

KARACHI UNIVERSITY BUSINESS SCHOOL
 University of Karachi
FINAL EXAMINATION DECEMBER 2010: AFFILIATED COLLEGES
PRODUCTION AND OPERATIONS MANAGEMENT BA (H) – 522
BS – VI

Date: January 7, 2011

Max. Marks: 60

Instruction: Attempt any 7 questions

Max. Time: 3 Hours

1. What is the difference between operation management and operation research.
2. Define operation strategy and discuss the major competitive dimensions that form the competitive position of a firm.
3. Describe how the different control charts are applied in project management (illustrate using diagrams).
4. Draw the critical path diagram for a project that has been defined to contain the following list of activities along with their required times for completion.

Activity	Time (days)	Immediate Predecessors
A	1	-
B	4	A
C	3	A
D	7	A
E	6	B
F	2	C,D
G	7	E,F
H	9	D
I	4	G,H

5. Define the following terms:
 - i. Job enrichment
 - ii. Job shop
 - iii. Work breakdown structure
 - iv. Outsourcing
 - v. Assembly Line
6. Dell Computer reported the following information in its 1999 annual report (all amount in Dollars and expressed in millions). Determine the inventory turnover.

Net revenue _____	\$ 18,243
Cost of revenue _____	14,137
Cost of production materials _____	6,423
Production materials on hand _____	234
Work-in-process and finished goods on hand _____	39
Production materials-Days of supply _____	6 days

7. Discuss the difference between process layout and product layout.
8. How can TQM be differentiated from ISO 9000.
9. The material requirement planning (for manufacturing activities) closely interacts with master schedule, bill of material, inventory records, and output reports. Elaborate the statement.
10. Describe the concept of fixed-order quantity model with reference to inventory calculation.

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FINAL EXAMINATION JUNE 2010; AFFILIATED COLLEGES

OPERATIONS MANAGEMENT BS (H) – 522

BS-VI

Date: 29-06-2010

Max. Mark 60

Max. Time: 2.5 hrs

Note: Attempt all questions. Leave one inch margin on each side of paper. Do not write anything in margins. Write Q.No. in a block at top centre of the page. Legible and clear writing will yield better scores. Do not write any thing in pencil.

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Q1(a) "The Hair Clip" operates three barber's chairs in the student center at a university campus. During the week before semester break and the week before graduation, "The Hair Clip" experiences peak demands. Military style haircuts take five minutes each, and other styles require 20 minutes each. Operating from 9 AM to 6 PM on the six days before semester break, "The Hair Clip" completes 100 military style haircuts and 450 other haircuts. During a comparable six-day week before graduation, "The Hair Clip" completes 800 military haircuts and 400 other haircuts.

~~Calculate in which week the utilization rate is highest~~

(b) What decision areas you might need to look into while developing the waiting line model of your business operations?

(c) What Operational Benefits do you foresee in a manufacturing organization through use of ~~KANBAN~~

⇒ Actual output
Design capacity

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Q.2 A distribution center (DC) experiences an average weekly demands of 50 units for one of its items. The product is valued at Rs.500/ unit. Average inbound shipments from the factory warehouse average 400 units. Average lead time (including ordering delays and transit times) is 2 weeks. The DC operates 50 weeks per year; it carries a one-week supply of inventory as safety stock and anticipation inventory of 50 units.

(a) ~~What is the average aggregate inventory value being held by the DC?~~

(b) How many weeks of supply are held? What are the annual sales? What is the inventory turnover?

(c) From the above result indicate what type of inventory (cycle/safety stock/anticipatory/pipeline) is the best target for inventory reduction?

(e). Why there is high pressure for lowering inventory in organizations?

(f) How does decision making in Inventory Management under certainty differ from decision making under uncertainty?

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Q3(a) What is a Lean system? What are characteristics of a Lean System?

(b) What factors should management consider when deciding whether to use a JIT system in a particular manufacturing environment?

(c) What is Learning Curve? How is it important in Workforce Management? Explain through drawing a typical learning curve giving example from any industry.

(d) What are the benefits of Material Requirement Planning? What inputs are necessary to create MRP explosion? What outputs come out of MRP explosion? Use a block diagram to explain your concept.
