



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF COMMUNICATION AND INFORMATION SCIENCE
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
MASTER OF SCIENCE DEGREE IN LIBRARY AND INFORMATION SCIENCE
MANAGEMENT INFORMATION SYSTEMS

ILI 5107

SECOND SEMESTER EXAMINATION PAPER

April 2016

This examination paper consists of 2 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: None
Examiner's Name: Mr. E. Mupaikwa

INSTRUCTIONS

1. Answer any four (4) questions
2. Give equal time to all questions you choose
3. Each question carries 25 marks
4. Importance is attached to accuracy, clarity of expression and legible handwriting

MARK ALLOCATION

| QUESTION | MARKS |
|-----------------|--------------|
| 1. | 25 |
| 2. | 25 |
| 3. | 25 |
| 4. | 25 |
| 5. | 25 |
| 6. | 25 |

SECTION A

1.1 Justify the use of the critical path analysis in managing information systems project development. [4 marks]

1.2 Given the following table, perform the following tasks:

| Activity | Predecessor | Time | EST | LST | ECT | LCT | Slack |
|----------|-------------|------|-----|-----|-----|-----|-------|
| A | -- | 4 | | | | | |
| B | -- | 6 | | | | | |
| C | -- | 5 | | | | | |
| D | A | 4 | | | | | |
| E | C | 5 | | | | | |
| F | A | 8 | | | | | |
| G | B,D,E | 7 | | | | | |
| H | C | 6 | | | | | |
| I | C | 7 | | | | | |
| J | F | 7 | | | | | |
| K | I | 6 | | | | | |
| L | F | 8 | | | | | |
| M | F | 9 | | | | | |
| N | G,H,J,K | 8 | | | | | |
| O | I | 9 | | | | | |
| P | I | 8 | | | | | |
| Q | M,N,O | 6 | | | | | |
| R | P,Q,L | 10 | | | | | |

- 1.2.1 Draw the network diagram [3 marks]
1.2.2 Compute the Earliest Start Times (EST) [4 marks]
1.2.3 Compute the Latest Start Times (LST) [4 marks]
1.2.4 Compute the Earliest Completion Times (ECT) [4 marks]
1.2.5 Compute the Latest Completion Times (LCT) [4 marks]
1.2.6 Compute the slack [1 marks]
1.2.7 Find the critical path [1 marks]

SECTION B

2. With respect to Porters's Forces model, propose how computer-based information systems may be used to reduce the impact of:
 - 2.1 Bargaining power of suppliers [5 marks]
 - 2.2 Bargaining power of buyers [5marks]
 - 2.3 Threats of new entrants [5marks]
 - 2.4 Threats of new substitute [5marks]
 - 2.5 Competitive rivalry between existing players [5marks]

3. Critique the rational model of decision making suggesting how other models address the rational model's weaknesses. [25 marks]

4. Evaluation of information systems is guided by the two (2) dimensions of 'how to evaluate' and "what to evaluate". Examine the six (6) types of information systems evaluation that are guided by these dimensions. [25 marks]

5. Analyse how e-commerce and e-business enhance the competitiveness of business organisations. [25 marks]

6. Evaluate the following systems development approaches:
 - 6.1 RAD [6 marks]
 - 6.2 Spiral model [6 marks]
 - 6.3 Waterfall model [6 marks]
 - 6.4 Prototyping [7 marks]