KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

MBA 3rd Sem. Examination, 2014

Paper : 10

Production and Operation Management

Time : 3 Hrs. Full Marks : 80

1. Answer any five from the following questions (each within 50 words) 2×5 = 10
   (a) What is Production and Operation management?
   (b) State two advantages of a good plant layout.
   (c) What is capacity planning?
   (d) State two characteristics of product quality.
   (e) What is 'six sigma' in TQM?
   (f) State one objective of work measurement.
   (g) What is speculative purchasing?
2. Answer any three from the following questions (each within 100 words) 4×3 = 12
   (a) State any four differences between continuous and Intermittent production systems.
   (b) Discuss any two factors which influences in selecting location for production.
   (c) Explain the basic concept of economic order quantity (EOQ). Also state the formula to measure EOQ.
   (d) Discuss any one method to modify capacity of a produciton unit.
   (e) What is acceptance sampling? What are the different types of sampling plans used for acceptance sampling?
3. Answer any three from the following questions (each within 250 words) 6×3 = 18
   (a) What is work measurement? Discuss different techniques involved in work measurement.
   (b) Discuss the role of inventories in a production unit. Also state the advantages and disadvantages of holding a large inventory.
   (c) Write short notes on Just In Time (JIT) production system. Also

discuss the JIT process for a normal factory.

(d) Four jobs A, B, C, D have to be performed in two machines. The time taken by each job on each machine is given below. Determine the sequence of the jobs by Johnson's methods.

Jobs	Time taken in M1	Time taken in M2
A	15	4
B	9	10
C	7	6
D	12	8

(e) XYZ company has identified three locations, viz, Assam, Kolkata and Pune to set up a new manufacturing unit. The factor ratings and location ratings have been given. Arrive at the best location using the factor and location rating method.

Factor		Location Rating		
	Factor rating	Assam	Kolkata	PUne
1. Proximity to market	3	4	6	3
2. Proximity to raw material	5	10	5	4
3. Transportation facility	4	9	10	5
4. Basic amenities	2	6	7	6
5. Acceptance of factory by local	4	8	3	7
6. Availablility of cheap land	3	7	2	8
7. Low construction cost	1	5	1	6
8. Easy availability of labour	3	3	8	4

4. Answer any four from the following questions $10 \times 4 = 40$
(each within 400 words)

(a) Discuss different types of layout stating their advantages and disadvantages.

(b) Explain W. Edward Deming's 14 points of Total Quality Management.

(c) Discuss different functions of Production Planning and Control.

(d) What is Material Requirement Planning (MRP)? Discuss the MRP process.

(e) Four jobs A, B, C, D needs to be done at the same work centre. Their process time and due dates are as given below. Sequence the jobs using the Minimum Process Time and Due Date method.

Job	Process time (days)	Due date (days from today)
A	5	10
B	4	12
C	7	14
D	9	16

(f) What is cost of quality? Why statistical methods are used for measuring quality? Discuss the themes of six sigma in quality.