UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2017/2018

COURSE NAME : BUILDING TRANSPORTATION SYSTEM

COURSE CODE : BNB 31803

PROGRAMME CODE : BNB

EXAMINATION DATE : JUNE/JULY 2018

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER **ALL** QUESTIONS

TERBUKA

Q1 (a) An escalator is a type of vertical transportation in the form of a moving staircase. With appropriate illustrations and examples, explain how escalator works.

(10 marks)

(b) Describe how to makes the elevator is a good elevator.

(8 marks)

(c) Apart from lift and escalator, vertical transportation also consists of dumbwaiter and paternoster. Describe the function and purpose of the dumbwaiter and paternoster.

(7 marks)

Q2 (a) List **TWO (2)** types of escalator and its functions.

(4 marks)

(b) Explain the circumstances in which escalator are chosen instead of lift as transportation in building.

(6 marks)

(c) An escalator inclined at 30°, operation with one person per 400mm step at 0.65m/s. Calculate the capacity of escalator.

(7 marks)

(d) There are two types of inclination angle which are 30° and 35°. Sketch and briefly describe the effect of each angle.

(8 marks)

Q3 (a) Lift system consist of two main types of hydraulic and traction. With the aid of sketches, explain both of the systems.

(10 marks)

(b) Determines how many lifts are required in a building.

(8 marks)

(c) As an engineer, you need to design the vertical transportation in a shopping mall. Determines the factors that should consider in your design.

(7 marks)

Q4 ALAM Group of Companies plan to develop a mixed commercial centre 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 transportation systems from the security and control aspect of the project when it is completed.

(25 marks)

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- END OF QUESTION -

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