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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : BUILDING SERVICES AND
MAINTENANCE
COURSE CODE : BPE 33802
PROGRAMME : 3 BPD
EXAMINATION DATE : DECEMBER 2014/JANUARY 2015
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

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Q1 Air conditioning system is the treatment of air in an enclosed space to control and maintain temperature, heat and pressure.

- (a) Describe **FOUR (4)** functions of air conditioning systems in a building.
(6 marks)
- (b) Illustrate with proper labeling the basic cooling components cycle of air conditioning systems.
(6 marks)
- (c) Discuss the functions of main component of air condition system. Your discussion should focus on **THREE (3)** main components i.e. evaporator, condenser and compressor.
(6 marks)
- (d) Explain the step by step on how to do the maintenance of air conditioning system for split unit air-condition.
(7 marks)

Q2 Fire safety planning normally involves several important aspects for designer's consideration.

- (a) Discuss **THREE (3)** most important aspects to be considered for fire safety planning.
(15 marks)
- (b) Discuss **TWO (2)** aspects of site planning of buildings which are considered in **PASSIVE** fire fighting.
(10 marks)

Q3 Cracks in buildings are normally associated with differential settlements that occur at building foundations.

- (a) Discuss **THREE (3)** sources of problems which have been found to be the causes of the building settlement.
(15 marks)
- (b) Differentiate between hairline and structural cracks and how these can be rectified.
(10 marks)

- Q4** (a) According to the Uniform Building By Laws (1984), in order to get approval in the issuance of Certificate of Completion and Compliance (CCC), a number of building services technical requirements must be met.

Discuss the scope and functions of **THREE (3)** approving authorities in the process of technical evaluation.

(12 marks)

- (b) Energy saving, water conservation and, material and resources are three major components in Green Building Index (GBI) assessments.

Discuss on how to implement the above **THREE (3)** components in managing UTHM campus.

(13 marks)

- END OF QUESTION -