

淡江大學 100 學年度碩士班招生考試試題

101

系別：管理科學學系

科目：生產與作業管理

考試日期：2 月 28 日(星期一) 第 2 節

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I. Definitions of Terms: (2 % each, 20% total)

- 1.1) Social Responsibility
- 1.2) Effectiveness
- 1.3) FMEA
- 1.4) Process Capability
- 1.5) TRIZ
- 1.6) Pareto Chart
- 1.7) Line Balance
- 1.8) EPQ
- 1.9) DMAIC
- 1.10) Appraisal Cost

II. Problems: (10 % each, 80 % total)

- 2.1) As the upper specification limit USL is 110, and the lower specification limit LSL is 90, the target value is 100, the mean is 104, and the standard deviation is 2, please compute the process capability Cpm.
- 2.2) Please list 7 kinds of waste in lean production.
- 2.3) There are 4 continuous processes of work stations. The processing time for station 1, 2, 3, and 4 are 1.3, 2.0, 1.7, and 1.5 minutes respectively. Please compute the line balance rate.
- 2.4) The real processing time is 360 minutes and the total available time is 480 minutes. The real production quantity is 800 units and the production quantity during normal time should be 1000 units. The conforming quantity is 600 units among total production quantity 800 units. Please compute overall equipment effectiveness (OEE).
- 2.5) The customer demand quantity is 1000 units and should be satisfied. The defective rate is 0.1. The defective products can not be reworked. Please compute the production quantity which should be produced.
- 2.6) The unit cost is 50 dollars, and the unit revenue is 100 dollars. As the unit salvage value is 40 dollars, please compute the service level.
- 2.7) Please describe the linkage of the impact of quality issues on social responsibility related to TOYOTA.
- 2.8) Please describe the equation of EPQ.