FINAL EXAMINATION
SEMESTER I, SESSION 2012/2013

COURSE CODE : SAB 3122/ SAM 4123/ SAA 3133
COURSE : CONSTRUCTION TECHNOLOGY
PROGRAMME : SAW
DURATION : 2 HOURS
DATE : JANUARY, 2013

INSTRUCTION TO CANDIDATES:
1. ANSWER ALL QUESTIONS.

WARNING!
Students caught copying/cheating during the examination will be liable for disciplinary actions and the faculty may recommend the student to be expelled from the study.

This examination question consists of ( 3 ) printed pages only.
Semua Pelajar
Program Pengajian Separuh Masa
Universiti Teknologi Malaysia

Saudara/i,

PERINGATAN KHAS PEPERIKSAAN


2. Tindakan tatatertib boleh dikenakan ke atas mana-mana pelajar yang ditangkap kerana kesalahan seperti di atas dan jika disabit kesalahan boleh dihukum melalui Peruntukan Kaedah 48, Bahagian V, Tatacara Tatatertib, Kaedah-Kaedah Universiti Teknologi Malaysia (Tatatertib Pelajar-Pelajar) 1999, yang membawa hukuman maksima seperti “digantung daripada pengajian” atau “dipecat” dari Universiti Teknologi Malaysia. Hukuman juga boleh berdasarkan Peraturan Akademik, UTM Bahagian XIII yang membawa hukuman maksima “membatalkan keputusan keseluruhan peperiksaan dan diberhentikan daripada pengajian”.

3. Pihak Universiti tidak teragak-agak untuk mengambil tindakan dan menjatuhkan hukuman maksima jika saudara/i didapati bersalah dalam melakukan penyelewengan akademik.

Sekian.

DEKAN
Sekolah Pendidikan Profesional dan Pendidikan Berterusan (UTMSPACE)
Universiti Teknologi Malaysia

2 Januari 2013
Q1. The construction of a shop lot building is to be carried out at Taman Universiti, Skudai. The foundation that is recommended for this project is piled foundation. The size of reinforced concrete pile for the piled foundation is 300 mm X 300 mm.

As a site engineer employed by the contractor in charge for the project, your main duties are to ensure that the works are done in accordance to the conditions as stated in the contract.

(a) Explain the temporary facilities that must be taken into account when planning site layout.  

(10 marks)

(b) Sketch the typical site layout proposal for the above project and justify the location of the temporary facilities.  

(10 marks)

(c) Explain the construction of the piled foundation.  

(10 marks)

(d) Explain the procedure and method for carrying out a load test for the piled foundation mentioned above.  

(10 marks)

(40 marks)
Q2. (a) Discuss on five (5) differences on the installation of curtain wall between ‘stick’ and ‘panellised’ system. 

(5 marks)

(b) Discuss the factors that should be taken into consideration by the contractors in the selection of plants and machineries for earthwork. 

(10 marks)

(c) A trench 100 meters long, 2 meters wide and 4 meters deep is to be excavated to lay the sewer pipes. With the aid of a sketch, you are required to propose the types of machine and also the safety requirements in the excavation of the trench. 

(15 marks) 
(30 marks)

Q3. (a) State three (3) main issues faced by the Construction Industry Development Board (CIDB) in promoting the Industrialised Building System (IBS) especially to the small class contractors and give three (3) steps on how to overcome the issues. 

(12 marks)

(b) State three (3) main differences between ‘Rigid Pavement’ and ‘Flexible Pavement’. 

(3 marks)

(c) Briefly discuss the stages of office building construction for the following items for external works with respect to the project schedule.
(i) Drainage system 
(ii) Paved road 
(iii) Turfing 
You must clearly indicate the reasons to support your choice of the time frame for each item. 

(15 marks) 
(30 marks)