KUMARAGURU college of technology
character is life

Register Number: ……

MBA DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2014)

Second Semester

MASTER OF BUSINESS ADMINISTRATION

MBA624**:** Operations Management

Time: Three Hours **Maximum Marks: 100**

Case Study:-

PART A (1 x 20 = 20 Marks)

1. A company manufacturing plant and equipment for chemical processing is in the process of quoting a tender called by a public sector undertaking. Delivery data is crucial and penalty clause is applicable. Project manager has listed down the major activities in the project as given in table:

Activity	Immediate Predecessor	Time Estimate (days) Optimistic	Most Likely	Pessimistic
A	---	2	5	7
B	---	4	6	8
C	A	5	7	9
D	A	7	8	9
E	C	7	9	11
F	D	8	10	12
G	B	9	11	13
H	E,F,G	4	5	6

(a) Draw a network diagram. (K_4)

(b) Identify the critical activities of the project. (K_2)

(c) Determine the latest time and earliest time for all the activities. (K_4)

(d) Estimate the delivery date if the project commences on 1st July. (K_4)

Answer all the Questions:-

PART B (10 x 2 = 20 Marks)

2. Cite an example for productivity measure. (K_2)
3. List the major functions of operations management. (K_1)
4. Define Just-in Time. (K_1)
5. Define Lead Time. (K_1)
6. The sales for March, April, May and June are 375, 355, 275 and 255 units. Determine the forecast for July using a 3 month simple moving average method. (K_4)
7. Illustrate bill of materials for a product of your choice. (K_3)
8. List two advantages of sequencing of jobs. (K_1)
9. Define project management. (K_1)
10. Define aggregate planning. (K_1)
11. List the work measurement techniques. (K_1)

PART C (4 x 15 = 60 Marks)

12. a) List the key determinants of process characteristics in operations? Explain the relationship between volume, variety and flow, with respect to process design? (K_2)

(OR)

b) Explain the production system with suitable examples for manufacturing and service organizations. (K_2)

13. a) The demand for a certain item is 4800 unit per year. Each unit cost Rs.100. Inventory cost charges are estimated at 15%. No shortage cost is allowed. The ordering cost Rs. 400 per order. Lead time is one day. Assume 250 working days. (K_4)

Determine: a. Economic Order Quantity
b. Time between the orders
c. Number of orders required each year.
d. Minimum relevant Inventory cost.
e. Minimum total inventory cost.

(OR)

b) Illustrate the ABC classification of inventory control with an suitable example. (K_3)

14. a) You are given the following information: (K_4)

Task	Immediate predecessor	Task time in minutes
A	-	0.2
B	A	0.2
C	-	0.8
D	C	0.6
E	B	0.3
F	D,E	1.0
G	F	0.4
H	G	0.3

a) Assume an 8 hours working day and calculate cycle time needed to obtain an output of 400 units per day. (3)

b) Design the assembly line. (7)

c) Calculate line efficiency and balance delay. (5)

(OR)

b) Which location would you choose based on ROI and Qualitative method? (K_4)

	Site A	Site B
Initial Investment (Rs)	200000	200000
Expected sales (Rs)	250000	300000
Total Expenses (Rs)	195000	215000
Housing	Poor	Excellent
Community Attitude	Indifferent	Want business

15. a) For a product of your choice compare at least two global facility locations for achieving competitive advantage. (K_4)

(OR)

b) Explain the various types of layouts used in manufacturing products and its advantages. (K_2)

****