

Systems Analysis

Candidates for Systems Analysis were expected to demonstrate a practical ability in modelling systems and were tested for this in Part A of the paper. Additionally, candidates were tested on a competency in Part A. To pass the examination, achievement of the competency and a minimum number of marks were required in Part A.

A further three competencies were tested in Part B and a theoretical understanding of system development issues was tested in Part C.

At this level, candidates were expected to exhibit a depth of understanding for each topic and to pass **every** competency.

The following observations are made for each question:

Part A

Question 1

This question was based on a structured approach to modelling and was attempted by a majority of candidates. Marks were normally distributed.

A key competency 'Translate the Business Needs into Technical Requirements (ICAA5158A)' was also determined within Part A by this question.

The topics are covered in considerable detail in chapter 8, pp. 176 – 209, chapter 9, pp. 220 – 242 and chapter 10, particularly pp. 248 – 260 of the prescribed textbook for this unit, namely:

Hawryszkiewicz, I. T., *Introduction to systems analysis and design*, Sydney, NSW, Prentice Hall of Australia, 2001.

Common reasons for loss of marks for a data flow diagram include an insubstantial model, many dataflows not named and a lack of detail. Some candidates do not understand the concept of levelling data flow diagrams. For a data model, marks were often lost because of an insubstantial model, poor relationship connections and insufficient description of entities. Some candidates did not provide process descriptions or the attributes incorporated in an entity.

Modelling of a system is an important part of the analysis function because everybody in a development team must understand all parts of an existing and new system. A data flow diagram is of little use when only dataflows from external entities are named, no detail such as temporary stores are provided, different dataflows enter and leave a context diagram and its related diagram zero and, for a data diagram, little thought in developing data relationships connections.

Question 2 This question was based on an object-oriented approach and was attempted by some candidates.

All of the candidates attempting this question exhibited a reasonable understanding of an object-oriented analysis modelling process and obtained good marks.

A key competency 'Translate the Business Needs into Technical Requirements (ICAA5158A)' was also determined within Part A by this question.

The process is covered in chapter 11, pp. 270 – 293 and chapter 12, pp. 304 – 316 of Hawryzkiewicz (2001).

Part B In Question 1 or Question 2 and in Part B, candidates are expected to demonstrate an achievement of required competencies.

The competencies are integral to the practice of Systems Analysis and are covered in a considerably more detail than required in the first portion of Hawryzkiewicz (2001), particularly (although not limited to) Chapters 1 to 7, pp. 1 – 172 and Chapter 20, pp. 468 – 475. A reasonable coverage of each issue was expected for 4 marks.

A number of candidates are not attempting all questions in Part B. Students should be aware that if any required competency is not attempted, then a failing mark is assured.

Question 3 This question determines the ability in the key competency 'Validate Quality and Completeness of Design Specifications (ICAA5054A)' and candidates attempting this question provided at least an adequate response.

Question 4 This question determines the ability in the key competency 'Gather Data to Identify Business Requirements (ICAA5151A)' and candidates attempting this question provided at least an adequate response.

Question 5 This question determines the ability in the key competency 'Match the IT Needs with the Strategic Direction of the Enterprise (ICAP5039A)' and candidates attempting this question provided at least an adequate response.

Part C

- Question 6**
- (a) Most candidates answering this question could provide a few reasonable advantages and disadvantages for CASE.
 - (b) A number of candidates were unable to demonstrate an understanding of horizontal integration.
 - (c) Many candidates provided little explanation of the operation of a CASE tool.

(d) Most candidates provided an adequate explanation.

The topic is covered in chapter 6, pp. 138 - 149 of Hawryskiewicz (2001).

Question 7

Most candidates that attempted this question provided a methodological approach, although a number of candidates provided insufficient detail.

The topic is covered in chapter 5, pp. 102 – 124 of Hawryskiewicz (2001).

Question 8

Most of the candidates who attempted this question gave very little information in comparison to the marks allocated to the question. Few answered the question and compared and contrasted structured and object-oriented approaches.

The topic is covered in chapters 8, 9, 11 and 12 of Hawryskiewicz (2001).

Question 9

(a) Many students adequately explained issues in interviewing. Some students provided little detail.

(b) Most students could explain questionnaires, observation and prototyping as a means of gathering information.

The topic is covered in chapter 4, pp. 89 – 99 and in chapter 19, pp. 454 – 466 of Hawryskiewicz (2001).