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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2013/2014**

COURSE NAME : ENGINEER AND SOCIETY
COURSE CODE : BFC 32202/BFC3062
PROGRAMME : 3 BFF
EXAMINATION DATE : DECEMBER 2013/JANUARY 2014
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGE

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Q1 Engineers generally can be distinguished according to several key areas for example the field of Mechanical, Electrical and Electronics, Civil, Marine and others. To perform the engineers task as qualified person, they must be registered with the appropriate bodies, particularly the Board of Engineers Malaysia (BEM).

(a) Based on the above statement, define Civil Engineers field and the minimum qualifications required to be Civil Engineer.

(3 marks)

(b) Resident Engineer and Project Engineer are two characters in ensuring a smooth development of the project during the construction process. Describe **six (6)** main tasks respectively for both positions.

(12 marks)

(c) The Board of Engineers Malaysia (BEM) and the Institution of Engineers Malaysia (IEM) are two bodies that play an important role in career development of an engineer. Describe **five (5)** functions of these two bodies.

(10 marks)

Q2 (a) Performing research and development (R&D) activities is one important way in which engineers can give significant contribution to society. Describe separately the definition of *research* and *development* referred above.

(4 marks)

(b) Discuss **three (3)** responsibilities in which engineers are expected to uphold whenever they participate in research and development activities.

(6 marks)

(b) Describe **four (4)** issues that related with engineering in the industry and universities.

(8 marks)

(c) State **two (2)** types of research grant scheme in Malaysia and list **three (3)** of their prime objectives.

(7 marks)

Q3 (a) The code of ethics consists of principles and canons about the rules of professional behavior suitable for all specialties. Describe **four (4)** main purposes why code of ethic is needed.

(8 marks)

(b) The development of the construction sector today is contaminated with many issues that are not healthy. There are several cases have been recognized for instance, incompetent contractor have been appointed as a main contractor, intervention by interested parties against a decision until the course of abandoned of project, low quality of project compare to budget provided and a lot of issue which is not comply to the procedure.

(i) Based on the above, please state your position.

(1 marks)

(ii) Elaborate your position clearly with suitable examples.

(8 marks)

(iii) Based on your understanding, discuss the **four (4)** steps in resolving this problem.

(8 marks)

Q4 Globalisation, characterised by the increase in international trade, mobility of labour and capital, as well as borderless communications, presents new opportunities and challenges for engineering sector. The WTO (World Trade Organisation), the APEC (Asia Pacific Economic Cooperation) and the AFTA (ASEAN Free Trade Area) are developments of the concept of a borderless world.

(a) As an engineer, explain the opportunities that can be grabbed and challenges faced by the engineers when the above concept being implemented.

(9 marks)

(b) List **four (4)** Programme Education Objectives (PEO) for Bachelor's Degree in Civil Engineering.

(4 marks)

(c) In your opinion, how are the Programme Education Objectives (PEO) and the Programme Learning Outcomes (PLO) for this program help to prepare graduates who can be marketed.

(12 marks)

-END OF QUESTION-