UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA
(OTHER SUMMATIVE ASSESSMENT)
FINAL EXAMINATION
SEMESTER II
SESSION 2019/2020

COURSE NAME	:	COMPUTER SYSTEM ENGINEERING
COURSE CODE	:	BEC 41603
PROGRAMME CODE	:	BEJ
EXAMINATION DATE	:	JULY 2020
DURATION	:	3 WEEKS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS **OPEN BOOK EXAMINATION**

THIS QUESTION PAPER CONSISTS OF **TWO (2)** PAGES

Q1 Cloud Computing is recently being a hot topic nowadays. As an engineer, analyse the suitable memory architecture for multicore that most match with cloud computing. Your reference should come from Scopus website (2016-2020). List and cited each reference properly. [At least 10 references]. Your analyses should cover the contents (a) to (c) listed below:

(a) Analyse the suitable memory architecture with justification.

(5 marks)

(b) Analyse on memory consistency for each type of consistency model suitable for memory architecture selected at Q1(a).

(8 marks)

(c) Analyse on memory coherency for each type of coherence protocol suitable for memory architecture selected at Q1(a).

(7 marks)

Q2 Analyse the parallel performance for different latest multicore at the market. Choose the best THREE (3) multicore. Your reference should come from Scopus website (2016-2020). List and cited each reference properly. [At least 10 references]

(15 marks)

Q3 Synchronization is used to protect data conflicts as well as to prevent race conditions for the shared data. Analyse THREE (3) ways to implement synchronization in multicore technology. Your explanation should have justification on why the synhronization been used for specific multicore technology. Your reference should come from Scopus website (2016-2020). List and cited each reference properly. [At least 10 references].

(15 marks)

-END OF QUESTIONS –