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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022**

COURSE NAME : CONTRACT AND ESTIMATION
COURSE CODE : BFC 31602
PROGRAMME CODE : BFF
EXAMINATION DATE : JANUARY / FEBRUARY 2022
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : 1. ANSWER **ALL** QUESTIONS.
2. THIS FINAL EXAMINATION IS
AN **ONLINE** ASSESSMENT AND
CONDUCTED VIA **CLOSE BOOK**.

THIS QUESTION PAPER CONSISTS OF **FIVE (5)** PAGES

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- Q1** (a) Your construction company plans to be involved in a Design and Build (DB) project. As a project manager of the company, you are responsible to give a briefing on the design and build project stages to you. Explain the stages of the project for DB to your project team members. (12 marks)
- (b) You are working with a client as a contract manager and responsible for reviewing and considering the legal aspects of construction contract administration. You are currently administering a sub-contract award process for mechanical and electrical works to a nominated sub-contractor, Ikhlas Bina Sdn. Bhd., who has signed the acceptance of offer by the client. All terms and conditions in the agreement are being agreed by both parties. However, the subcontractor refused to do the installation work based on the given specification of works. Based on this issue, explain the key elements of the contract that can terminate the contract agreement between both contractual parties. (7 marks)
- (c) A contract can be terminated during the construction of a project. There are a variety of reasons for terminating a contract and the consequences can be very critical to the progress of the project. Based on your understanding, briefly describe **THREE (3)** types of termination of contract. (6 marks)
- Q2** (a) Upon completion of all preliminary stages of a project (design development and detail design), the works must be assigned to a contractor to commence the construction. An open tender will be employed to select a competent main contractor for the project. Explain a suitable conventional tendering process in selecting the contractor. (14 marks)
- (b) Describe the following contract terms in the construction contract:
- (i) Conditions of contract (2 marks)
 - (ii) Standard form of contract (2 marks)
 - (iii) Specifications (2 marks)
- (c) Differentiate contractual obligations of parties between a main contractor and an employer (client) during project execution. (5 marks)

- Q3** (a) Design-bid-build is a sequential process to deliver a construction project. Produce a short report on factors that need to be considered in choosing a suitable type of contracts. (10 marks)
- (b) You are involved in consulting the top management in choosing the suitable procurement method for construction of a sustainable commercial building project. The building to be built contains sustainable construction elements that requires the involvement of green building experts. The top management also requires the project to be completed in a short time with an acceptable project cost. Propose to the top management the best procurement method in order to construct the sustainable commercial building project. (10 marks)
- (c) Typical standard form of contract enables the contract administrator to approve the extensions of time for completion of the work where delay occurs due to certain reasons. Discuss the acceptable reasons that allows contractor to obtain a Certificate of Delay and Extension of Time. (5 marks)
- Q4** You are assigned to do a quantity measurement for work below lowest floor finish (WBLFF) element of a computer lab building. Based on **FIGURE Q4(a) - (b)** and **TABLE Q4**, perform a quantity measurement of the following items:
- (a) Lean concrete for pad footing (in m³). (1 mark)
- (b) Concrete for pad footing, column stump and ground beam (in m³). (6 marks)
- (c) Reinforcement bars in pad footing, column stump and ground beam (in kg). (12 marks)
- (d) Links in column stump and stirrups in ground beam (in kg). (6 marks)

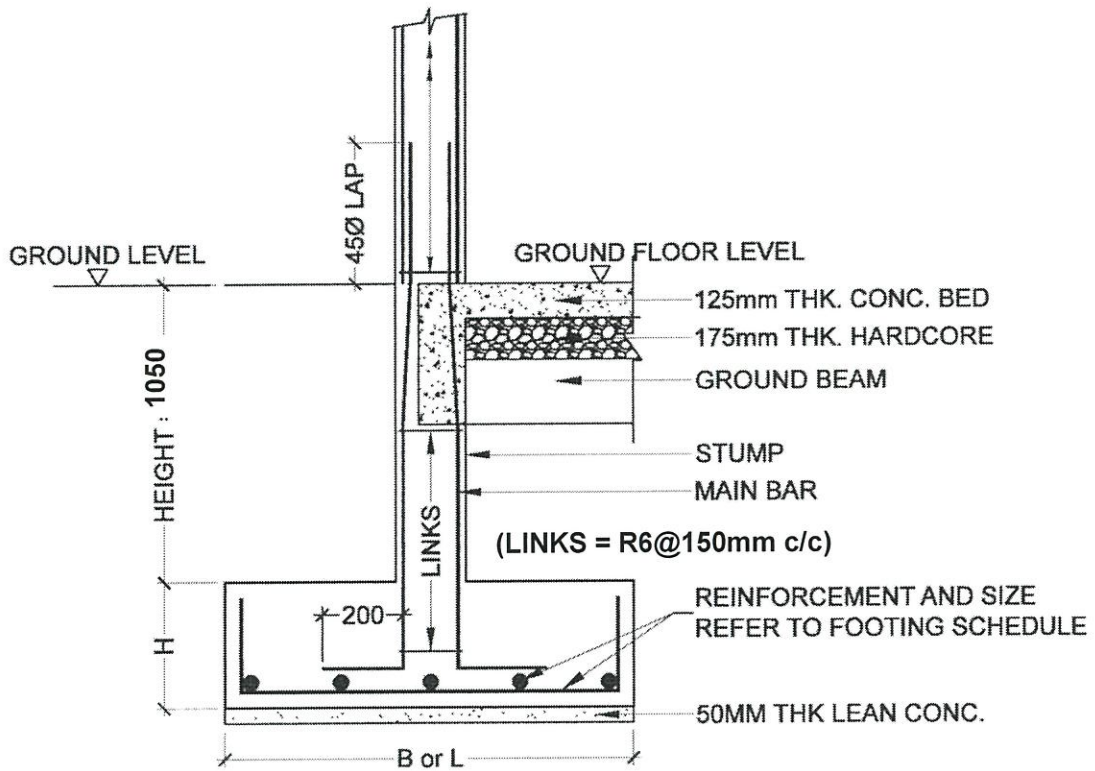
–END OF QUESTIONS–

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PAD FOUNDATION REINFORCEMENT SCHEDULE



FOOTING SCHEDULE		
Type	B x L x H	Main Reinforcement
F1	1500 x 1500 x 600	T20@150 (B/W)

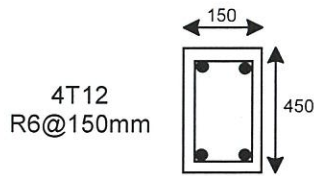
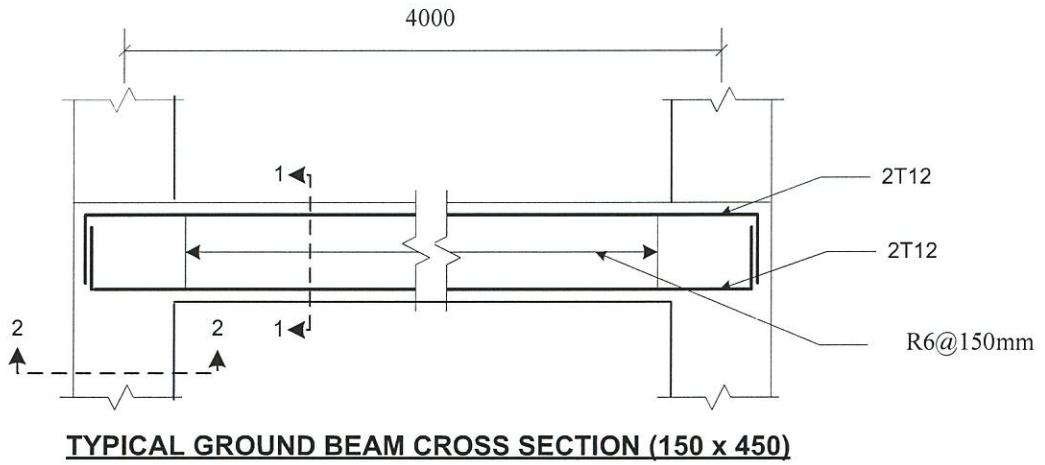
- NOTES :
1. ALL DRAWINGS ARE NOT TO SCALE
 2. ALL DIMENSIONS ARE IN MILIMETRE (MM) UNLESS OTHERWISE NOTED.
 3. ALL CONCRETE COVERS SHALL BE 40 MM THICK.
 4. LEAN CONCRETE SHALL BE OF GRADE 7 CONCRETE
 5. PAD FOOTING, COLUMN STUMP AND GROUND BEAM SHALL BE OF GRADE 25 CONCRETE

FIGURE Q4 (a)

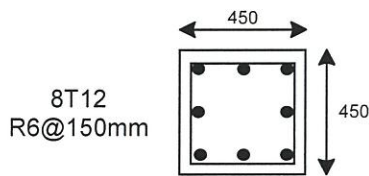
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**SECTION 1-1:
GROUND BEAM**



**SECTION 2-2: COLUMN/
COLUMN STUMP**

FIGURE Q4 (b)

TABLE 1 - Conversion Table for Round Bar

SIZE (MM)	MASS PER UNIT LENGTH (KG/M)
06	0.222
08	0.395
10	0.616
12	0.888
16	1.579
20	2.466
25	3.854
32	6.313

