

Code: BA2T4

I MBA - II Semester - Regular Examinations - JULY 2016

PRODUCTION AND OPERATIONS MANAGEMENT

Duration: 3 hours

Max. Marks: 70 M

SECTION-A

1. Answer any FIVE of the following:

5 x 2 = 10 M

- a. Value analysis
- b. Process design and Development
- c. Aggregate Planning
- d. ISO series
- e. Work Measurement
- f. Quality Inspection
- g. Shop Loading
- h. TQM

SECTION – B

Answer the following:

5 x 10 = 50 M

2. a) What is POM? Explain the past and present scenario of POM.

OR

b) Define product design. State the functions of product design.

3. a) Bring out the comparison between product layout and process layout.

OR

b) Define the term ‘work study’ and state its objectives.

4. a) Discuss the purpose and scope of aggregate planning.

OR

b) Discuss the concept of 'waiting lines' in service operations.

5. a) What are the merits and demerits of Quality Circles?

OR

b) What is the role of statistical Quality Control (SQC) in the management of quality?

6. a) Discuss the techniques PERT and CPM.

OR

b) What is ISO-9000 standards? How do these differ from ISI standards?

SECTION – C

7. Case Study

1 x 10 = 10 M

Facility Layout at ambulance manufacture firm

The firm started with a handful of employees and presently expanded to a workforce of 350. The physical plant has also expanded. Like many growing companies, the firm was not able to design its facilities in an efficient manner. The management realized that material handling costs are a little higher than a ideal layout would provide.

The aluminum cutting work cell lies adjacent to body fabrication, which in turn, is located next to the body-installation work cell. The vehicle must be driven across a street to one building for painting

and then to another for final assembly, at least the ambulance is on wheels. To some extent the work cell designing is good in terms of flexibility. Work cell construction is modular and can accommodate changes in product mix and volume. They are small and movable with many work benches and staging racks borne on wheels so that they can be easily rearranged and products transported to the assembly line.

Assembly-line balancing is one key problem facing by the firm. Produced on a schedule calling for FOUR 10-hour work days per-week, once an ambulance is on one of the six final assembly lines, it must move forward each day to the next workstation. Balancing just enough workers and tasks at each of the seven workstations is a never-ending challenge. Too many workers end up running into each other; too few can't finish an ambulance in 7 days. Constant shifting of design and mix and improved analysis has led to frequent changes.

Questions:

- i) What analytical techniques are available to help this firm to deal with layout problems?
- ii) How would you measure the efficiency of the layout?