

 **INTI** International
University & Colleges

FINAL
Examination Paper

(COVER PAGE)

Session : APRIL 2017

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1106: System Analysis And Design

Date of Examination : 05 August, 2017 (Saturday)

Time : 8:am – 10:00am Reading Time : Nil

Duration : 2 Hours

Special Instructions :

This paper consists of **SIX (6)** questions. Answer any **FOUR (4)** questions in the answer booklet provided. All questions carry equal marks.

Materials permitted : Non-Programmable Calculator

Materials provided : Nil

Examiner(s) : Tan Kok Cheng and Kavitha Thamadharan

Moderator : Professor Dr. Abdullah Gani

This paper consists of 4 printed pages, including the cover page

DIPLOMA IN INFORMATION AND COMMUNICATIONS TECHNOLOGY PROGRAMME
(DICTN)
ICT1106: SYSTEM ANALYSIS AND DESIGN
FINAL EXAMINATION: APRIL 2017 SESSION

Instruction: This paper consists of **SIX (6)** questions. Answer any **FOUR (4)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) Explain by giving **THREE (3)** reasons why information systems are important to an organization. (6 marks)
- (b) Identify and explain the activities in the Second phase of the System Development Life Cycle (SDLC). (7 marks)
- (c) Briefly describe Transaction Processing System (TPS). Give **TWO (2)** examples of a TPS. State which layer of the organization structure that will normally use this system. Give **THREE (3)** examples of people working in this layer of the organization structure. (12 marks)

Question 2

- (a) Define *technical feasibility*. List the **FIVE (5)** queries that will help the system analyst to study this technical feasibility. (7 marks)
- (b) Explain by giving any **FOUR (4)** reasons business users may use to request for a new system (12 marks)
- (c) State **SIX (6)** types of constraints given by end-users through their system requirements. Give an example to illustrate each of these constraint. (6 marks)

Question 3

- (a) What is an interview? How would the system analyst determine the people he need to interview? Explain the **THREE (3)** objectives the system analyst need to establish for interviews (12 marks)

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- (b) Define the term *system requirement*. State any **FOUR (4)** categories of system requirement. For each category identified, give **TWO (2)** examples (13 marks)

Question 4

- (a) What is *Software Engineering (SE)*? Briefly explain the user documentation used in Software Engineering (8 marks)
- (a) Explain the system changeover method called *direct cutover*. Explain the **THREE (3)** factors a system analyst should consider when choosing this changeover method. (8 marks)
- (c) Explain any **SIX (6)** reasons a system analyst would conduct a post implementation review (PIR) after an IT project. (9 marks)

Question 5

- (a) Understand the following system requirement for an online shopping system.

*A customer uses the system shopping cart to shop for the various items online.
Upon checkout, the customer pays for the items with his credit card.*

Based on the above requirement statements, identify at least **THREE (3)** objects. Sketch these objects with at least 2 attributes and 1 method (6 marks)
- (b) This is a description of a sports shop *operated by* Sports International Sdn Bhd. You are to draw a suitable use case diagram to show how this sports shop works.

On a given day, a customer enters into the shop and looks through the sports items that are on sale. He selects the items and put them into his shopping cart. He goes to the check-out counter and the cashier scans and checkouts the item. The customer pays for his items either by cash or by credit card or by debit card. He then leaves the shop with his purchases.

The manager generates a sale report every day.

On another given day, the shop's manager will re-stock inventory by buying more goods. The manager will pay for these purchases. The suppliers who receives the orders will supply the sports goods. The suppliers receive payment for goods delivered. The company's inventory system will update the stocks inventory when the goods are delivered.

(19 marks)

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Question 6

- (a) Briefly explain the **FOUR (4)** factors that can influence the time and cost estimate of a given IT project. (10 marks)

- (b) Consider the following network of activities as shown in Table 1.

Table 1

Activity Name	Predecessor Activities, if any	Duration (Weeks)
a	-	2
b	-	3
c	a	4
d	b	3
e	a	3
f	d, e	5
g	c, f	2
h	d, e	4

Using the information given in Table 1, you are required to do the following:

- i) Draw out the required PERT/CPM network diagram (4 marks)
- ii) Determine all the possible paths and decide on which path is the critical path for this project. (3 marks)
- iii) Determine the Earliest Completion Time (ECT) and Latest Completion Time (LCT) for each node. (6 marks)
- iv.) Can activity "c" be delayed without affecting the completion of the project? If so, determine how many weeks activity "c" may be delayed? (2 marks)

~THE END~

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