II Semester M.B.A. Degree Examination, July/August 2014
(2007-08 Scheme)
Management
Paper – 2.3 : PRODUCTION AND OPERATIONS MANAGEMENT

Time : 3 Hours

Max. Marks : 75

*Instruction : D_3 and A_2 tables are **allowed**.*

SECTION – A

Answer **any six** questions. **Each** carries **2** marks.   (6×2=12)

1. a) What is multifactor productivity ?

   b) Define quality according to American society for quality.

   c) What is vendor development ?

   d) List down the '5s' of house keeping.

   e) What are the important inputs for MRP ?

   f) What are the important inventory costs ?

   g) Define 'Value'.

   h) What is Operations Management ?

SECTION – B

Answer **any three** questions. **Each** carries **8** marks.   (3×8=24)

2. Explain in detail the procedure for methods study.

3. What are the seven tools of quality ?

4. Write short notes on :
   a) OEE
   b) QFD.

5. What are facility layouts ? Illustrate and explain the advantages and disadvantages of each type of layout.

6. The data processing department of a company has five data entry clerks. Each day their supervisor verifies the accuracy of a random sample of 200 records. A record containing one or more errors is considered defective and must be redone. The results of the last 20 samples are shown below. None of them are out of control.

Sample	Number of defective records
1	7
2	5
3	19
4	10
5	11
6	8
7	12
8	9
9	6
10	13
11	18
12	10
13	16
14	4
15	11
16	8
17	12
18	4
19	6
20	11
Total	200

a) Based on these historical data, set up a p-chart using $z = 3$.

b) Samples for the next four days showed the following

Sample	Number of defective records
21	17
22	15
23	22
24	21

What is the Supervisor's assessment of the data – entry process likely to be ?

SECTION – C

Answer **any two** questions. **Each** question carries **twelve** marks. **(2×12=24)**

7. a) What is TPM ? How does TPM score over other maintenance methods ? Why is maintenance necessary ?

   b) Write briefly on the following concepts :
   a) Seven wastes   b) POKA YOKE.

8. A firm is considering three alternative locations for setting up its new factory. Each of these locations provides some advantages and some limitations. Therefore, it is necessary that some method of assessing the attractiveness of each site be arrived at. Based on the survey of its top management, the company has identified seven factors that will determine the appropriatives of a site for setting up the new factory. These factors and the score out of 100 for each of them are shown in the table below :

Sl. No.	Factors for Consideration	(Score out of 100)
1.	Nearness to port	80
2.	Existence of supplier infrastructure	70
3.	Availability of skilled labour	90
4.	Government policies and local taxes	50
5.	Projected cost of operations	60
6.	Quality of road infrastructure	70
7.	Availability of educational infrastructure	40

The company collected data on each site and arrived at site rates against a score of 100 against each factor.

Factor No.	Site 1	Site 2	Site 3	Basis
1	70 Km	130 Km	95 Km	Actual data
2	60	80	85	Score out of 100
3	50	70	85	Score out of 100
4	70	45	60	Score out of 100
5	Rs. 20,000,000	Rs. 18,000,000	Rs. 17,000,000	Actual data
6	80	90	70	Score out of 100
7	60	80	80	Score out of 100

Identify the most appropriate site for locating the new factory on the basis of the above information.

9. What is meant by product design ? Explain all issues that ensure efficient and cost effective products ?

SECTION – D

(Compulsory)   (1×15=15)

10. Zen Copier, manufacturing copier machines require a total assembly time of 66 minutes. Table given below shows the tasks, assembly time and sequence needed.

Tasks	Time (Mins)	Precedence (Sequence)
A	10	—
B	11	A
C	5	B
D	4	B
E	12	A
F	3	C, D
G	7	F
H	11	E
I	3	G, H

The firm has 480 productive minutes of work per day and the production schedule required 40 copiers to be produced from the assembly line per day.

Find :

a) Cycle time.

b) Number of work-stations.

c) Efficiency of the assembly line.

d) What is the employee idleness ?

e) Draw the precedence diagram and the task assignment table and give your comments.

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