FINAL
ALTERNATIVE ASSESSMENT

(COVER PAGE)

Session	:	**August 2020**
Programme	:	Diploma In Information Technology (DITN)
Course	:	**ICT1106: System Analysis And Design**
Date of Examination	:	December 13, 2020 (Sunday)
Time	:	4.00pm – 6.30pm Reading Time : Nil
Duration	:	2 Hours : 30 Minutes

Note: 30 minutes is added into the duration of the examination to factor in any connectivity matters and for you to scan and upload your scripts.

Special Instructions :

Section A: This section consists of **FOUR (4)** questions. Answer **ALL** the questions
Section B: This section consists of **FOUR (4)** questions. Answer **ALL** the questions.

Materials permitted :
Non-Programmable Calculator

Materials provided :
Nil

Examiner(s)	:	**Tan Kok Cheng**, and Christine Retnabai Rethinam Paul
Moderator	:	Melisa Kaur Narjan Singh

*This paper consists of **5** printed pages, including the cover page*

DIPLOMA IN INFORMATION TECHNOLOGY PROGRAMME (DITN)

ICT1106: SYSTEM ANALYSIS AND DESIGN
FINAL ALTERNATIVE ASSESSMENT: AUGUST 2020 SESSION

SECTION A: (20 marks)

Instruction: This section consists of **FOUR (4)** questions. Answer **ALL** the questions. All questions carry equal marks.

Question 1

Sketch a simple *class diagram* that involves this following scenario of **FIVE (5)** objects:

> A sales office has a manager who manages a few sales executives. The sales executives has their own customers who will place orders through them.

In your class diagram, you are to determine **ONLY the UML notations** for these object relationship. (**Note**: Do not identify the attributes and methods of these objects in the diagram.)

(5 marks)

Question 2

Explain *Management Support System*. Describe the management layer that uses this system.

(5 marks)

Question 3

What is ISO definition of *software quality*? Give at least **THREE (3)** possible causes that may reduce the quality of software during a software development processes.

(5 marks)

Question 4

What is *technical feasibility*? Provide **THREE (3)** suitable questions that will help to answer the technical feasibility of a software being developed.

(5 marks)
(Total: 20 marks)

SECTION B (80 marks)

Instruction: This section consists of **FOUR (4)** questions. Answer **ALL** the questions. All questions carry equal marks.

Question 1

(a) Briefly describe the **THREE (3)** responsibilities a system analyst will undertake. Give at least **FOUR (4)** skills this system analyst must possess.

(10 marks)

(b) Explain the **TWO (2)** issues a system analyst need to consider when he/ she wants to establish the objectives for an interview. Briefly describe the **THREE (3)** types of questions the system analyst can create for interviews.

(10 marks)

(Total: 20 marks)

Question 2

(a) Understand the following system requirement for a hospital outpatient treatment system.

A patient makes an appointment to see a doctor in a hospital. At the end of his appointment, he pays for the medical consultation.

Based on the above requirement statements, identify at least **FOUR (4)** objects. Sketch these objects with at least 2 attributes and 1 method.

(8 marks)

(b) The following table describes the projected costs and benefits for the next five years of a proposed software development project.

Year	**0**	**1**	**2**	**3**	**4**	**5**
Costs (RM)	100,000	25,000	20,000	20,000	20,000	20,000
Benefits (RM)	5,000	40,000	100,000	160,000	160,000	160,000

Using the information from above, you are required to answer the following:

(i) Explain a possible reason for the benefits earned in Year 0.
(ii) Calculate the cumulative present values of its cost and of its benefits for all the five years.
(iii) Determine when the payback will occur for this new system.
(iv) Determine the Return of Investment (ROI) for this new system at Year5.
(v) What can you conclude about this proposed software project?

(12 marks)

(Total: 20 marks)

Question 3

(a) Define *project management*. Explain the **FOUR (4)** management functions practiced in a project management.

(10 marks)

(b) Briefly describe the **FOUR (4)** methods of chargeback.

(10 marks)

(Total: 20 marks)

Question 4

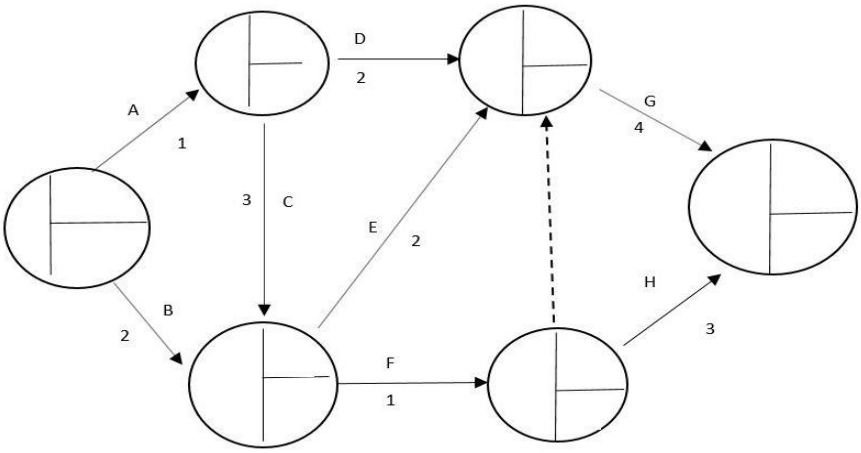
(a) The following is a description of a retail shop that offers an online rewards system for its customers.

> Whenever a customer buys its retail products, the sales system of retail shop will generate an equivalent reward points and adds it into its online rewards system.
>
> At any given time, a customer can go into its online rewards system to check for his current reward points. The customer can browse the rewards catalogue and perhaps choose the reward items in the catalogue.
>
> The customer can redeem the reward items using his reward points. The reward clerk will arrange for the items to be shipped to the customer.
>
> At the end of a business day, the Reward Manager will generate a redemption report.

Based on the above description, create a suitable *Use Case Diagram* for this system.

(10 marks)

(b) Consider the following software development project with the following network.



You are to do as follows:

(i) Determine all possible paths and find the critical path for this project. State a reason for your critical path selection.

(ii) Determine the Earliest and Latest Completion Times (ECT/LCT) for every node.

(10 marks)

(Total: 20 marks)

≈ The End ≈

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