



kasneb

CICT PART II SECTION 3

SYSTEMS ANALYSIS AND DESIGN

WEDNESDAY: 19 May 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

- (a) Formulate four questions that a systems analyst should ask when seeking to know an organisation's stakeholders. (4 marks)
- (b) Feasibility study or cost-benefit analysis answers the question "should we build the system" and it can be measured through return on investment (ROI), break-even point and discounted cash flow technique.

**Required:**

Describe the following terms:

- (i) Return on Investment (ROI). (2 marks)
- (ii) Break even point. (2 marks)
- (iii) Discounted cash flow technique. (2 marks)
- (c) Explain two types of costs incurred during systems life cycle. (4 marks)
- (d) Once the project has been evaluated, a report must be produced to provide clear, concise information about the outcome of the evaluation report.

**Required:**

Describe the purpose of the three main sections of an evaluation report. (6 marks)

QUESTION TWO

- (a) ABC Company Ltd. has consulted you to analyse a system that they wish to be developed within the shortest time possible.
- Justify a suitable systems analysis development methodology for ABC Company Ltd. (2 marks)

- (b) (i) Describe two reasons for obtaining information about a user skills set before starting an interview. (2 marks)
- (ii) Formulate three guidelines for preparing good interviews. (3 marks)

- (c) You are a system analyst using Joint Application Development approach to develop a system at ABC Company Ltd. You have planned to meet the senior management.

**Required:**

Formulate five goals that should be achieved during a session with the senior management. (5 marks)

- (d) Using an example in each case differentiate between a "business use case" and a "system use case". (4 marks)
- (e) Using an example, explain the term "data dictionary". (4 marks)

(Total: 20 marks)

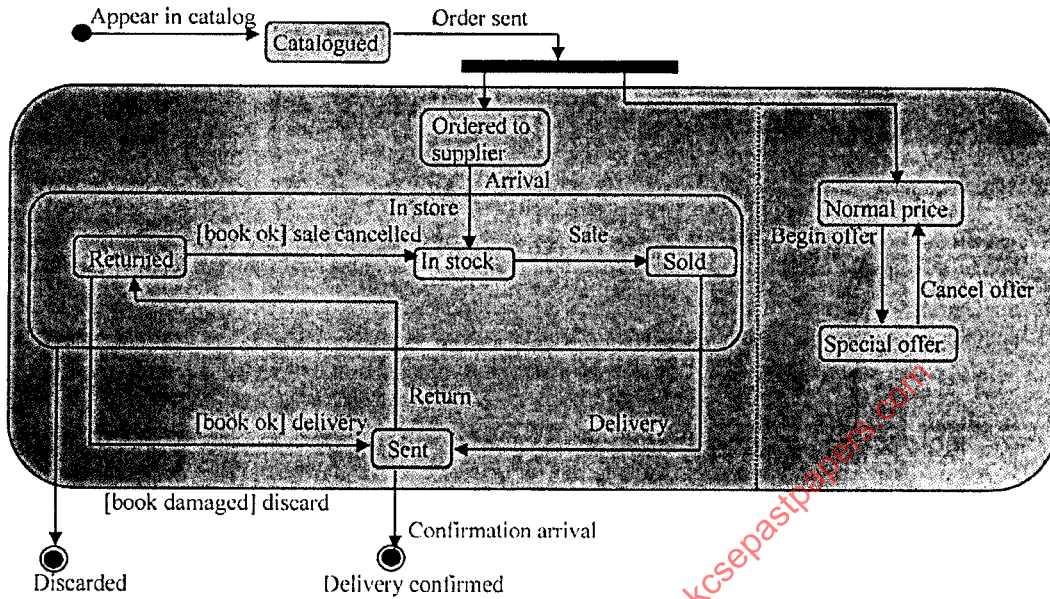
QUESTION THREE

- (a) Discuss three stages involved in system testing. (6 marks)
- (b) Assess four objectives of post implementation evaluation review (PIER). (4 marks)

- (c) Examine five reasons of systems analysis and specification. (5 marks)
  - (d) Describe five outputs for system design. (5 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Study the state machine diagram shown below:



**Required:**

Using the information given on the state machine diagram above, generate a system case model. (10 marks)

- (b) Using an example in each case, differentiate between "functional requirements" and "non functional requirements". (4 marks)
  - (c) Describe six objectives of carrying out systems specifications during systems development. (6 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Discuss four challenges encountered during systems integration and testing. (8 marks)
  - (b) Highlight three examples of standards in each of the following:
    - (i) User interface design. (2 marks)
    - (ii) Procedure. (2 marks)
  - (c) Using an illustration explain the "user interface design process". (8 marks)
- (Total: 20 marks)**