Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2016/2017

COURSE NAME	:	CONSTRUCTION TECHNOLOGY II
COURSE CODE	:	BPD 22203
PROGRAMME CODE	:	BPC
EXAMINATION DATE	:	DECEMBER 2016 / JANUARY 2017
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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

Q1 Rigid and flexible roads are two types of roads available in the Malaysian construction industry. The selection of type of roads is depending on several criteria such as cost allocation, location, and usage of the roads.

(a) Differentiate between tar macadam roads with concrete roads.

(8 marks)

(b) Discuss with the aid of sketches, the complete construction process of roads that is a suitable for a heavy usage.

(12 marks)

Q2 Explain with the aid of sketches, the complete construction process of the following:

(a) Fixed ceiling

(10 marks)

(b) Suspended ceiling

(10 marks)

Q3 **Figure Q3** in **Appendix I** shows the sewerage line from the building to public sewer line and wastewater treatment works. The **Figure Q3** also depicts the layout of main and service pipe of water supply for the building.

(a) Illustrate a schematic diagram for suitable water supply system for the building.

(8 marks)

(b) Explain with the aid of sketches, the complete construction process of sewerage system for the apartment from point A and B to point C.

(12 marks)

Q4 The new Industrialised Building System (IBS) Roadmap 2011-2015 is to replace the previous IBS roadmap. It is hoped that the new roadmap will drive the way forward for sustainable IBS adoptions; both in public and private sector. This was due to the implementation of IBS among Malaysian contractors is still relatively very low.

(a) Explain **FOUR (4)** pillars of the new IBS roadmap.

(8 marks)

(b) Discuss the importance of IBS implementation among Malaysian contractors even though the cost of its components is expensive.

(12 marks)

Q5 A civil engineer would choose the correct type of bridge based on how far it must span from one support to the next. Each bridge deals differently with tension and compression. If part of the bridge cannot stand the compression and tension, it will buckle and snap, respectively. Therefore, bridge structures are designed depending on several parameters.

(a) Explain **FOUR (4)** types of beam bridges.

(8 marks)

(b) Discuss **SIX (6)** parameters for bridge structures design.

(12 marks)

-END OF QUESTIONS-

APPENDIX I

FINAL EXAMINATION

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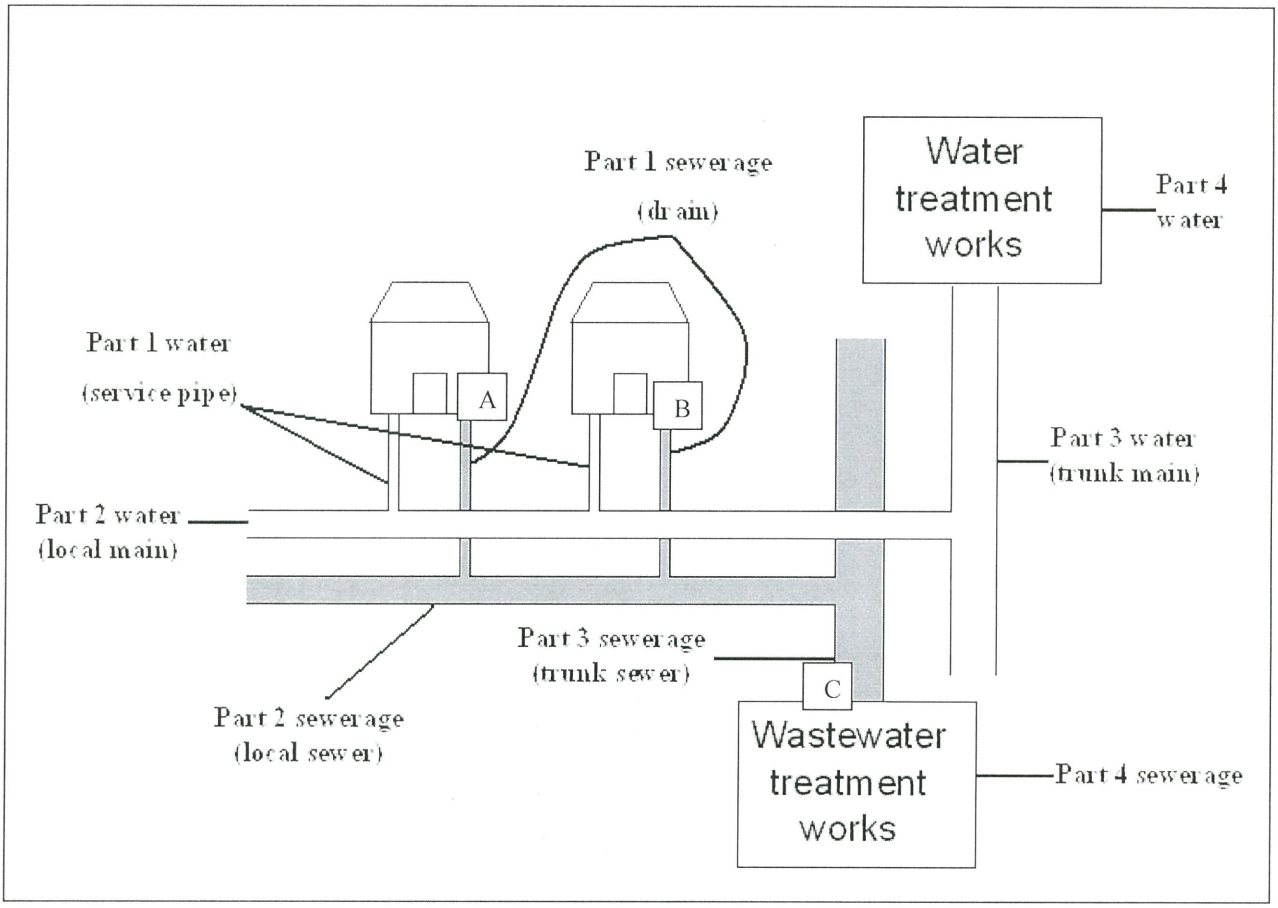

FIGURE Q3: Sewerage Line from Building to Public Sewer line