UTHM
Universiti Tun Hussein Onn Malaysia

# UNIVERSITI TUN HUSSEIN ONN MALAYSIA

## FINAL EXAMINATION
## (TAKE HOME)
## SEMESTER II
## SESSION 2019/2020

| | | |
|---|---|---|
| COURSE NAME | : | CONSTRUCTION PROJECT MANAGEMENT |
| COURSE CODE | : | BPE 23602 |
| PROGRAMME CODE | : | BPD |
| EXAMINATION DATE | : | JULY 2020 |
| DURATION | : | 24 HOURS |
| INSTRUCTION | : | ANSWERS **ALL** QUESTIONS<br>**OPEN BOOK EXAMINATION** |

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

**Q1** 'Construction projects across the world have been significantly affected by COVID-19. As management of the pandemic continues to evolve, many project managers are no longer focused on potentially closing sites, but rather the measures required to allow sites to remain open and continue work'.

(RICS, 2020)

(a) Examine **FIVE (5)** main skills with their challenges that a project manager requires to successfully manage a construction project in times of Covid-19 pandemic.

(10 marks)

(b) The Project Management Triangle (Triple Constraint) as shown in **Figure Q1(b),** is a model of the constraints of project management.

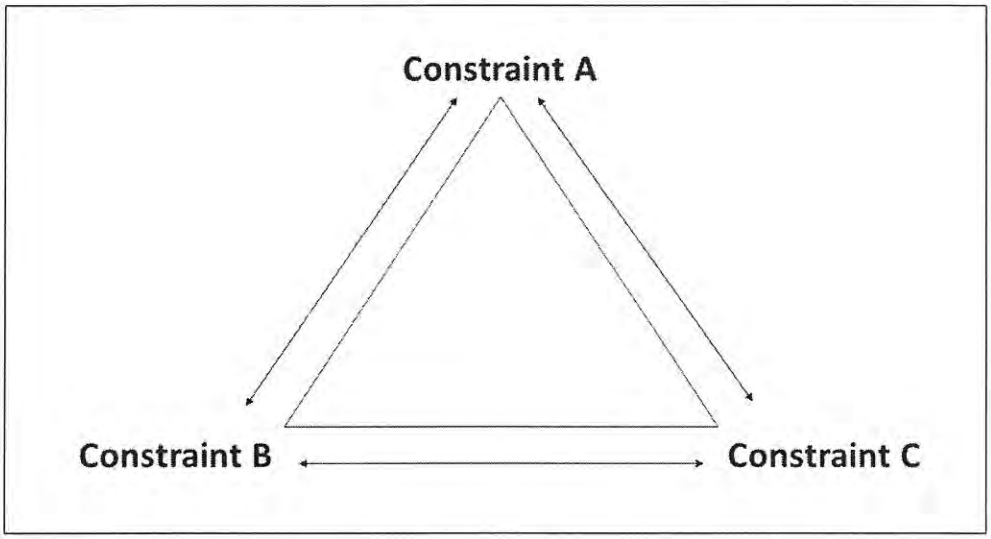


**Figure Q1(b): The Project Management Triangle**

Discuss the interrelation between these 'constraints' of a successful construction project.

(15 marks)

**Q2** A Work Breakdown Structure (WBS) identifies tasks and deliverables associated with a project. Resources are identified for each item within the WBS that facilitates budgeting as well as assignment of responsibilities. The WBS can be used to determine the critical path of the project and create the project schedule.

(a) Consider the list of activities and predecessors that are involved in building a house, as listed in **Table Q2(a)** below.

**Table Q2(a) : Project X (Building a House)**

| Activity | Immediate Predecessor Activities | Duration | Lag | ES | EF | LS | LF | TF | FF |
|---|---|---|---|---|---|---|---|---|---|
| A | - | 6 | | | | | | | |
| B | - | 11 | | | | | | | |
| C | A | 8 | | | | | | | |
| D | A | 6 | | | | | | | |
| | B | | 4 | | | | | | |
| E | B | 6 | | | | | | | |
| F | B, C | 4 | | | | | | | |
| G | D | 8 | | | | | | | |
| | E | | 5 | | | | | | |
| H | F, G | 5 | | | | | | | |

(i) Draw a Gantt Chart of the activities using *Microsoft Excel*, showing all dependencies and floats.

(10 marks)

(ii) Draw a node network based on your Critical Path Method (CPM) calculation.

(10 marks)

(iii) Complete the table.

(5 marks)

**-END OF QUESTIONS-**