UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2019/2020

COURSE NAME	:	SOFTWARE ENGINEERING
COURSE CODE	:	BEC 41803
PROGRAMME CODE	:	BEJ
EXAMINATION DATE	:	JULY 2020
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS **OPEN BOOK EXAMINATION**

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

Q1 (a) Describe the differences between exploratory development and throwaway prototype.

(5 marks)

(b) Interpret the extreme programming release cycle.

(7 marks)

(c) According to a recent Cambridge University research, the global cost of debugging software has risen to $312 billion annually. Based on the research, explain: (i) why the cost increased? (ii) how to reduce it?

(8 marks)

Q2 (a) List five (5) problems of requirement elicitations.

(5 marks)

(b) Describe two (2) differences between functional and non-functional requirements.

(6 marks)

(c) As a software engineer you have been given a project to develop a patient information system for mental health care namely as MHC-PMS. It is a medical information system that maintains information about patients suffering from mental health problems and the treatments that they have received. Based on your analysis, explain three (3) key features of the system?

(9 marks)

Q3 (a) Describe four (4) types of Reuse-Based Software Engineering.

(6 marks)

(b) Explain the Component-Based Software Engineering (CBSE) with reuse.

(6 marks)

(c) As an electronic engineer that specialized in software system engineering, you have been given a task to design a traffic management system. Explain the traffic management system with master-slave architecture.

(8 marks)

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Q4   (a)   There are two (2) goals in software testing process. Explain it.

(5 marks)

(b)   Interpret the software testing process model.

(6 marks)

(c)   As a software manager, you have been given a task whether to upgrade or replace or scrap or continue maintaining a legacy system in your company. However, legacy system replacement is risky and expensive. The legacy system is older system that rely on programming language and technology that are no longer used for new system development. Evaluate this task and explain your strategy by providing the legacy system categories assessment.

(9 marks)

Q5   (a)   Describe the four (4) sub models in COCOMO 2.

(4 marks)

(b)   The tasks of a manager are essentially people-oriented. Poor people management is an important contributor to project failure. As a project manager, give four (4) crucial factors of people management. Explain it.

(8 marks)

(c)   A highspeed train is composed of several millions of individual parts and requires thousands of persons to assemble. A 100-storey building is another example of complexity. The first version of Microsoft Word, required 55 person-years, resulted into 249,000 lines of source code, and was delivered four (4) years late. Highspeed train and 100-storey building are usually delivered on time and below budget, whereas software is often not. In your opinion, discuss four (4) differences between developing an highspeed train, a 100-storey building, and a word processor, which would cause this situation?

(8 marks)

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-END OF QUESTIONS -

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