

**VPM's**  
**DR VN BRIMS, Thane**  
**Programme: MMS (2015-17)**  
**Second Semester (Operations) Examination April 2016**

<b>Subject</b>	<b>TQM</b>		
<b>Roll No.</b>		<b>Marks</b>	<b>60 Marks</b>
<b>Total No. of Questions</b>	<b>7</b>	<b>Duration</b>	<b>3 Hours</b>
<b>Total No. of printed pages</b>	<b>2</b>	<b>Date</b>	<b>25.04.2016</b>

**Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.**

**Q1) 20 Marks (Compulsory)**

**a) Implementation of TQM technique to reduce accidents**

The organization is a mini steel plant and well known for its commitment to the implementation of the TQM principles and practices. The organization has been able to sustain its profits and performance in the face of intense competition in the global and the Indian steel industry. The objective was to take up a focused project using continuous quality improvement methodology for reduction in burn injuries due to splashes in the steel casting section of the organization.

The project was selected by the quality control council to learn the root cause of the accidents and take preventive actions to eliminate the same the team appointed by the council was from across all functions in the company which did the detailed study of all the past data and after pareto analysis reached the consensus that the main problem of accident was burn injuries on account of the splashes in the steel casting section. To solve the problem, the team put forward various theories through Ishikawa diagram and also interviewed those involved in the accident. Apart from this, various related equipments were standardized which were directly used by the concerned people and the dos and don'ts were mentioned in Hindi and Marathi whenever this work was conducted. To follow up the project, audit of process at regular intervals was institutionalized.

- i. Explain the learning points of the case.
- ii. Explain the critical success factor of the organization. **(10 marks)**

**b) Match the following:** **(5 marks)**

- |  |                                  |
|--|----------------------------------|
| 1. Inspection                              | a) Phillip. B. Crosby Quality    |
| 2. Assurance                               | b) Joseph Juran                  |
| 3. Quality is fitness for use              | c) Prevention                    |
| 4. Quality is conforming to specifications | d) Quality features of a Product |
| 5. Serviceability                          | e) Detection                     |

**c) Fill in the blanks:** **(5 marks)**

- i) \_\_\_\_\_ is a maturity framework that focuses on continuously improving the management and development of the human assets of an organization.
- ii) The principle of \_\_\_\_\_ is to prevent errors in the processes and making them human independent .
- iii) \_\_\_\_\_ organize the work of Six Sigma Black Belts and provide Black Belts with the necessary backing at the executive level
- iv) Variation due to Differences among machines is an example of \_\_\_\_\_ causes

- v) \_\_\_\_\_ are useful for monitoring quality and giving early warnings that a process may be going “Out of Control”

**Attempt Any FOUR from the Remaining SIX Questions**

**Q2) Write short notes on Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) DMAIC
- b) 5S for Workplace improvement
- c) Quality Guru: Contribution of Ishikawa

**Q3) Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) Explain why employee empowerment is important?
- b) Discuss gap model of Quality in services
- c) What is Quality circle and what are the benefits of it to the organizations

**Q4) Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) Explain what is PCMM?
- b) Explain Double sampling plan by showing the statistics with an example.
- c) What are the different elements of TQM? Also explain Total Quality Control.

**Q5) Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) What do you understand by Pull system and discuss its merits and demerits.
- b) Explain the term Operating Characteristics curve. With the help of neat diagram.
- c) How TQM plays important role in the organizations performance?

**Q6) Write short note on Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) Juran's Trilogy
- b) Poka yoke
- c) Hidden cost of Quality

**Q7) Any two from (a) or (b) or (c) \_\_\_\_\_ (5x2) = 10 Marks**

- a) Explain What is JIT and lean manufacturing?
- b) Explain the term 7 different wastage MUDA.
- c) Find the probability of acceptance for the following data obtained in a single sampling plan: N, Lot size =10,000; Sample size n= 50; number of defective items permitted c= 4and Fraction or Percent defective p= 0.01.