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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2017/2018**

COURSE NAME : SUSTAINABLE CONSTRUCTION
COURSE CODE : BPF 44103
PROGRAMME CODE : BPC
EXAMINATION DATE : DECEMBER 2017 / JANUARY 2018
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWER ALL QUESTIONS

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

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Q1 Sustainable construction was defined as "...the design and operation of a healthy, resource - efficient built environment based on ecological principles".
(Kibert, 1994)

(a) Explain the above statement with emphasise on water efficiency for housing development.

(10 marks)

(b) Discuss the efficient built environment development based on ecological principles in optimising environmental friendly construction material resources.

(10 marks)

Q2 Activities of construction consumes about 40% of global energy and accounts for about 40% of carbon emissions. Apart from resource intensive in using energy and raw materials, buildings generate wastes, harmful substances and pollutants directly and indirectly into atmosphere. Obviously, sustainable material resources in construction are crucial factor in affecting environment.

(Journal of Building Performance, 2016)

Relate all key elements of sustainable construction material resources with activities in construction site.

(20 marks)

Q3 There are factors to be considered for sustainable site planning and management in green building index. Therefore, in order to be considered as sustainable construction, the contractors must adhere to these factors.

Elaborate **SIX (6)** factors in sustainable site planning and management for green building index.

(30 marks)

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Q4 Innovation is one of the factors in green building index. Construction industry player should understand how innovative design can improve the environment and the protection against the negative effects of construction activities.

(Greenbuildingindex, 2009)

Relate the following with regards to innovation:

(a) Human settlements sustainability

(15 marks)

(b) Urban environmental management strategies

(15 marks)

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- END OF QUESTIONS -