Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020

COURSE NAME	:	BUILDING INFRASTRUCTURE
COURSE CODE	:	BFR 31903
PROGRAMME CODE	:	BFR
EXAMINATION DATE	:	DECEMBER 2019 / JANUARY 2020
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 (a) As an architect for a new building development, identify **FIVE (5)** types of infrastructures that can be considered to provide facilities to the building.

(5 marks)

(b) Your appointment as an architect involve a task to design a row of 7 terrace shop lots. Meanwhile, the nearest road at the front of your site is a 24m (60') width road. With aid of sketches, explain how you shall design the access road to your shop lots.

(8 marks)

(c) An owner of a house which located on a higher land besides his neighbour's house is seeking your advice as an architect. There is a stream flowing across both lands, which both owner use it to discharge their surface water drainage.

Recently, during heavy rain, he realises that the water discharged from his land into the stream has caused his neighbour's land to flood. Explain how to avoid the flooding problem in the land from happening again with aid of sketches.

(12 marks)

Q2 (a) Explain the basic concept of water supply system.

(5 marks)

(b) Explain the water treatment process and provide sketches to support your answer.

(8 marks)

(c) Explain in detail by using sketches, the phases in sewerage treatment system.

(12 marks)

Q3 (a) Electrical power is an important facility for a new development. Based on your understanding, list **FIVE (5)** components of Electric Grid that are linked to each other in delivering the electrical power to the development.

(5 marks)

(b) There are two stages of installing a fully solar energy based building. The first stage is the design process and the second stage is the process of obtaining approval from Tenaga Nasional Berhad (TNB). Explain both stages work process.

(12 marks)

(c) 5G is the fifth generation cellular network technology. Recently, Malaysia has announced to enter this infrastructure technology in providing faster networking system in the country. Explain how this technology may be applies to give benefit in architecture and construction industry.

(8 marks)

Q4 (a) Give **FOUR (4)** types of solid waste in Malaysia.

(4 marks)

(b) 3R is the best approach to solid waste issues in Malaysia. Explain what is 3R and include examples for each of the elements.

(9 marks)

(c) Town B is a new township development. Somehow, the developer has not provided area for solid waste disposal ground. As the Architect, you need to propose the suitable area for solid waste disposal ground in Town B. Explain on why you proposed the site and the relevant solid waste disposal system. Refer to **FIGURE Q4 (c)**.

(12 marks)

– END OF QUESTIONS –

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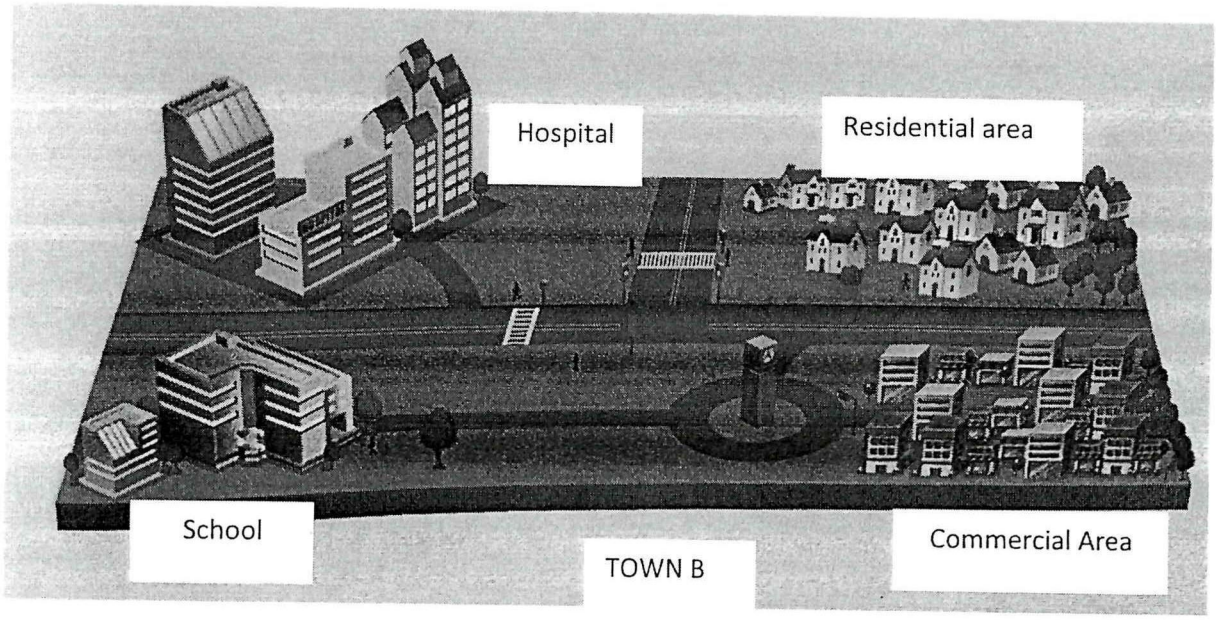

FIGURE Q4 (c)