MBA- Semester- II Examination, May 2014

KadiSarvaVishwavidyalaya University

Dt: 14·5·14

Production & Operations Management (CC206)

Duration: 2 Hours & 30 Minutes **Total weightage: 40%**

Notes:

1. Working notes must form part of calculation.
2. Whenever required put example to support your answer.
3. Figure to right side indicates weightage of question.

Que 1 (A) ABC Ltd. has yearly demand of 15000 Units. Purchasing Price per unit is Rs. 10. Holding cost is Rs. 25 per unit. Ordering cost per order is Rs. 75. Calculate 1)Economic Order Quantity 2) Total Cost as per Economic Order Quantity 3) Total costwhen ABC Ltd. makes order of 1000 unitswith their supplier & supplier gives 20% discount to ABC Ltd. 4%

Que 1 (B) Explain ten strategic OM Decisions, in brief. 4%

Or

Que 1 (B) 'A firm can achieve competitive advantage over its competitors through operations'- Do you agree? Justify 4%

Que 2 (A) Explain difference between goods & services With Suitable Example. 4%

Que 2 (B) Explain different types of plant Layout, in brief. 4%

Or

Que 2 (A) What is Operations Management? Why we need to study OM as production Manager of Company? 4%

Que 2 (B) What is a lean operation? Explain Lean operations in Service. 4%

Que 3 (A) Mr. Pandya wants to establish a Rubber Manufacturing Plantin India. But he is worried about best suitable location for his business. As Operation Manager, guide Mr. Pandya, in brief, that which can be best suitable location for his manufacturing unit & by considering which factors he can select best suitable location in india. 4%

Que 3 (B) Below given table gives detail of customer & location. Find the optimal assignment of location to customers so as to minimize total driving distance to the customers. 4%

	Customer			
Location	A	B	C	D
1	7	3	4	8
2	5	4	6	5
3	6	7	9	6
4	8	6	7	4

Or

Que 3 (A) Pantaloons India Ltd. is highly diversified company. Pantaloons India Ltd., produces various diversified products such as Automobile Products, Medicine, Furniture & Over-bridge development. Suggest to the owner of Pantaloons India Ltd, with best process strategy for each product with justification. 4%

Que 3 (B) Calculate transportation cost Using (1) Low cost Method (2) North-West corner Method from following data. 4%

Destination → / Source ↓	Chennai	Ahmedabad	Bhopal	Lucknow	Availability
New Delhi	15	20	24	28	**800**
Kolkata	40	30	25	10	**4500**
Bhuvneshwar	10	12	21	36	**200**
Mumbai	40	10	15	70	**2000**
Requirement	**800**	**1500**	**2000**	**3200**	**7500**

Que 4 (A) Explain various supply chain strategies. 4%

Que 4 (B) Explain various International quality standards which pertaining to product quality. 4%

Or

Que 4 (A) Microcosm Ltd. Sources 9000 Blank CDs annually from a supplier. The Ordering Cost per order is Rs.10 & each CD has cost of Rs.20. The Carrying Cost is 10% of CD Price. The Supplier offers following discounts. 4%

Quantity	100-449	450-899	900 & Above
Discount	2%	4%	5%

Evaluate EOQ Option and Various discount options& advice management of Microcosm Ltd., about best inventory order.

Que 4 (B) Explain the strategic importance of supply chain. 4%

Que 5 The activities described by the following table are given for Durga Corporation. 8%

Activity	Immediate Predecessor(S)	Time (Weeks)
A	-	9
B	A	7
C	A	3
D	B	6
E	B	9
F	C	4
G	E,F	6
H	D	5
I	G,H	3

1. Draw a project network.
2. Find critical Path.
3. Find EF, LF, ES, LS for each activity.
4. What is Expected Project Completion time?

KADI SARVA VISHWAVIDYALAYA
END TERM EXAMINATION
PRODUCTION AND OPERATIONS MANAGEMENT (CC 206)

MBA I Semester II **Batch 2014-15**
Duration: 2.5 Hrs **Marks: 40**
Time: 10.30 am to 1.00 pm **Date: 07/05/15**

Instructions:

1. **This paper has FOUR questions.**
2. **Your answer should be precise and to the point.**
3. **Give examples and make diagrams wherever necessary.**

Question 1. Answer the following: **[08]**

A. Define mission and strategy. Describe with a suitable example how an organization's mission and strategy have different purposes.

B. Explain the various Operational decisions.

OR

B. Once a product has been defined, what documents are required to be prepared to assist production department for its manufacturing?

Question 2. Answer the following: **[08]**

A. ABC Ltd. is going to build a new plant to manufacture ball bearings (used in automobiles and trucks). The site selection team is evaluating three sites, and they have scored the important factors for each as follows. Use these ratings to compare the locations and suggest the most suitable location.

Location Factor	Weight	SCORES (0 to 100)		
		Site 1	Site 2	Site 3
Labour	.30	80	65	90
Proximity to suppliers	.20	100	91	75
Wage rates	.15	60	95	72
Environment	.15	75	80	80
Proximity to customers	.10	65	90	95
Transportation	.05	85	92	65
Housing	.05	50	65	90

B. Explain the techniques used for improving service productivity.

OR

A. A firm must produce 40 units / day during an 8-hour workday. Tasks, times, and predecessor activities are given below. Determine the cycle time and the appropriate number of workstations to produce the 40 units per day.

Task	Time (Minutes)	Predecessor(s)
A	2	-
B	2	A
C	8	-
D	6	C
E	3	B
F	10	D, E
G	4	F
H	3	G
Total	38 minutes	

B. Differentiate between design capacity and effective capacity.

Question 3. Answer the following: [08]

A. Sam runs a business for gym equipment. Annual demand for the treadmill is 16,000. The annual holding cost per unit is Rs. 20.50 and the cost to place an order is Rs. 500. What is the economic order quantity?

B. What is vertical integration? Explain forward and backward integration with suitable examples.

OR

A. The precedence table for activities involved in a computer game is shown below. An activity on arc network is to be drawn to model this production process.

Activity	Must be preceded by
A	-
B	-
C	B
D	A, C
E	A
F	E
G	E
H	G
I	D, F
J	G, I
K	G, I
L	H, K

Draw the activity network. Explain why it is necessary to use at least two dummies when drawing the activity network.

B. What is manufacturing resource planning? How is it different from material requirement planning?

Question 4. Answer the following: [08]

A. A store sells water beds and assorted supplies. The best-selling bed has an annual demand of 400 units. Ordering cost is Rs. 400; holding cost is Rs. 50 per unit per year. To minimize the total cost, how many units should be ordered each time an order is placed? If the holding cost per unit was Rs. 60 instead of Rs. 50, what would be the optimal order quantity?

B. How do you think an organization can gain a competitive edge using TPS?

OR

A. Determine the center of gravity location for the destinations and shipping quantities shown below:

Destination	**Coordinates**	**Quantity**
A	3, 5	600
B	5, 1	400
C	6, 7	300
D	8, 4	500

B. What is work breakdown structure? Differentiate between PERT and CPM.

Question 5. Solve the following: [08]

Obtain the initial solution for the following transportation problem using VAM. Check if the solution obtained from VAM is optimal.

	A	B	C	D	Supply
1	10	15	8	20	7
2	3	2	7	15	5
3	8	11	12	18	3
Demand	4	2	3	6	15