Dist), Hyderabad

MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: <u>QUANTITATIVE ANALYSIS & DECISION MAKING</u>

Branch: **MBA**

Time: **3 hours**   Max. Marks: **60**

PART-A

Answer the following Question   **1x20M=20M**

1. Answer the following (each question carries 10 Marks)

    a. A manufacturing unit of super Scooters Ltd. Products three components C1, C2 and C3 that are used in production of scooters. Each component can be produced on either one or two machine A and B. The time required to produce one unit of each component on a machine is presented here:

    Time in hours Component Machine "A" Machine "B" C1 0.5 0.6 C2 0.7 0.8 C3 0.9 1.05

	Time in Hours	
Component	Machine A	Machine B
C1	0.6	0.7
C2	0.8	0.9
C3	0.9	1.06

    The operating cost is Rs. 6 per hour for machine M and Rs. 4 for machine N. the main production centre of the company has sent the requirements for at least 80 units of C1 and C2 each, and not less than 50 units of C3. Each machine can be operated for 8 hours per day. It has been informed that the machines are due for repairs just after 10 days so that only 80 hours are available on each machine. If the manufacturing unit wishes to minimize the operating cost, your are required to formulate the above problem as an LPP.

    b. Write the Simplex algorithm for Maximization of LPP?

PART-B

Answer any FIVE questions of the following   **5x8 Marks = 40 M**

1. What are the essential characteristics of Operations Research? Explain with suitable examples. Point out its limitations, if any.

2. Discuss the scope of Operations Research, and brief on opportunities and short comings of using an operations research model.

3. There are four jobs to be assigned to the machines. Only one could be assigned to one machine. The amount of time in hours required for the jobs in a machine are given in the following matrix.

Jobs/ Machines	A	B	C	D	E
1	4	3	6	2	7
2	10	12	11	14	16
3	4	3	2	1	5
4	8	7	6	9	6

Find the optimum assignment of jobs to the machines to minimize the total processing time and also find for which machine no job is assigned. What is the total processing time to complete all the jobs?

4. What is meant by a queue? Discuss various queuing models with relevant examples.

5. A client asks an estate agent to sell three properties A, B and C for him and agrees to pay him 5% commission on each sale. He specifies certain conditions. The estate agent must sell property A first, and this he must do within 60 days. If and when A is sold, the agent receives his 5% commission on that sale. He can then either back out at this stage or nominate and try to sell one of the remaining two properties within 60 days. If he does not succeed in selling the nominated property in that period, he is not given the opportunity to sell the other. If he does sell it in the period, he is given the opportunity to sell the third property on the same conditions. The following table summarizes the prices; selling costs (incurred by the estate agent whenever a sale is made) and the estate agents estimated probability of making a sale.

Property	Prices of Property (Rs.)	Selling Costs (Rs.)	Probability of Sale
A	12,000	400	0.7
B	25,000	225	0.6
C	50,000	450	0.5

a) Draw an appropriate decision tree for the estate agent.
b) What is the estate agents best strategy under EMV approach?

6. Describe a business situation where a decision maker faces a decision under uncertainty and explain various quantitative methods which are useful for decision making under uncertainty.

7. Answer the following

a. State the differences between Queuing Model and FCFS
b. What is a decision tree and construct a decision tree with an illustration

	MR18

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: <u>MARKETING MANAGEMENT</u>

Branch: **MBA**

Time: **3 hours**   Max. Marks: **70**

PART-A

Answer All Questions   **5 X 4M = 20 Marks**

1. Explain the importance of marketing in the present business scenario.

2. What is a product line? What are the methods of product line extension?

3. What is segmentation? What are the requirements of effective segmentation?

4. What are distribution channels? What are the uses of distribution channels to marketers?

5. What is WOM ? How it is effective in marketing?

PART-B

Answer All Questions   **5X10M=50 Marks**

1. What is marketing environment? What are its components? Explain.

(OR)

2. What is green marketing? What are the advantages and issues of green marketing?

3. What is consumer behavior? Explain the model of consumer behavior?

(OR)

4. Explain the stages of new product development in detail.

5. What are consumer markets? How are consumer markets segmented?

(OR)

6. Explain how organizations determine the segments to be targeted.

7. What are   a) Vertical marketing systems   b) Horizontal marketing systems   and
                      c) Hybrid marketing systems. Explain

(OR)

8. Explain the process of communication with the help of a diagram in detail.

9. What is the "c" for price in the 4Cs of marketing? Explain how pricing is a major decision in marketing of products or services for an organization.

(OR)

10. Explain about   a)Relationship marketing   b)Social marketing

Code No.: **8B202**

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: **FINANCIAL MANAGEMENT**

Branch: **MBA**

Time: **3 hours**   Max. Marks: **70**

PART-A

Answer All Questions   **5 X 4M = 20 Marks**

1. Explain the concept of Time Value of money.
2. What is a capital Budgeting? List out the techniques of Capital Budgeting.
3. Explain EBIT – EPS Analysis?
4. What is a Bonus share? When they Issued?
5. What is a Cash Budget?

PART-B

Answer All Questions   **5X10M=50 Marks**

1. What do you mean by Financial Management? Discuss the approaches to Finance functions?

<div style="text-align:center">(OR)</div>

2. Explain the Nature and scope of Financial Management?

3. A project requires an investment of Rs.5.00.000 and has a scrap value of Rs. 20,000 after five years. It is expected to yield profits after Depreciation and taxes during the five years amounting to Rs.40,000, Rs.60,000, Rs.70,000,Rs50,000 and Rs20,000. Calculate the average rate of return of the investment.

<div style="text-align:center">(OR)</div>

4. Define Cost of Capital? Discuss in detail the steps Involved in Computation of WACC?
5. Calculate the operating . financial and combined leverage from the Following information :

	Rs.
Interest	5,000
Sales	50,000
Variable Cost	25,000
Fixed Cost	15,000

<div style="text-align:center">(OR)</div>

6. Explain Financial, Operating and combined leverages?

7. ABC Ltd belong to a risk class for which the appropriate capitalization Rate is 10% it currently has outstanding 5,000 shares selling at Rs.100 each. The firm is contemplating the declaration of dividend of Rs.6 per share at the end of the current financial year. The company expects to have a net income of Rs.50,000 and has a proposal for making new investments of Rs.1,00,000. Show that under the MM hypothesis, the payment of dividend does not effect the value of the firm.

<div style="text-align:center">(OR)</div>

8. Explain In Detail Gordian's Dividend Policy.

9. What is a working Capital? Distinguish between Gross Working Capital & Net Working Capital?

(OR)

10. Prepare an estimate of working capital requirement from the following Information of a trading concern:

(a)	Project annual sales	1,00,000 units
(b)	Selling Price	Rs.8 per unit
(c)	% age of net profit on sales	25 %
(d)	Average credit period allowed to customers	8 weeks
(e)	Average credit period allowed by suppliers	4 weeks
(f)	Average stock holding in terms of sales requirement	12weeks
(g)	Allow 10% for contingencies	

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: HUMAN RESOURCE MANAGEMENT

Branch: MBA

Time: 3 hours   Max. Marks: 70

PART-A

Answer All Questions   5 X 4M = 20 Marks

1. Write a note on duties of HR Manager.
2. Differentiate between Job enlargement and Job enrichment with example
3. Explain briefly the parameters for evaluating train and Management Development Programs.
4. Write about salient features of Minimum Wages Act.
5. Describe briefly various measures to be taken by the companies regarding employee's safety.

PART-B

Answer All Questions   5X10M=50 Marks

1. Explain the challenges of HRM due to economic challenges and brief on HR Scorecard developed by TVRLS India.

OR

2. Discuss the different trends in the nature of work in the present scenario.

3. Differentiate recruitment and selection? Explain the importance of recruiting diverse   workforce in the organization.

OR

4. What is an interview? Explain the interview process and the errors that occur in an interview.

5. Explain the different methods of training with examples.

OR

6. Explain the role of performance management system in making decisions on compensation, promotion & training.

7. Brief about the employee in- service Benefits.

OR

8. What is Compensation? Explain the factors that determine the pay structure.

9. Explain the causes of Industrial Disputes and state the salient features of Industrial Disputes Act 1947.

OR

10. What is EEO? Write detailed notes on EEO 1990-1991.

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: **OPERATIONS MANAGEMENT**

Branch: **MBA**

Time: **3 hours**　　　　　　　　　　　　　　　　　　　　　　　　Max. Marks: 70

PART-A

Answer All Questions　　　　　　　　　　　　　　　　　　**5 X 4M = 20 Marks**

1. Write short notes on types of production systems?

2. Explain the concept of Standardization in production?

3. Mention the limitations of product layout.

4. Write short notes on VED and FSN analysis?

5. Differentiate between PERT and CPM.

PART-B

Answer All Questions　　　　　　　　　　　　　　　　　　**5X10M=50 Marks**

1. What is the importance of Production and Operations Management in a developing country?

(OR)

2. Which are the various types of production systems? Write the advantages and disadvantages of batch manufacturing?

3. Elucidate the process of new product development in organizations?

(OR)

4. Explain the importance of process selection design?

5. Explain the importance of Plant location decision? What are the factors need to be considered for plant location?

(OR)

6. What is group Technology layout and to which type of organizations this layout suits better?

7. What is Materials Requirement Planning? How important is it for an organization?

(OR)

8. Explain ABC & XYZ analysis of inventory control in detail.

9. Which are the requirements for effective maintenance management?

(OR)

10. The following times represents activities associated with a project

Activity	A	B	C	D	E	F	G	H	I
t_o	5	18	26	16	15	6	7	7	3
t_p	10	22	40	20	25	12	12	9	5
t_m	8	20	33	18	20	9	10	8	4

Determine.

i) Expected activity time & Variance

ii) The critical path.

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: <u>MANAGEMENT INFORMATION SYSTEM & ERP</u>

Branch: **MBA**

Time: **3 hours**   Max. Marks: **70**

PART-A

Answer All Questions   **5 X 4M = 20 Marks**

1. Explain the structure of Management Information System.

2. Discuss briefly about System Acquisition.

3. What do you mean by Systems Analysis and Design?

4. Define the concept of Business Modelling.

5. ERP improves customer satisfaction – Justify.

PART-B

Answer All Questions   **5X10M=50 Marks**

1. Define MIS. Discuss the Nature, Scope and Importance of MIS.
(OR)
2. Discuss in detail different types of Information Systems.

3. Information Systems Planning is most crucial part in Information Systems Management – Comment.
(OR)
4. Explain the importance of Information System Security and Control.

5. Discuss in detail the stages involved in Information Systems Development.
(OR)
6. What is meant by Systems Design? Explain various methods of Systems Design.

7. Write a short note on the following:
   a) ERP
   b) MRP
   c) MRPII
(OR)
8. Enunciate the reasons for the growth of ERP across world.

9. Explain various benefits of Enterprise Resource Planning.
(OR)
10. Discuss in detail the problems encountered in implementation of ERP.

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: **OPERATIONS RESEARCH**

Branch: **MBA**

Time: **3 hours**   Max. Marks: **70**

PART-A

Answer All Questions   **5 X 4M = 20 Marks**

1. Write the limitation of operations research.
2. Write about Multiple optional solutions in assignment problems.
3. Explain deterministic & probabilistic model of queuing system.
4. Write Decision making under uncertainty.
5. What are the concepts of simulation theory?

PART-B

Answer All Questions   **5X10M=50 Marks**

1. A company manufactures two products P1 and P2. Each product uses lathe and milling machine. The processing time per unit of P1 on the lathe is 5 hours and on the milling machines is 4 hours. The processing time per unit of P2 on the lathe is 10 hours and on the milling machine is 4 hours. The maximum number of hours available per week on the lathe and the milling machine are 60 hours and 40 respectively and profit per unit of selling P1 and P2 are 6 and 8 respectively. Formulate LP model to maximize profit.

                                            OR

2. Solve the following problem graphically

   Maximize $Z=6X_1 + 8X_2$

   Subject to , $5X_1 + 10X_2 \leq 60$

   $\qquad 4X_1 + 4X_2 \leq 40$

   $\qquad X_1 , X_2 \geq 0$

3. Solve the following transportation problem using Vogel's approximation method

To	D1	D2	D3	Supply
A1	10	2	14	100
A2	12	8	12	160
A3	6	4	10	30
Demand	150	40	100	

   Jobs

                                            OR

4. The matrix below shows the cost of assigning a certain worker to a certain job. The objective is to minimize the total cost of the assignment

   JOBS

W1	164	166	138	184
W2	154	74	98	184
W3	22	138	10	172
W4	16	18	196	46

5. Customers arrive at self service departmental stores to make their daily purchases. The store employs one cashier at its counter. 20 customers arrive on an average every 40 minutes while 5 customers leave every 30 minutes after making their purchases. Assuming Poisson distribution for service rate find
    a. Average time a customer spends in the departmental store
    b. Average time customer waits before being served
    c. Average number of customers in the departmental store

OR

6. In a bank with a single server, there are two chairs for waiting customers. On an average, one customer arrives every 20 minutes and each customer takes 10 minutes for getting served. Making suitable assumptions, find
    i. The probability that an arrival will get a chair to sit down
    ii. The probability that an arrival will have to stand
    iii. Expected waiting time of a customer.

7. Mr A has 3 plans, X,Y,Z each needs an initial investment of 20000.probabilities of success of plans X,Y,Z are 0.7,0.8 and 0.9 respectively, Successful result of plan X, planY, plan Z will fetch profit of 120000,70000 and 140000 respectively while failure will cause penalty of 4000,6000 and 2000 respectively. Draw a decision tree and make a choice of any plan.

OR

8. Explain the procedure for EVPI.

9. Solve the game

$$
\begin{array}{c}
 \quad B \\
\begin{array}{c} 1 \quad 3 \quad 1 \\ A \quad 0 \quad \text{-}4 \quad \text{-}3 \\ 1 \quad 5 \quad \text{-}1 \end{array}
\end{array}
$$

OR

10. Cherish bakery keeps stock of a popular brand of cake, previous month sales demand as given below. simulate the demand for first 15 days of the month

Demand(Cake)	0	10	20	30	40	50
No. of days	6	11	5	4	3	1

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MBA II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2019

Subject: **BUSINESS ANALYTICS**

Branch: MBA

Time: **3 hours**   Max. Marks: **70**

PART-A

Answer All Questions   **5 X 4M = 20 Marks**

1. Explain the characteristics of Big data.
2. Discuss the applications of business analytics
3. Differentiate between Continuous Probability Distribution and Discrete Probability Distribution.
4. List out various regression models with specification of equations and examples
5. Elaborate your discussions on Random Number Generation tool.

PART-B

Answer All Questions   **5X10M=50 Marks**

1. a) What is meant by Data Visualization? Explain various data visualization tools.
    b) Discuss various statistical techniques used for summarizing data.

                                          OR

2. a) What is meant by Pivot Table? Discuss the process of exploring data dimensions using Pivot
        table tool.
    b) Discuss various types of data queries in big data analytics.

3. a) Explain various techniques of measures of location and measures of dispersion.
    b) Discuss the process of data modeling and distribution fitting for a probability distribution.

                                          OR

4. a) Explain the significance of Population and Sampling in data modeling.
    b) Discuss various measures of association.

5. a) Discuss the concept of Multiple Regression Analysis and multicolinerity with examples.
    b) Explain Method of Least Squares (MLS) with assumptions.

                                          OR

6. a) Explain the application of Business Intelligence Systems in Fraud Detection and Customer
        Analytics in Banking Industry.
    b) Discuss One ANOVA and Two Way ANOVA with its significance in interpretation of data.

7. a) Discuss the applications and various processes of Data mining with suitable examples.
    b) Explain the uses of cluster analysis in data mining. Write a note on Hierarchical Clusters and
       Non-Hierarchical Cluster techniques in data mining.

                                          OR

8. a) Examine Dummy Variable Regression analysis with its model fit indicators.
    b) Discuss data reduction techniques in business analytics.

9. a) Discuss the conditions under which what if analysis is suitable in business analytics.
    b) Explain the risk analysis technique in simulation.

                                          OR

10. a) Discuss the application of decision tree analysis technique in solving business problems.
    b) Explain the significance of simulation analysis in data modeling.