



**UNIVERSITI KUALA LUMPUR  
MALAYSIAN INSTITUTE OF INDUSTRIAL TECHNOLOGY**

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**FINAL EXAMINATION  
JANUARY 2016 SEMESTER**

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**COURSE CODE** : JCB 40203  
**COURSE TITLE** : CERTIFICATIONS, STANDARDS AND REGULATION  
IN INSTRUMENTATION AND CONTROL  
**PROGRAMME LEVEL** : BACHELOR  
**DATE** : 29 MAY 2016  
**TIME** : 2.30 PM – 5.30 PM  
**DURATION** : 3 HOURS

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**INSTRUCTIONS TO CANDIDATES**

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1. Please read the instructions given in the question paper CAREFULLY.
  2. This question paper is printed on both sides of the paper.
  3. This question paper consists of ONE (1) section.
  4. Answer ALL questions in Section A.
  5. Please write your answers on the answer booklet provided.
  6. Please answer all questions in English only.
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THERE ARE 6 PAGES OF QUESTIONS EXCLUDING THIS PAGE.

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**SECTION A (Total : 100 marks)**

**INSTRUCTION: Answer any FIVE (5) questions.**

**Please use answer booklet provided.**

**Question 1**

- a) Regulations is a rule produce by the authority department to cover all aspects in private and government sector. Show **SIX (6)** benefits of regulation.

(6 marks)

- b) Instrumentation is a device used for engineering purposes in measurement, manufacturing and etc. Show with example **FIVE (5)** characteristics of specification in instrumentation.

(10 marks)

- c) Company ABCD involved in heavy industry which are drilling and grinding metal bar. According to the regulation by OSHA, all worker must wear earplug at the workplace, but the company did not provide that facility. As an OSHA engineer, justify **FOUR (4)** actions must be taken.

(4 marks)

Question 2

- a) Standard are categorized into several types of level. Each of those type have different function are usage based its performance. Explain with example **FOUR (4)** types of standards.

(8 marks)

- b) International Standard Organization (ISO) is a body used for standardization in certain aspect and it is world largest developer international standard. Identify **ONE (1)** of ISO family.

(4 marks)

- c) ISO 9001:2000 is used to monitor quality in aspect of design, production, installation and service. Examine **EIGHT (8)** ISO 9001:2000 requirements for quality measurement.

(8 marks)

**Question 3**

- a) Process of adopted standardization involved many parties, which are audience, customer, organization, authority and etc. In your own word, define **FOUR (4)** steps standards are adopted.

(4 marks)

- b) The standard maintenance tools used in engineering to analyze the company performance based on time and profit. Identify **SIX (6)** purpose of standard maintenance.

(6 marks)

- c) Company QQQ is involved in automotive industry. The performance of the company is decreasing 14% each year. Using Ishikawa / fishbone mechanism identify **FIVE (5)** causes or effect diagram to the company performance.

(10 marks)

**Question 4**

- a) Documentation, implementation and maintain the system is the key required to have a good organization management system. Construct in details **FOUR (4)** approaches to develop an effective system.

(12 marks)

- b) Certification compliance is used to ensure all the products are measure in high quality and condition. Interpret with example **THREE (3)** criteria's of certificate compliance.

(8 marks)

**Question 5**

- a) Alliance is an agreements on established by main company from other company. Several benefits can achieved through alliance communication between 2 or more parties at the same time. Explain **SIX (6)** benefits that the alliances focus on.

(6 marks)

- b) Occupational Safety and Health Administration (OSHA) is an organization that provide its own strategic management plan due to safety and health administration. Show **THREE (3)** goals that OSHA planned to achieve target.

(6 marks)

- c) A small spark happen during milling and turning process. As a senior control engineer, Mr Amin takes futher action by entering to stop the fire from spreading. Discuss his action with respect to OSHA act.

(8 marks)

**Question 6**

- a) Certification can be recognized in local and international company according to the field of interest. Calibration is tools or technique needed to be applied for every instrument in order to get precise and accurate measurement. Discuss the definition of calibration.

(4 marks)

- b) Safety and health is a critical factor in certification because it involve live of employer, employees and people surrounding. Organization Safety and Health Administration (OSHA) is an organization responsible to ensure the safety and health of every employments. Show **THREE (3)** benefits of safety and health corresponded to company certification.

(6 marks)

- c) Web security control used to monitor any breach into private software designed to restrict or control the content a reader is authorized to access, especially when utilized to restrict material delivered over the Internet via the Web e-mail, or other means. Show **FIVE (5)** benefits of control software to user.

(10 marks)

**END OF EXAMINATION PAPER**

