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Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : FIRE SERVICES
COURSE CODE : BNB 40303
PROGRAMME : 3 BNB
EXAMINATION DATE : JUNE 2015 / JULY 2015
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

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- Q1**
- (a) List **THREE (3)** methods of fire spread. (6 marks)
 - (b) State **TWO (2)** fire classes with examples. (4 marks)
 - (c) Discuss in detail the **THREE (3)** elements that cause the occurrence of fire. (6 marks)
 - (d) Fire Services Act 1988 (Act 341) emphasizes the importance of prevention and control of fires in buildings that need to be complied with by building owners to ensure there were no injuries and the difficulty of escape in case of fire. Discuss the objectives of the Fire Services Act 1988 (Act 341). (4 marks)
- Q2**
- (a) According to the appropriate examples, distinguish between fixed installation tool and non-fixed installation tool for fire protection system in the building. (10 marks)
 - (b) Briefly explain on the following types of fire detector devices:
 - (i) Halon system (2 marks)
 - (ii) Smoke detector (2 marks)
 - (iii) Fire damper (2 marks)
 - (iv) Dry riser (2 marks)
 - (v) Fire Rated Door (2 marks)
- Q3**
- (a) State **FIVE (5)** security systems for a bank which located inside a shopping mall. (5 marks)
 - (b) A security system designed to detect intrusion unauthorized entry into a building or area. As a professional building services technologist, explain why the security system is needed. (5 marks)
 - (c) With an aid of a well-labelled diagram, operationalize the stages involved to wired connection. (10 marks)

Q4 ALAM CO. (M) BHD plans to add another branch of Alam Shopping Mall in the vicinity of Batu Pahat. Thus, a ninth-storey building with an area of 2.1 million sq. ft. will be built in the mentioned area. Based on the situation, you are asked to propose the followings:

(a) Fire life safety management (10 marks)

(b) Emergency response management (10 marks)

Q5 (a) With the aid of sketches, explain the stages of a fire growth. (6 marks)

(b) How does knowledge about “Fire Growth” can help managers and building services professionals relate the life cycle of a building construction project with fire prevention and protection works? (6 marks)

(c) Explain **FOUR (4)** methods to extinguish the fire. (8 marks)

- END OF QUESTION -