



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: DCT2133
COURSE	: SOFTWARE ENGINEERING TECHNIQUE
SEMESTER/SESSION	: 1 – 2024/2025
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 3 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

- a) Describe software process model. List **FOUR (4)** software process models. (6 marks)
- b) Explain the main weakness of traditional software process model. (2 marks)
- c) Explain **FOUR (4)** main activities in software process. (8 marks)
- d) Explain the requirement specification. Give **TWO (2)** importance of requirements specification document. (4 marks)

QUESTION 2

- a) Explain **THREE (3)** processes in requirement engineering in order to produce System Requirements Document. (6 marks)
- b) Assume that you are going to develop a Library Information System. Write **THREE (3)** possible functional requirements and **THREE (3)** possible non-functional requirements. (12 marks)
- c) Explain what could happen if the requirements not properly validated? (2 marks)

QUESTION 3

- a) Describe the software architecture design. Provide **TWO (2)** advantages of software architecture design. (6 marks)
- b) Model View Controller (MVC) pattern is the most frequently used industry standard web development framework. List **TWO (2)** MVC frameworks that available in the market. (2 marks)

- c) Describe the client server architecture. Give **TWO (2)** applications / information systems that suitable to implement this type of architecture. (4 marks)
- d) Assume that you are going to develop Food Ordering System and planning to implement the layered architecture. Draw the architecture for the system which consists of **FOUR (4)** main layers and their components. (8 marks)

QUESTION 4

- a) Explain between software design and implementation process. (4 marks)
- b) Describe **THREE (3)** main issues in implementation. (6 marks)
- c) Using your experiences in registering the courses using Student Portal, draw the sequence diagram. To get maximum marks, you must include at least **THREE (3)** objects and **SEVEN (7)** interactions in your diagram. (10 marks)

QUESTION 5

- a) Define the software evolution. (2 marks)
- b) Explain **THREE (3)** types of software maintenance. (6 marks)
- c) List **FOUR (4)** factors that affecting the maintenance cost. (4 marks)
- d) Legacy system lies into **FOUR (4)** categories. Explain each category and the strategic option should be taken. (8 marks)

-----End of question-----

