

2

SYBMS
OP3ABA
March 2016

PTQM

Time : 2 Hrs 30 min

Marks : 75

- Instructions :**
1. Answer any two subquestions from each question. Q.5 is compulsory.
 2. Each question carries 15 marks. Figure to the right indicate marks.
 3. Only use of basic calculator is allowed.

- Q.1
- A) What are the different factors to be considered while deciding plant location?
 - B) Explain Batch type of manufacturing system with advantages & disadvantages.
 - C) Explain product layout with advantages & disadvantages.
- Q.2
- A) Why materials management is important? Explain its objectives?
 - B) The XYZ company uses 75000 units per year. The price is Rs. 1.50 per unit. The cost of carrying inventory is 20% of average inventory investment on annual basis. The cost to place an order & process the delivery is Rs. 18. It takes 1.5 month to receive delivery from the date of an order. Consumption is 6250 units per month. Safety stock is 3250 units. Determine EOQ, Reorder point & Annual total cost.
 - C) Explain selective inventory technique for inventory control.
- Q.3
- A) What is mean by TQM? Explain eight building blocks of TQM.
 - B) What is mean by Kaizen Gemba? Explain the process of kaizen technique.
 - C) What is mean by productivity? How it can be improved? Find total productivity, partial productivity & total factor productivity.

Output (Rs)	15000
Input (Rs)	
Capital	5000
Labour	2000
Material	3500
Energy	500
Others	1000

- Q.4
- A) What is mean by Six Sigma? Explain DMADV.
 - B) Discuss in detail Lean thinking.

C) Explain the concepts:

- i) ISO 14000
- ii) European Quality Award
- iii) Taguchi,

Q5 Read the case study & answer the following questions.

Motorola Limited

A division of Motorola Limited was acquired by Electric Industrial Company. It employed people to produce colour televisions sets and microwaves. A few years later the defects dropped and the sales improve drastically. The labour required to produce colour television sets was reduced by 50%. This could be achieved due to new equipments, technology, training and managerial practices to revitalize an already skilled labour force.

Automatic equipments were used. Changes in the design were also brought about. Closed circuit television systems were installed as a part of technological upgradation. Suitable training was given to the employees to enhance their horizons regarding the quality aspects. Moreover a practice was developed where in employees came together voluntarily to solve problems in their work area & presented solutions to management. On the production line awareness was aroused by slogans and poster making competitions. Winners were entertained by felicitating them and giving them a modest reward. The purpose of all these activities was to create a conducive environment and encourage people to offer their suggestions.

Questions:

1. Which techniques were used by Electric Industrial Company to improve quality of colour television? How these techniques were implemented? 8M

2. Suggest various other quality improvement techniques that can be applied to enhance the quality of product. 7M