FMS DQE PART 1 TYPICAL CONTENTS

Sir Syed CASE Institute of Technology (CASE)

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Document History

S. No.	Document Version	Major Changes	Author/s	Creation Date	Review Date	Reviewer/s
1.	1.0	Initial Release	Mr. Shahid Iqbal	01-01-2013	02-01-2013	Dr. Ali Ahsan
2	1.1	--	Mr. Sakhawat Riaz	05-05-2016	05-05-2016	Dr. Ali Ahsan
3.	1.2	Minor Changes	Mr. Nasir Shafique	04-11-2016	07-11-2016	Dr. Ali Ahsan

Purpose:

The purpose of this document is to explain to candidate students and faculty members the typical contest of DQE Part 1 exam conducted by Faculty of Management Sciences at CASE.

Research Methodology

Instructor: Dr. Memoona Rauf Khan
Typical Course Contents - (Fall 2016)

- Understanding Research and Science
- Dimensions and Major Types of Research
- Qualities of a Researcher
- Types of Literature, How to do a Literature Search
- Developing your Research Question: Importance of Good Questions, From Interesting Topics to Researchable Questions
- Characteristics of a Good Literature Review and types of Literature Reviews
- How to make correct Literature References
- Concepts, Forming Hypotheses and Research Objectives
- Theory and Research. Dealing with Conceptual Issues
- Quantitative (Positivistic) and Qualitative (Normative) Research Methodologies
- The Steps of the Research Process for Qualitative and Quantitative paradigms
- Types of Research Designs
- Sampling Theory and Selection
- Data Collection and Variable Measurement Techniques
- Qualitative Research Issues
- Presenting Research Results

Qualitative and Quantitative Methods

Instructor: Dr. Memoona Rauf Khan
Typical Course Contents

Statistics

- The Nature of Probability and Statistics, Frequency Distributions and Graphs, and Data Description
- Probability and Counting Rules
- Discrete Probability Distribution, the Normal Distribution and the Central Limit Theorem (excluding proportions)
- Confidence Intervals and Sample Size
- Hypothesis Testing
- Types of Linear Regression models and derivation of the simple linear equation; preliminary curve fitting etc.
- Measures of variation and simple ANOVA, confidence intervals for point estimates, and their covariance. BEST properties of OLS estimates. Simple Regression
- Multiple Regression: basic results, residual analysis, homoskedasticity and F tests; confidence intervals; Multicollinearity.
- Tests for aptness of model (Chi-square etc), and Time Series: Classical model, trends and forecasting.
- Dimensions of Qualitative research. Differences in data collection, design etc of Qualitative versus Quantitative approach.
- Qualitative Data Analysis for Exploratory Research: The process of QDA. Organizing/Sorting Data and Identifying/using a framework for Descriptive Analysis
- Qualitative Data Analysis: Second Order, Content and Narrative Analyses
- Qualitative Data Analysis: Framework analysis and Grounded theory

Errors / omissions accepted