



UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2013/2014**

COURSE NAME : BUILDING SERVICES
COURSE CODE : BPD 32902
PROGRAMME : 3 BPC
EXAMINATION DATE : DECEMBER 2013 / JANUARY 2014
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

Q1 The function of air conditioning system is to give comfort to the occupants and to provide the most suitable environment for a space function.

- (a) Explain with appropriate examples based on the above statement. (6 marks)
- (b) Discuss **TWO (2)** factors that will decrease the effectiveness of air conditioning system. (4 marks)
- (c) Explain with schematic diagram of a window unit air conditioning system. (15 marks)

Q2 Building ventilation system is required for a building in order to ensure the building is in a comfort and safe for occupants.

- (a) Discuss **TWO (2)** factors to be considered in providing a good ventilation system of the buildings. (5 marks)
- (b) Analyse mechanical ventilation is preferred over natural ventilation in a commercial building. (10 marks)
- (c) Discuss with sketches, the possibilities combination of natural and mechanical ventilation system. (10 marks)

Q3 Building transport system is needed to expedite the movement of travel within the building. There are several types of transport system used in the buildings.

- (a) Discuss the suitable transport system in shopping complex. (5 marks)
- (b) Explain **TWO (2)** types of escalator arrangement commonly used in commercial buildings. (10 marks)
- (c) Compare the advantages and disadvantages of hydraulic lift and electric lift. (10 marks)

Q4

Fire safety is often related to rescue team and Fire Brigade. Therefore, the buildings have to comply with the specifications or standards recommended by the Fire Department.

- (a) The buildings should have special protections, active and passive protections to prevent fires from occurring and to facilitate the fire rescue session.

Describe the active and passive protection covers to prevent fires in buildings. (5 marks)

- (b) The owner of a paint factory is considering the possibility of using portable fire extinguishers as part of the fire fighting installation in his factory.

Discuss **TWO (2)** possible options that is suitable preventing fire in the factory. (10 marks)

- (c) Analyse **TWO (2)** main components of an automatic fire alarm system. (10 marks)

-END OF QUESTION-

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