UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2014/2015

COURSE NAME	:	CONTRACT AND ESTIMATION
COURSE CODE	:	BFC 31602
PROGRAMME	:	4 BFF
EXAMINATION DATE	:	DECEMBER 2014 / JANUARY 2015
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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

Q1 (a) The Contract is normally a massive and complex document, by which right are acquired by one or more to acts on the part of the other or others and hereinafter called the contract as an agreement enforceable by law. List **three (3)** general principles of contract

(6 marks)

(b) Construction Law is neither a legal term of art nor a technical one. It is used to cover the whole field of law which in one way or another affects the construction industry. Sketch the type of law on construction works.

(6 marks)

(c) The purpose of a contract is to establish the agreement that the parties have made and to fix their rights and duties in accordance with that agreement. Explain **nine (9)** basic elements of a contract.

(9 marks)

(d) An offer is an intimation of willingness by the offeror to enter into a legally binding contract. There are two types of offers which are unilateral offers and bilateral offers. Differentiate between these two types of offer.

(4 marks)

Q2 (a) Describe the meaning of discharging a contract by performance in construction.

(2 marks)

(b) Contractor **A** makes an agreement with Owner **B** to build a cottage house at a fixed sum of RM 120,000. Owner **B** gave RM 20,000 as advance money to Contractor **A** after the contract signed for mobilization purposes. After completing 50 % of the construction, the house accidently destroyed by a fire caused by lightning strike during the bad weather. Based on this situation, explain the solutions that can be made by both parties with regard to the contract that they have signed earlier.

(8 marks)

(c) Illustrate the process involved in open competitive tendering starting from tender out by client until the result on the successful bidder announced.

(6 marks)

(d) Typical contract document consist of agreement, specification, drawings, condition of contract and bills of quantities. Explain what is construction contract and differentiate between Contracts with Bill of Quantity (BQ) using lump sum price, with Contract with Bill of Quantity using measured and value method.

(9 marks)

Q3 (a) Describe **two (2)** main purposes of tendering process.

(2 marks)

(b) Ministry of Education Malaysia insist to build one of their secondary school in Parit Raja Darat, Batu Pahat through open tender. Discuss **five (5)** initial tender process needs to be done before the process of evaluating tenderers can be proceed.

(10 marks)

(c) Tender process can be divided onto three catogories namely Open Tender, Selective Tender and Negotiated. Discuss **four (4)** difference features between Selective Tender and Negotiated.

(8 marks)

(d) Variation Order is one of the things that happen unplanned during the construction process. Summarize the **five (5)** main causes of Variation Order may happen.

(5 marks)

Q4 Base on Figure **Q4(a)** and Figure **Q4(b)**, take-off the following items

(a) Excavation work for clearing the entire site at 150mm deep and pad foundation.

(5 marks)

(b) Concrete volume for pad foundation, column stumps and ground beams.

(5 marks)

(c) Formwork for pad foundations, column stumps and ground beams.

(5 marks)

(d) Reinforcement steel work for the pad foundations, column stumps and ground beams (in kilogram).

(5 marks)

(e) Links in column stumps and stirrups in ground beam

(5 marks)

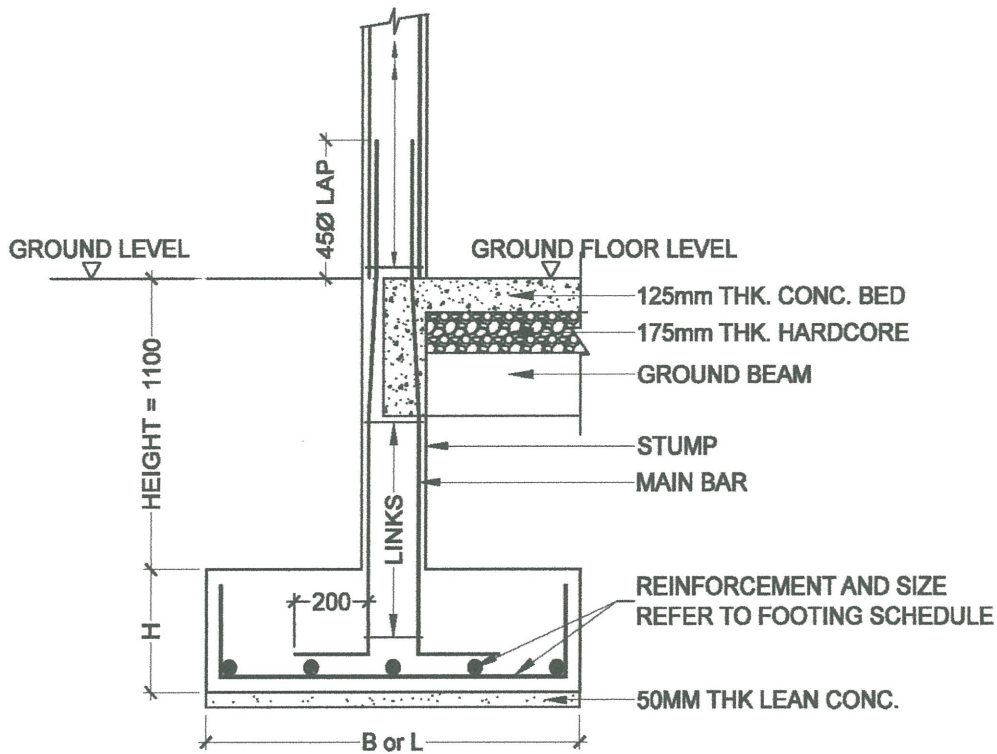-END OF QUESTION-

FINAL EXAMINATION

PAD FOOTING MARK	PAD FOOTING DIMENSIONS			REINFORCEMENT		
	B, mm	L, mm	H, mm	XDirBar	YDirBar	TIES
F1	1250	1250	350	T12-125	T12-125	-

PAD FOOTING REINFORCEMENT SCHEDULE

CONVERSION TABLE FOR ROUND BAR (BS 4449:1997)

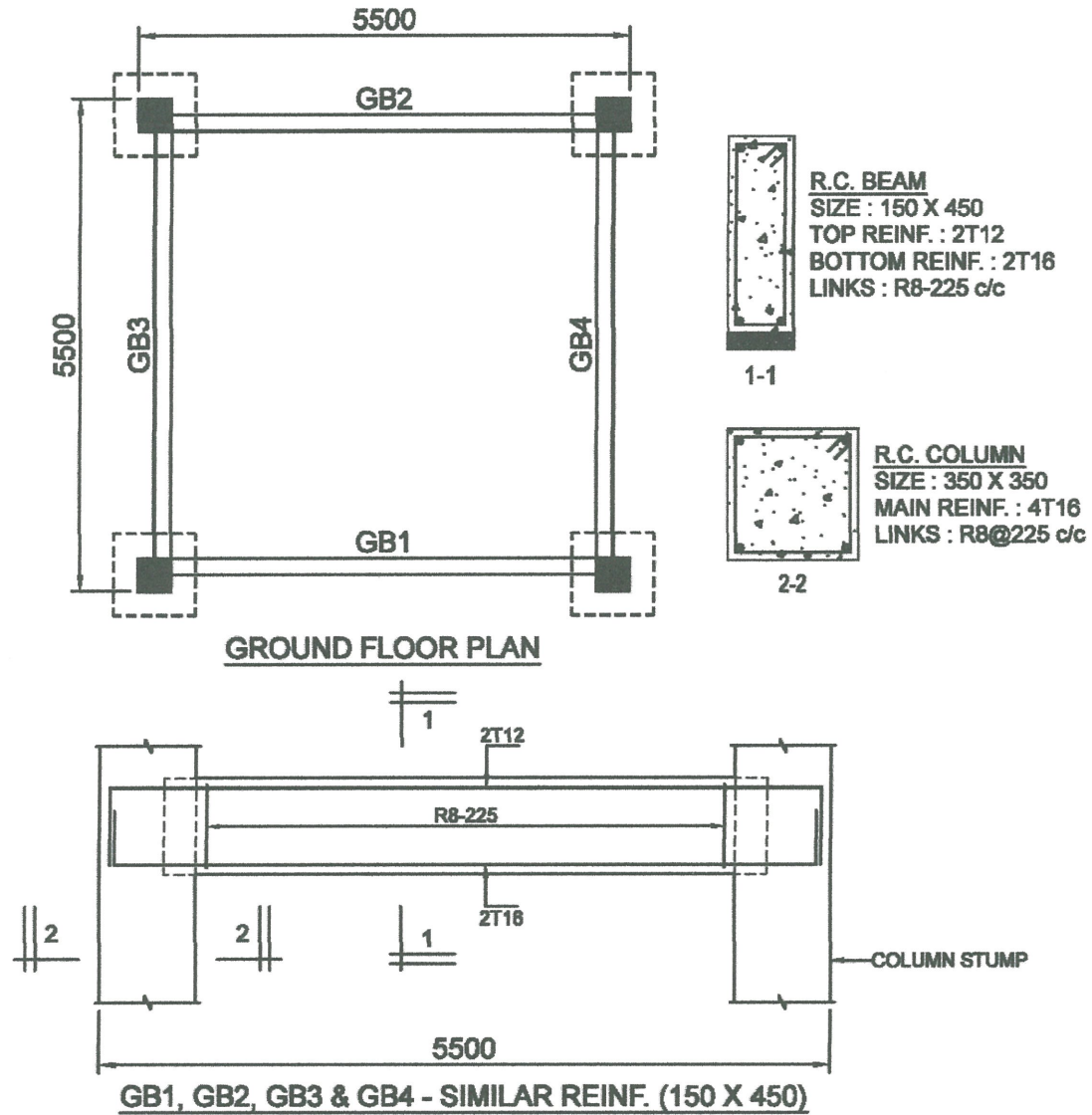| Nominal Size (mm)	Cross Sectional Area (mm^2)	Mass Per Meter Run (kg)
06	28.3	0.222
08	50.3	0.395
10	78.5	0.616
12	113.1	0.888
16	201.1	1.579
20	314.2	2.466
25	490.9	3.854
32	804.2	6.313

FIGURE Q4(a)

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GROUND FLOOR PLAN

R.C. BEAM
SIZE : 150 X 450
TOP REINF. : 2T12
BOTTOM REINF. : 2T16
LINKS : R8-225 c/c

1-1

R.C. COLUMN
SIZE : 350 X 350
MAIN REINF. : 4T16
LINKS : R8@225 c/c

2-2

GB1, GB2, GB3 & GB4 – SIMILAR REINF. (150 X 450)

NOTES
1. Excavate top soil 150mm deep to be deposited 10m from site
2. Concrete cover for pad footing, column stump and ground beam is 50mm thick.
3. Lean concrete shall be of G7 concrete.
4. Concrete to footings, stumps, ground beams and bed shall be of G30 concrete.
5. Extra over for excavation in rock shall be 10% of the volume in soil.

FIGURE Q4(b)