



FINAL EXAMINATION

Semester	:	JANUARY 2024 SEMESTER
Programme Name	:	DIPLOMA IN COMPUTER SCIENCE DIPLOMA IN E BUSINESS TECHNOLOGY
Course Code & Name	:	DCS2213 DEB2233 SYSTEM ANALYSIS AND DESIGN
Duration	:	3 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Please read the instructions given in the question paper **CAREFULLY**.
2. The question paper consists of **FOUR (4)** questions.
3. Answer **ALL** questions in the question paper.
4. Answers to the questions are to be written into the examination booklet.
5. Electronic dictionaries, lecture notes, files or any unauthorised materials except writing equipment are strictly prohibited.

This question paper must be submitted along with all used and/or unused rough papers and/ or graph papers (if any). Candidates are **NOT ALLOWED** to take any examination paper(s) used or unused out of the examination hall.

WARNING:

The Examination Board of Peninsula College Georgetown regards cheating as a very serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students' Handbook, up to and including expulsion from Peninsula College Georgetown.

(This booklet contains 3 printed pages including this page)

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

Answer **ALL** questions on the separate sheet provided.

[100 marks]

1. a) Explain the following roles involve in System Development.
- i) System Analyst (2 marks)
 - ii) Infrastructure Analyst (2 marks)
 - iii) Business Analyst (2 marks)
 - iv) Change Management Analyst (2 marks)
 - v) Project Manager (2 marks)
- b) List out **FIVE (5)** importances of Implementation and Maintenance stage. (10 marks)
- c) Give the definition of System Development Life Cycle and name its **FOUR (4)** phases. (5 marks)
- Total: [25 marks]

2. a) A software project has **TWO (2)** phases, each with **THREE (3)** tasks respectively. All the tasks must be completed as soon as possible. The tasks are expected to be completed based on the following duration.

PHASE 1	
Analysis	3 Weeks
Code	2 Weeks
Test	1 Week
PHASE 2	
Analysis	1 Week
Code	2 Weeks
Test	3 Weeks

Given that there is Planning task for 1 week before the project above start, then Analysis and Test tasks in Phase 2 cannot start before the completion of the same tasks in Phase 1. But, the Coding tasks for both Phase can be run at the same period.

- i) Draw the Gannt Chart based on the information above. (12 marks)
 - ii) What is the duration for the completion of the whole project? (1 marks)
 - iii) What will be the duration for the project if there is an issue occurred during Test of Phase 1, and cause a delay of 2 weeks. (2 marks)
- b) Show the differences between Waterfall Development and V-model Development using diagram. (10 marks)

Total: [25 marks]

3. a) Illustrate an Entity Relationship Diagram, given a part of the system where, a customer pays a bill. The system will store customer's name and credit card number. Then, invoice number, item details, total price, and service tax will be needed by the system for the payment. (9 marks)
- b) Explain the **FIVE (5)** benefits of using Entity Relationship Diagram. (10 marks)
- c) List down **SIX (6)** principles of user interface design. (6 marks)
- Total: [25 marks]
4. a) Explain any **THREE (3)** type of testing which will be conducted in the Testing Phase. (9 marks)
- b) You are asked to migrate from an old system to a new system. What are the steps required in your migration plan? (9 marks)
- c) List down the team that involved in the Post Implementation Stage with their roles and responsibilities. (7 marks)
- Total: [25 marks]

- END OF QUESTIONS -