



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016**

COURSE NAME : BUILDING AUTOMATION AND CONTROL SYSTEM

COURSE CODE : BNB 40603

PROGRAMME CODE : BNB

EXAMINATION DATE : DECEMBER 2016/ JANUARY 2017

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWERS ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **TWO (2)** PAGES

- Q1** (a) What is the difference between a smart building system and intelligent building system and explain the relationship of both systems with the building automation system (BAS). (15 marks)
- (b) Give **TWO (2)** examples of situations where smart building system and intelligent building system are applied. (10 marks)
- Q2** (a) An escalator is a type of vertical transportation in the form of a moving staircase. With appropriate illustrations and examples, explain how the escalator works. (10 marks)
- (b) What makes an escalator is a good escalator? (8 marks)
- (c) Apart from the lift and escalator, vertical transportation also consists of moving ramp and paternoster. Describe the function and purpose of the moving ramp and paternoster. (7 marks)
- Q3** (a) Lift system consists of two main types of hydraulic and traction. With the aid of sketches, explain both of the system. (10 marks)
- (b) What determines how many lifts a building will have? (8 marks)
- (c) What factors should be taken into account in designing vertical transportations in a mall. (7 marks)
- Q4** ALAM Group of Companies plans to develop a mixed commercial center in Pagoh metropolitan. Therefore, they began to build a 4-storey mega mall with a 21-storey 5 star hotel adjacent to the existing 23-storey apartment. With the use of sharing facilities concepts, suggest the best methods for integrating building automation systems from the security and control aspect of the project when it is completed. (25 marks)

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- END OF QUESTIONS -