



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

**FINAL EXAMINATION
JANUARY 2016 SEMESTER**

COURSE CODE : JFB 40103

**COURSE TITLE : STANDARD AND CERTIFICATION IN FACILITIES
MAINTENANCE**

PROGRAMME LEVEL : BACHELOR

DATE : 31 MAY 2016

TIME : 9.00 AM – 12.00 PM

DURATION : 3 HOURS

INSTRUCTIONS TO CANDIDATES

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 TWO (2) sections.
 4. Answer ALL questions in Section A. Choose THREE (3) questions in section B.
 5. Please write your answers on the answer booklet provided.
 6. Please answer all questions in English only.
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THERE ARE 4 PAGES OF QUESTIONS EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

A regulation is "subordinate legislation" authorized by an act and made by a group of individuals (government agencies). These regulations are based on the act that has been approved and served as a way to make the act easier to follow and comply.

- (a) Identify **FOUR (4)** differences between act and regulation. (8 marks)
- (b) Explain **FOUR (4)** importance of regulations in facilities and maintenance engineering. (8 marks)
- (c) Name **TWO (2)** regulations under Department of Occupational Safety and Health (DOSH) that specifically related to facilities engineering. (4 marks)

Question 2

A standard is a document that defines the characteristics of a product, service and process such as dimensions, safety aspects, and performance requirements. While certification is a scheme, structure or process that ensures that the origin, material, quality, manufacture, accuracy and other characteristics of a product or service has met with requirement.

- (a) List down **TWO (2)** applicable standards and **TWO (2)** applicable Certification Body (CB) related to facilities engineering. (6 marks)
- (b) In general, compliance means conforming to a rule, such as a specification, policy, standard and law. Discuss **FOUR (4)** significance of standards compliance. (8 marks)

- (c) Certification and accreditation are always link with competency of people, service, product and organization. Differentiate the definition of certification and accreditation as mentioned by International Organization for Standardization (ISO).

(6 marks)

SECTION B (Total: 60 marks)

INSTRUCTION: Answer THREE (3) questions only.

Question 1

ISO 9001 Certification will provide maximum benefit to an organization if it approaches ISO 9001 implementation in a practical way. By adopting an approach that starts out to implement more efficient working practices and focuses on the business objectives of the organization.

- (a) As a facilities engineer, you need to propose to your manager to implement the quality standards. Explain to your manager, how ISO 9001 Certification can give benefits to organization and customer satisfaction in term of quality management system.

(16 marks)

- (b) Determine FOUR (4) significance by applying standards can help small businesses.

(4 marks)

Question 2

- (a) The Certified Facility Manager (CFM) under International Facility Management Association (IFMA) is the only global facility management certification available. The goals of IFMA's certification program are to assure professional excellence and promote the added value of the profession. Briefly, the steps become a facilities engineer.

(10 marks)

- (b) Competency areas ^{are} defined as the practice arena for competent facilities practitioners. Identify FIVE (5) competency areas as requirement become Certified Facility Manager (CFM).

(10 marks)

Question 3

Calibration of equipment needs to be carried out on a regular basis. This is because of instruments tend to deviate owing to hard operating conditions, mechanical shocks or exposure to extreme temperature or pressure. The exact process of equipment calibration shall vary according to the type of instrument, how critical its role is in the operation and standards that are followed for the calibration purpose.

- (a) List out **FOUR (4)** types of instrument that need to do calibration certification. (4 marks)
- (b) Explain in detail\$ the process that needs to be followed for equipment calibration. (12 marks)
- (c) Laboratory Accreditation Scheme of Malaysia (SAMM) is unified national laboratory accreditation scheme and is multi-disciplinary in its scope of accreditation activities. It covers both calibration and testing. Name **FOUR (4)** accredited companies in Malaysia that provide calibration services. (4 marks)

Question 4

- (a) Most certification programs have three levels of Non-destructive Testing (NDT) qualification which are Level I, Level II and Level III. Discuss requirements for each level. (10 marks)
- (b) There are multiple Non-destructive Testing (NDT) certification systems worldwide, but they can generally be divided into two main types which is "employer-based" and "central" certification systems. Clarify each of these types. (10 marks)

END OF EXAMINATION PAPER

