

Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER 3– EXAMINATION – WINTER 2018**Subject Code: 3539292****Date:06/12/2018****Subject Name: Designing of Operations System (DOS)****Time:10:30 am To 01:30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 Explain following terms in brief: 14**
- (a) Work Sampling
 - (b) Job Design & work measurement
 - (c) Ergonomics
 - (d) Cellular layout
 - (e) Service Blue printing and Fail Safing
 - (f) Service Encounters
 - (g) Business Process Re-engineering
- Q.2 (a) Define Process Analysis. Discuss Various types of Processes. 07**
- (b) Discuss Behavioral consideration in designing of Job for Sales Executive. 07**
- OR**
- (b) Discuss Work measurement Standards utilized for supervisor in Car Manufacturing. 07**
- Q.3 (a) Discuss Manufacturing process for wedding ring. 07**
- (b) Discuss the importance of Hybrid Manufacturing Process in present competitive market. 07**
- OR**
- Q.3 (a) Discuss Manufacturing process for Juicer mixer Grinder. 07**
- (b) “To decide about manufacturing process in restaurant is demand analysis and experience.” Discuss. 07**
- Q.4 (a) Discuss the steps of service delivery system in detail. 07**
- (b) Discuss the point to take care in single step of services and multi step services. 07**
- OR**
- Q.4 (a) Explain the utility of three service design approach. 07**
- (b) Discuss how to manage customer introduce variability with any service example. 07**

PRODUCTIVITY GAINS AT WHIRLPOOL

Workers and management at Whirlpool Appliance's Benton Harbor plant in Michigan have set an example of how to achieve productivity gains, which has benefited not only the company and its stockholders, but also Whirlpool customers, and the workers themselves.

Things weren't always rosy at the plant. Productivity and quality weren't good. Neither were labor-management relations. Workers hid defective parts so management wouldn't find them, and when machines broke down, workers would simply sit down until sooner or later someone came to fix it. All that changed in the late 1980s. Faced with the possibility that the plant would be shut down, management and labor worked together to find a way to keep the plant open. The way was to increase productivity-producing more without using more resources. Interestingly, the improvement in productivity didn't come by spending money on fancy machines. Rather, it was accomplished by placing more emphasis on quality. That was a shift from the old way, which emphasized volume, often at the expense of quality. To motivate workers, the company agreed to gain sharing, a plan that rewarded workers by increasing their pay for productivity increases.

The company overhauled the manufacturing process, and taught its workers how to improve quality. As quality improved, productivity went up because more of the output was good, and costs went down because of fewer defective parts that had to be scrapped or reworked. Costs of inventory also decreased, because fewer spare parts were needed to replace defective output, both at the factory and for warranty repairs. And workers have been able to see the connection between their efforts to improve quality and productivity.

Not only was Whirlpool able to use the productivity gains to increase workers' pay, it was also able to hold that lid on price increases and to funnel some of the savings into research.

(Source: Based on "A Whirlpool Factory Raises Productivity-And Pay of Workers" by Rick Wartzman, from The Wall Street Journal, 1992.)

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| (a) | Who has benefited from the productivity gains? | 07 |
| (b) | What were the two key things that Whirlpool management did to achieve productivity gains? | 07 |

OR

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| Q.5 | (a) | How are productivity and quality related? | 07 |
| | (b) | How can a company afford to pay its workers for productivity gains? | 07 |
