



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020**

COURSE NAME : ENGINEER AND SOCIETY /
ENGINEERING TECHNOLOGIST
AND SOCIETY

COURSE CODE : BNR 42702 / BNR 44002

PROGRAMME CODE : BND / BNE

EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020

DURATION : 2 HOURS

INSTRUCTION : ANSWER ALL QUESTIONS

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

Q1 Engineering technologists have played an important part in developing and improving people's lifestyle all around the world.

(a) Describe engineering technology according to The National Society of Professional Engineers (NSPE). (4 marks)

(b) Differentiate between 'Engineer', 'Technologist' and 'Technician' by providing **FOUR (4)** criterias. (12 marks)

(c) List **FOUR (4)** scope of work of a technologists. (4 marks)

(d) Describe the similarity of engineering and engineering technology. (5 marks)

Q2 Currently, society greatly depends on the sound judgment and integrity of the professional technologist and engineer. Technologist and engineer need to be aware of ethics as they make choices during their professional practice of engineering.

(a) Define the term 'Ethics'. (3 marks)

(b) The codes serve as starting points for making ethical decisions.

(i) Relate one case study or scenario on engineering failure which shows the ethical issues. (10 marks)

(ii) Demonstrate **TWO (2)** actions that will be taken by the profession mention in **Q(b)(i)**. (6 marks)

(iii) Relate the scenario in **Q(b)(i)** with **TWO (2)** suitable code of ethics established by NSPE. (2 marks)

(c) In case of conflicting values occur, explain the criteria's that need to be priorities and consider by technologists. (4 marks)

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Q3 As a technologist we are expected to exhibit the highest standard of honesty and integrity. Therefore, implementation of law and regulation are important to ensure technologist perform their duties with highest principles of ethical conduct.

(a) Describe the similarity and different between religion and ethics. (4 marks)

- (b) Define the term 'Professionalism'.
(3 marks)
- (c) You have discovered a safety flaw in a product that you are manufacturing. However, the recall of the product will affect the financial of the company. As an engineer / technologist, you have to make the decision either to keep silent or proceed to recall the product. Demonstrate and discuss the ethical step to resolve the conflict.
(10 marks)
- (d) The opening of world trade and globalization of economy and business has led to the spread of multinational companies. Industries in developing countries are faced with many challenges and must transform themselves into multinational industries by acquiring different competencies that allow them to face up to the challenges of globalization. Based on this statement, demonstrate **FOUR (4)** benefits of Globalization of Technology.
(8 marks)

Q4 Fast pace of development in technology has led to diversification of study which has opened up several other branches of engineering technology.

- (a) Electrical engineering technology is one of the early branch in engineering technology. State another **FIVE (5)** branch of specialization in engineering technology.
(5 marks)
- (b) List **FOUR (4)** role of electrical technologist.
(4 marks)
- (c) Electronics engineering technology is one of the specialization branch that is important in Industry Revolution 4.0. Demonstrate **THREE (3)** contributions of electronics engineering technology toward society in term of developing and improving people's lifestyle all around the world.
(6 marks)
- (d) Tech National Society of Professional Engineers defined that Sustainable Development as the challenges of meeting human needs for natural resources, industrial products, energy, food, transportation, shelter and effective waste management while conserving and protecting environmental quality and the natural resource for future generations. Discuss how you would foresee your responsibilities towards meeting this statement after graduation.
(10 marks)

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-END OF QUESTIONS -