Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2018/2019

COURSE NAME	:	GREEN BUILDING TECHNOLOGY
COURSE CODE	:	BNA 41003
PROGRAMME CODE	:	BNA
EXAMINATION DATE	:	JUNE / JULY 2019
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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

Q1 40% of new buildings in Malaysia are being designed and constructed with various degrees of eco-friendliness to meet the green building concepts.

(a) List **FIVE (5)** advantages of build 'green' and sustainable building.

(5 marks)

(b) The green building rating systems has been in practice for last three decades around the world. The developed and developing countries have their own rating systems and assessment methods to qualify the green building. Match the practice countries for the green building assessment system below:

(i) Building Research Establishment Environmental Assessment Method (BREEAM)
(ii) Comprehensive Assessment System for Built Environment Efficiency (CASBEE)
(iii) Leadership in Energy and Environmental Design (LEED)
(iv) Green Star
(v) Green Mark

(5 marks)

(c) The built environment has a vast impact on the natural environment, human health, and the economy. By adopting green building strategies, we can maximize both economic and environmental performance. Classify the benefits of green building prior to the:

(i) Environment
(ii) Social
(iii) Economic

(9 marks)

(d) Green Building Index (GBI) is Malaysia's recognized assessment system for green buildings which administrate by Greenbuildingindex Sdn Bhd. The organization of the GBI for certification and accreditation of green-rated buildings consist of three tiers. Illustrate the GBI organization.

(6 marks)

Q2 Green Building Index (GBI) rating tool for buildings are to promote sustainability in the built environment and raise awareness among developers, architects, engineers, technologist, planners, designers, contractors and the public about environmental issues and our responsibility to the future generations.

(a) Describe **FIVE (5)** focus of GBI organization on why they built green buildings.

(5 marks)

(b) Briefly explain the process of the GBI implementation.

(4 marks)

(c) The Malaysian Government provides incentives in the form of investment tax allowance for the purchase of green technology assets and income tax exemption for the use of green technology services and system. Discover **THREE (3)** objectives of provided tax incentives.

(6 marks)

(d) Differentiate **FIVE (5)** characteristics of GBI rating tools between residential and non-residential building.

(10 marks)

Q3 (a) State **FOUR (4)** parties involved in the Sustainable Construction and Development in Malaysia.

(4 marks)

(b) There are five legislative requirements for Green Practices in Building Construction Work. Explain **THREE (3)** of the legislative.

(9 marks)

(c) You are in your bathroom every day, several times a day, which makes it one of the most scrutinized rooms in a house. Design a bathroom remodelling checklist that will save energy and money while helping the environment.

(12 marks)

Q4 (a) In general, IAQ is related to pollutants such as biological, chemical, and physical within indoor environments that can affect the health of occupants. Discuss long-term actions that can help promote favorable IAQ in green buildings.

(5 marks)

(b) Measuring and testing indoor air quality is an imperfect science with many variables, and the path to establishing whether a building has healthy indoor air is rarely clear-cut. Point out **FOUR (4)** critical requirements for mold growth in a commercial building.

(8 marks)

(c) Dumping waste into a large tract of land is one of the oldest and cheapest ways to deal with garbage disposal, yet it poses a number of serious social and environmental repercussions. As a Green Consultant. Shows **FOUR (4)** examples of incredible transformations of former landfills that have gone from dirty and unfriendly to green and beautiful.

(12 marks)

-END OF QUESTIONS –