



Information Systems Analysis

December 2015

Sample Examination Paper

Answer ALL questions.

Clearly cross out surplus answers.

Time: 3 hours

The maximum mark for this paper is 100.

Any reference material brought into the examination room must be handed to the invigilator before the start of the examination.

Answer ALL questions

Marks

Question 1

- | | |
|---|----------|
| a) Identify THREE (3) aims of an information system. | 3 |
| b) Explain briefly the purpose of constructing a data flow diagram. | 4 |
| c) Suggest THREE (3) reasons why a combined approach to systems analysis is undertaken for some projects. | 3 |

Total: 10 Marks

Question 2

- | | |
|---|----------|
| a) State THREE (3) factors that should be considered when deciding whether or not to use a soft systems methodology. | 3 |
| b) Explain how a root definition aids the analysis of an information system. | 3 |
| c) State TWO (2) diagrammatic techniques that are used in a soft approach to information systems analysis and briefly explain why each technique is appropriate. | 4 |

Total: 10 Marks

Question 3

- | | |
|---|----------|
| a) Describe the purpose of requirements capture. | 3 |
| b) Identify THREE (3) factors that can affect the success of using CATWOE. | 3 |
| c) Explain is meant by the term <i>clients</i> in relation to CATWOE. | 2 |
| d) Explain how the <i>owners</i> , referred to in CATWOE, can influence information analysis. | 2 |

Total: 10 Marks

Questions continue on next page

Question 4

- a) Explain how constructing a stakeholder matrix helps a Systems Analyst to collect information in an organization. 4
- b) Outline FOUR (4) disadvantages of collecting information using the method referred to in question 4 (a). 4
- c) Identify TWO (2) stakeholders associated with a manufacturing organization. 2

Total: 10 Marks**Question 5**

- a) Provide THREE (3) reasons why object-oriented analysis is used as an information system methodology. 3
- b) Identify FOUR (4) features of an Activity model used in object oriented analysis. 4
- c) Suggest THREE (3) weaknesses of object oriented analysis. 3

Total: 10 Marks**Question 6**

- a) State FOUR (4) ways of how ETHICS can be used to support the analysis of an information system. 4
- b) Outline THREE (3) disadvantages of using a process oriented methodology when analysing an information system. 3
- c) Identify THREE (3) groups of people in an organisation who could be involved if a people oriented methodology is adopted for analysis. 3

Total: 10 Marks**Question 7**

- a) Why is it important to consider an organisation's knowledge base when undertaking information systems analysis? 3
- b) State FOUR (4) reasons why PEST is used as an analytical technique. 4
- c) Identify THREE (3) aims of SWOT analysis. 3

Total 10 Marks**Questions continue on next page**

Question 8

- | | |
|--|----------|
| a) Identify FOUR (4) economic factors that can influence the development of an organisation's information system. | 4 |
| b) Provide FOUR (4) examples of technical problems that limit an organisation's information system development. | 4 |
| c) Propose TWO (2) solutions that address economic and technological limitations to system development. | 2 |

Total: 10 Marks**Question 9**

- | | |
|---|----------|
| a) State THREE (3) tasks that should be performed during the analysis and specification of requirements for developing a human computer interface. | 3 |
| b) Outline THREE (3) types of demographic data associated with system users. | 3 |
| c) Briefly explain what is meant by task analysis and user analysis and provide ONE (1) example of each form of analysis. | 4 |

Total: 10 Marks**Question 10**

- | | |
|---|----------|
| a) Outline FOUR (4) informal evaluation methods to evaluate the interface of an information system | 4 |
| b) Briefly discuss the objectives of heuristic evaluation. | 3 |
| c) Suggest THREE (3) types of user experience goals used to evaluate user interface design. | 3 |

Total: 10 Marks

End of Examination Paper