



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: BCS2433
COURSE	: SOFTWARE ENGINEERING
SEMESTER/SESSION	: 1-2022/2023
DURATION	: 3 HOURS

Instructions:

1. This booklet contains 5 questions. Answer ALL questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

- a) Compare the term of Software engineering and System engineering. (4 marks)
- b) Give **FOUR (4)** attributes of good quality software. (4 marks)
- c) Compare between Plan-Driven and Agile process. (4 marks)
- d) Compare between Waterfall and Incremental software process model. (4 marks)

QUESTION 2

- a) State **FOUR (4)** categories of legacy systems. (4 marks)
- b) Explain **TWO (2)** reasons why software evaluation is important. (4 marks)
- c) State **FOUR (4)** perspectives can be used when designing a system architecture. (4 marks)
- d) Explain **TWO (2)** types of patterns with example of appropriate system. (4 marks)

QUESTION 3

- a) Compare between system error and system failure with examples of each. (4 marks)
- b) Define the meaning of system reliability. State **FOUR (4)** factors to improve the reliability of the system. (6 marks)
- c) Classify the following scenarios into appropriate software reliability techniques:
 - i. An input that represents the temperature of a liquid water should be between 0 degrees Celsius and 100 degrees Celsius. (2 marks)

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- ii. The data represent the ages up to 10,000 people, then the program should declare an array with 10,000 locations to hold the age data. (2 marks)
- iii. In intensive system, the system will automatically save data every few minutes and, in the event of a system failure, it will restart with the most recently saved data. (2 marks)

QUESTION 4

JazzN!ghts is a famous Jazz festival, held in Singapore every year. Since its first edition in 1986, it has gone through several major changes regarding its structure, length, and location, but the tickets have always been sold in a traditional way: through two events agencies. The organizers decided to complete modernize the tickets selling system that can facilitated customer and ticket seller. Based on the scenario, answer the following question:

- a) How can you gather further requirements that help you build the JazzN!ghts new tickets selling system? Explain **TWO (2)** different requirements elicitation methods. (7 marks)
- b) Suggest **FIVE (5)** functional requirements and **FIVE (5)** non-functional requirements of new tickets selling system. (10 marks)
- c) Based on the requirements suggested in 4b) answer, define the actors of the system and draw the UML use case diagram. (17 marks)

QUESTION 5

Based on Figure 1 below, answer the following question:

LEARNSOFT
Online Examination
Online Examination: This module is used for setting up multiple choice tests from a question bank for set base ...

Home Skills My Studies Register Login

Firstname :

Lastname :

Username :

Password :

Retype Password :

Email :

Security Question :

Answer :

Phone Number :

Register

Figure 1

- a) Produce **FOUR (4)** possible test scenarios that you can use for testing the interface. (8 marks)
- b) Produce **FIVE (5)** test cases for testing the interface. (10 marks)

-----END OF QUESTION-----