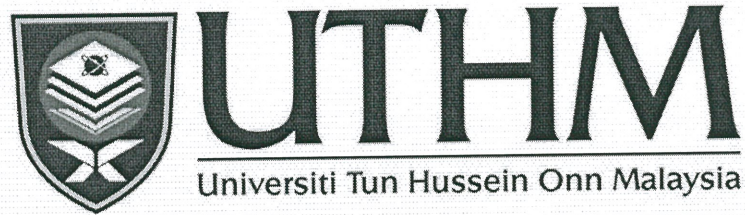


**CONFIDENTIAL**



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME : PIPED AND GAS SERVICES  
COURSE CODE : BNB 40203  
PROGRAMME : 3 BNB  
EXAMINATION DATE : JUNE 2015 / JULY 2015  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

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

**CONFIDENTIAL**

- Q1** (a) State **FOUR (4)** importance of water to human. (2 marks)
- (b) Explain the objectives of water supply. (5 marks)
- (c) With an aid of a well-labelled diagram, explain the components involved in supplying water to the consumers. (5 marks)
- (d) Recommend a layout of pipe distribution system for the areas with a structured road system. Give explanation to support your answer. (8 marks)
- Q2** (a) Alam Padu Ventures Sdn. Bhd. plans to build four-storey office building in Pagoh. You are required to propose the water supply system and sewerage piping system suitable for the mentioned four-storey office building. Explain clearly on each system that has been proposed. Support your explanation with the relevant figures. (20 marks)
- Q3** (a) Enumerate **THREE (3)** advantages and disadvantages of direct and indirect cold water supply system. (6 marks)
- (b) List **FOUR (4)** types of materials used for pipe. (4 marks)
- (c) Sketch and name the **THREE (3)** types of single trap in used for sanitary system. (6 marks)
- (d) Describe **TWO (2)** advantages of using siphonic water closet compare with wash down water closet. (4 marks)
- Q4** (a) Justify **THREE (3)** reasons for your choice of the method. (6 marks)
- (b) State traditional method of solid waste management is suitable for a small upland community of about 1000 inhabitants? (2 marks)
- (c) Outline the processes involved in solid waste management. (12 marks)

**Q5** Based on the table below, design:

Fittings	Ground floor	First floor	Second floor	Third floor	Fourth floor
Water closet (wc)	14	14	14	14	14
Wash basin (wb)	18	14	14	14	14
Urinal	6	6	6	6	6
Tap	22	14	14	14	14
Sink	3	-	-	-	-

- (a) Number of all fittings in the building. (4 marks)
- (b) Total water storage needed for this building. (4 marks)
- (c) Size of tank. (4 marks)
- (d) Size of suction tank. (4 marks)
- (e) Size of bulk storage tank. (4 marks)

**- END OF QUESTION -**