



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2014/2015**

COURSE NAME : ENGINEER AND SOCIETY
COURSE CODE : BFC 32202
PROGRAMME : BACHELOR OF CIVIL
ENGINEERING WITH HONOURS
EXAM DATE : JUNE 2015 / JULY 2015
DURATION : 2 HOURS
INSTRUCTION : ANSWERS ALL QUESTIONS.

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

- Q1.** (a) Differentiate the responsibilities of the professional engineer if he/she is working with a construction company and a consulting company. (10 marks)
- (b) Justify the procedures on how Uniform Building By Law (UBBL) controls the building plans and construction work. (10 marks)
- Q2** (a) Define the meaning of development . (2 marks)
- (b) Compare the differences between water resources engineering and construction engineering. (4 marks)
- (c) Distinguish the responsibilities of contractor and consultant. (4 marks)
- (d) In ensuring the project is completed according to the specification, project engineer and resident engineer have to play their roles. Explain the roles of project engineer and resident engineer . (10 marks)
- Q3** (a) BEM and IEM play significant role in the development of engineering profession in our Malaysia. Describe **TWO (2)** different of ways that both organization function and shows the relationship between them. (6 marks)
- (b) List the necessary steps for a graduate engineer to apply as a professional engineer (PE) with Ir status. (6 marks)
- (c) Engineering profession are said to save more life than medical profession. Debate the validity of these statement. (8 marks)

- Q4** (a) Define Research and Development (R&D). (4 marks)
- (b) Based on key elements that an engineer should have, choose an environmental issue and show the responsibilities that need to be aware of. (10 marks)
- (c) Explain the **FOUR (4)** characteristics of non-patentable intellectual property. (6 marks)
- Q5** (a) Technology transfer is the acquisition and adaptation of production techniques from one country or firm to another it includes the application in a local production process. In your opinion, what are the reasons for countries to practice technology transfer and state the drawback. (6 marks)
- (b) Describe **TWO (2)** basic types of intellectual properties. (4 marks)
- (c) 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. (4 marks)
- (d) List **TWO (2)** responsibilities in which engineers are expected to uphold whenever they participate in research and development activities. (2 marks)
- (e) Propose an example of potential application of nanotechnology which civil engineer can explore. (4 marks)

- END OF QUESTION-

