



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE : DCT 2113

COURSE : SYSTEM ANALYSIS AND DESIGN
METHOD

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 4 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

- a) Define information technology (IT). (2 marks)
- b) Describe **THREE (3)** components of information system. (6 marks)
- c) Careful planning can help assure in IT projects. List **FOUR (4)** advantages of careful strategic planning. (4 marks)
- d) State **THREE (3)** external factors that affect information system project. (3 marks)
- e) Explain **THREE (3)** main steps in a preliminary investigation in IT projects. (6 marks)

QUESTION 2

- a) Explain **FOUR (4)** system analysis activities. (8 marks)
- b) List **TWO (2)** advantages of JAD (Joint Application Development). (2 marks)
- c) Classify **THREE (3)** phases and activities involved in RAD (Rapid Application Development). (6 marks)
- d) Describe **THREE (3)** categories of system requirements checklist. (6 marks)
- e) Based on Figure 1 and summary of the business activities, answer all the questions below.

Hazim's digital is a mail order supplier of high-quality, fashionable clothing. Customers place orders by telephone, by mailing an order form included with each catalog, or via the Web site. He plans to develop order processing system to his customer and staff.

Figure 1. Description of Hazim's digital mail order.

Summary of business activities:

- When customer orders come in, the item master and the customer master files are both updated. If an item is out of stock, the inventory control department is notified.
- If the order is from a new customer, a new record is created in the customer master file.
- Picking slips are produced for the customer order and sent to the warehouse.
- A shipping statement is prepared.

- The process of shipping a customer order involves getting the goods from the warehouse and matching up the customer shipping statement, getting the correct customer address, and shipping it all to the customer.
- The customer statement is generated, and a billing statement is sent to a customer once a month.
- An accounts receivable report has been sent to the accounts department.

- i. List **FIVE (5)** external entities of order processing system. (5 marks)
- ii. Sketch a context-level data flow diagram (CD) based on the external entities identified in question (i). (9 marks)

QUESTION 3

- a) List **TWO (2)** differences between traditional and web-based development. (4 marks)
- b) State **THREE (3)** benefits for purchasing software licenses. (3 marks)

QUESTION 4

- a) Define user interface (UI). (2 marks)
- b) Discuss **THREE (3)** habits of successful interface designers. (6 marks)
- c) List **FOUR (4)** guidelines for interface designers. (4 marks)
- d) There are a few types of reports in printed output. Give **TWO (2)** examples of the report involved. (2 marks)

QUESTION 5

- a) State **FOUR (4)** characteristics of web-based design. (4 marks)
- b) Identify **FOUR (4)** steps in database design. (4 marks)

- c) Based on the scenario in Figure 2, create an ERD to show how you would track this information. Show **FIVE (5)** entity names and primary keys, attributes for each entity, relationships between the entities and cardinality. (14 marks)

A manufacturing company produces products. The following product information is stored: product name, product ID and quantity on hand. These products are made up of many components. Each component can be supplied by one or more suppliers. The following component information is kept: component ID, name, description, suppliers who supply them, and products in which they are used.

Figure 2. Operations of the manufacturing company's process.

-----END OF QUESTIONS-----