**UNIVERSITY OF ENGINEERING AND TECHNOLOGY TAXILA**

Department of Industrial Engineering **& of**

**MID TERM PAPER**

**SUBJECTIVE**

**Course Name:** Metrology & Statistical Quality Control **Course Code:** IE 312

**Semester:** 5th (Entry 2011) **Course Instructor:** Engr. Zaheer Ahmad

Time Allowed: 1:40 hrs Marks: 80

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**Question # 1**

An existing process is not meeting the Rockwell specifications, Determine the process capability based on the Range values for 10 subgroups of 5. Data are (7, 5, 4, 6, 8, 4, 6, 3, 2, 4) and d2=2.326. What is process capability Index?

**Question # 2**

Explain the following with Figures?

1. Michelson Interferometer
2. Johansson Mikrokator

**Question # 3**

Define three types of Fits with Figures and Examples?

**Question # 4**

1. Why Tolerances are specified? Give two reasons.
2. What is Zero line?
3. What is the difference between Chance causes and special causes?
4. Define the following Figure?

