



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2017/2018**

COURSE NAME : BUILDING SERVICES  
TECHNOLOGY & DESIGN

COURSE CODE : BNB 31103

PROGRAMME CODE : 3 BNB

EXAMINATION DATE : JUNE/JULY 2018

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER ALL QUESTIONS

**TERBUKA**

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

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- Q1** (a) Define the meaning of development and show the detail **THREE (3)** development needs. (5 marks)
- (b) Each application processes are provided for under the various related legislation name including Uniform Building by Law, 1984. State **THREE (3)** other legislation adopted for the purpose of planning and preparing a development. (3 marks)
- (c) The Certificate of Completion and Compliance (CCC) system which come into force in all states within Peninsular Malaysia in 2007 effectively replaces the Certificate of Fitness for Occupation (CFO) previously issued by the local authorities under the Street, Drainage and Building Act 1974. In brief, distinguish **THREE (3)** differences between CCC and CFO. (9 marks)
- (d) After the site possession by the main contractor, the construction work will start within allocated time agreed by both parties. Elaborate next steps that had to be taken upon construction. (8 marks)
- Q2** (a) Building services system are divided into three main categories; mechanical services, electrical services and building operations. For each category, propose **THREE (3)** types of building services systems that you think are necessary for a purpose built office (PBO) building and explain why the system is essential to the building. (5 marks)
- (b) With the aid of a well-labelled diagram, explain the stages involved in wired connection. (10 marks)
- (c) Enumerate **FIVE (5)** security systems for a 24-hours convenience store which located nearby Higher Learning Institution and for each system justify why it is a must. (10 marks)

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- Q3** A technical drawing is the instruction manual for something that needs to be built or manufactured. It is exact in offering a visual representation of what it's intended to be, in detail.
- (a) Differentiate between **FOUR (4)** types of plan drawing in working drawings. (10 marks)
- (b) In a technical drawing, a 2D and 3D drawing is used to illustrate a flat image and a perspective image respectively. Create a simple drawing of a single storey house that pictures a 2D drawing and a 3D drawing. (15 marks)
- Q4** (a) Historically, the role of building services technologies would have been to install all the services within the space allocated but a new focus on sustainable development in buildings has changing the job responsibility. Based on the above statement, discuss the roles and responsibilities of building services technologies today (10 marks)
- (b) Tan Sri Ishak owns a 3 storey bungalow and intend to renovate his house located within the jurisdiction of Dewan Bandaraya Pagoh. Point out **SIX (6)** steps that must be taken by Tan Sri Ishak in order to submit an application for submission. (8 marks)
- (c) In order to renovate a bungalow house, Tan Sri Ishak has to consider the setbacks of his house. With an aid of a sketch, illustrate the size of setbacks for his house. (7 marks)

- END OF QUESTION -

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