



Assignment -1

5 X 3 = 15

1. Explain the history of Operations research and its limitation?
2. Solve the following LPP by Graphical method
 Maximize $Z = 20x_1 + 40x_2$
 Subject to the constraints:
 $36x_1 + 6x_2 \geq 108$
 $3x_1 + 12x_2 \geq 36$
 $20x_1 + 10x_2 \geq 100$
 $x_1, x_2 \geq 0$
3. Solve the following problem by simplex method
 Max $Z = 8x_1 + 16x_2$
 Subject to $x_1 + x_2 \leq 200$
 $x_2 \leq 125$
 $3x_1 + 6x_2 \leq 900$
 and $x_1, x_2 \geq 0$
4. At a railway station, only one train is handled at a time. The railway yard is sufficient only for two trains to wait while other is signal to leave the station. Trains arrive at the station at an average of 6 per hour and the railway station can handle them an average of 12 per hour. Assuming Poisson arrivals and exponential service distribution, find the steady-state probabilities for the various number of trains in the system. Also find the average waiting time of a new train coming into the yard
5. Discuss various inventory control models.

MPDBA 301 – STRATEGIC MANAGEMENT

Assignment -1 5 X 3 = 15

1. Discuss the process of formulating mission and objectives
2. Discuss the usefulness of the BCG matrix as the corporate strategy process
3. Discuss the industry analysis in order to find out the growth of the industry
4. Discuss the internal, external parties and measures of corporate governance
5. Explain ‘SWOT Analysis’. Why is it important for an organization to follow ‘SWOT Analysis’?

Assignment -2 5 X 3 = 15

6. Differentiate business level strategies from functional level strategies
7. Explain the role of corporate governance in the process of strategic management
8. Elucidate the components of Michael Porter’s five forces model in detail
9. Elaborate the types of corporate level strategies in detail
10. Discuss the factors affecting strategic choice

Assignment -2 5 X 3 = 15

6. A super market has a single cashier. During the peak hours, customers arrive at a rate of 20 customers per hour. The average number of customers that can be processed by the cashier is 24 per hour. Calculate:
 - i. The probability that the cashier is idle.
 - ii. The average number of customers in the queuing system.
 - iii. The average time a customer spends in the system.
 - iv. The average number of customers in the queue.
 - v. The average time a customer spends in the queue waiting for service.
7. 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 rupees)	
		Normal	Crash	Normal	Crash
A	None	3	2	8000	9000
B	None	8	6	600	1000
C	B	6	4	10000	12000
D	B	5	2	4000	10000
E	A	13	10	3000	9000
F	A	4	4	5000	5000
G	F	2	1	1200	1400
H	C,E,G	6	4	3500	4500
I	F	2	1	700	800

- i. Draw a project network diagram and find the critical path.
- ii. If a deadline of 17 weeks is imposed for the completion of the project, what activities will be crashed? What would be the additional cost and the critical activities after crashing the project?

MPDBA 302 – ENTREPRENEURSHIP & SMALL INDUSTRY

Assignment -1 5 X 3 = 15

1. How is the price of a product fixed? Exemplify when the pricing strategies of skimming pricing and penetration pricing are suitable
2. Discuss the need for institutional support to small business enterprises
3. Define a business plan. List out the various stages involved in formulation of a business plan
4. Describe the role which State Small Industries Development Corporation play in developing small enterprises in India
5. What are the various stages involved in deciding the product design of a new product? Explain.

Assignment -2 5 X 3 = 15

6. Elaborate the selection procedure adopted in small business enterprises
7. How the family business different from other typical businesses? Explain the pitfalls and importance of family business
8. Define business plan and explain the significance of business plan
9. Elaborate the functions of marketing management in the organization
10. Examine the problems faced by women entrepreneurs in India

8. Determine an initial basic feasible solution to the following transportation problem using NWCM.

	A	B	C	Supply
S1	2	7	14	5
S2	3	3	1	8
S3	5	4	7	7
S4	1	6	2	15
Demand	7	9	18	

Source

9. At present, a company is purchasing an item X from outside suppliers. The assumption is 10,000 units/year. The cost of the item is Rs.5 per unit and the ordering cost is estimated to be Rs.100 per order. The cost of carrying Inventory is 25%. If the consumption rate is uniform, determine the economic purchasing quantity
10. A road transport company has one reservation clerk on duty at time. He handles information of bus schedules and makes reservations. Customers arrive at a rate of 8 per hour and the clerk can service 12 customers on an average per hour. After starting your assumptions, answer the following
- What is the average number of customers waiting for the service of the clerk?
 - What is the average time a customer has to wait before getting service?

MPDOM 316 – MATERIALS MANAGEMENT

Assignment -1 5 X 3 = 15

- Write the relation between the materials management and various functional managements.
- Explain the factors influencing the buyer-seller relationship. Discuss them in detail
- What type of information should be built into a code? Write the advantages and disadvantages of codification
- How a performance appraisal system is useful in the context of materials management
- Describe the purposes, similarities, and differences among purchase requisitions, purchase orders, and requests for quotation

Assignment -2 5 X 3 = 15

- Discuss various methods of material demand forecasting and explain its importance
- Why is stock location important in a warehouse? Describe four basic systems of stock location

- How does a firm forecast and manage uncertainties” of demand and price of materials for purchase?
- Explain the procedure involved in stores systems with suitable examples.
- Elaborate on the need for Performance Appraisal systems in Materials Management.

MPDOM 317 – MAINTENANCE MANAGEMENT

Assignment -1 5 X 3 = 15

- Explain the present status of maintenance in the industry
- Discuss the periodic review system. Also highlight how periodic review system is beneficial to purchase departments
- Discuss the procedure involved in the planning and scheduling of plant shut down
- What is RCM? Write the RCM methodology and its benefits
- Describe the methods for predicting and evaluating of maintenance work load of plant

Assignment -2 5 X 3 = 15

- Explain the relationship between TQM and TQC in maintenance management
- Explain Total Productive maintenance, origin and characteristics
- Critically examine the advantages and limitations of Computerised Maintenance system management and Implementation.
- “The liberalized economy is forcing Indian companies to establish Total Quality Management Systems. It is a struggle, which has just begun and Indian companies will continue to do so just to be in the race – lest they perish. Quantity will be just a qualifier, not a competitive advantage any more”. Do you agree? Why? Discuss it with respect to maintenance perspective.
- Examine the need, role and importance of Statistical Information in Maintenance Engineering.

NOTE:

- Last date for submission of assignments for all the courses / papers is- 30.11.2022
- Non-submission of assignments as per the scheduled date mentioned above attracts a fine of Rs. 200/- upto 12.12.2022 per each assignment of a course / paper and under any circumstances the assignments will not be accepted from 13th December 2022.
- Assignments are to be written in the Book-lets provided by CDL and other formats are not accepted.
- Answer all 10 questions, in a single book only.