

**SULIT**

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Second Semester Examination  
2021/2022 Academic Session

July/August 2022

**EAA484 – Building Construction and Technology**

Duration : 1 hour

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Please ensure that this examination paper contains **FOUR (4)** printed pages before you begin the examination.

**Instructions:** This paper contains **THREE (3)** questions. Answer **TWO (2)** questions.

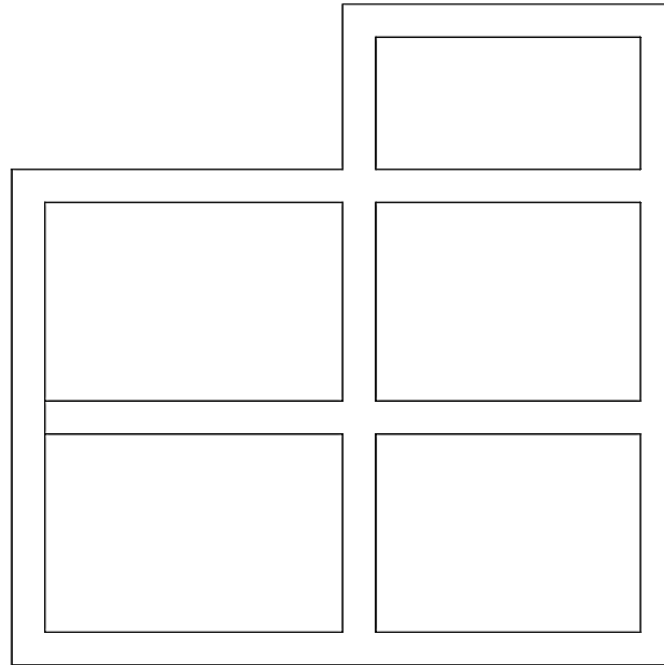
All questions **MUST BE** answered on a new page.

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**SULIT**

1. (a) In a residential area, the surface drainage system and subsurface drainage system are two external drainage systems that should be installed. External drainage system functions to control the excess water and prevent the housing area from massive damage.
- (i) Explain the function of **FOUR (4)** basic components in the surface drainage system for the residential area with the aid of a sketch.  
[9 marks]
- (ii) If one of the basic components is damaged, discuss **THREE (3)** problems that will occur caused by the excess water to the house and surrounding area.  
[6 marks]
- (b) In the preliminary stage of site work refers to earlier work carried out upon the "kick-off meeting".
- (i) Describe **FIVE (5)** activities of the preliminary stage for the construction of double-storey house.  
[5 marks]
- (ii) Every structure must be constructed in the right position by referring to the details provided in the construction drawing. **Figure 1** shows the foundation trench plan for a double-storey house. Sketch the setting out for the plan given with the help of pegs.  
[5 marks]

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**Figure 1**

2. (a) The concept of Green Building Technology is often referred to as 'Sustainable Building Technology', which means that the building is designed in such a way that it consumes less energy, has great design flexibility, a low maintenance cost, improved air quality, etc. By giving suitable examples, explain the stages involved in a building life cycle related to the adoption of green building technology.

[10 marks]

- (b). Industrialized Building Systems (IBS) involves the industrialized process which promotes the investment in construction equipment, facilities and technology to maximize production output, thereby reducing labour resources and enhancing quality, while building system is a set of related elements that joins together to enable the designated performance of a building.

- (i) Examine the important aspects to be considered in the implementation of IBS during its production, transportation and construction process.

[15 marks]

3. A two-story bungalow house with a swimming pool is plan to be constructed in front of Pantai Penarik, Terengganu. The house is 30 meters from the seashore.

- (a) Sketch a simple site plan to show the location of the swimming pool and the house in front of the seashore (assuming the land size is 180 m x 90 m, bungalow size is 16 m x 31 m and swimming pool size 6 m x 16 m).

[5 marks]

- (b) Choose any based material that is suitable for the construction and explain the reason for choosing the material.

[5 marks]

- (c) Explain in general the construction sequence for the bungalow house.

[15 marks]

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