

**Department of Higher Education**  
**University of Computer Studies, Yangon**  
**Second Year ( B.C.Sc.)**  
**Software Engineering + System Analysis and Design (CS- 206)**  
**Final Examination**  
**October, 2018**

**Answer all Questions:**

**Time allowed: 3 Hours**

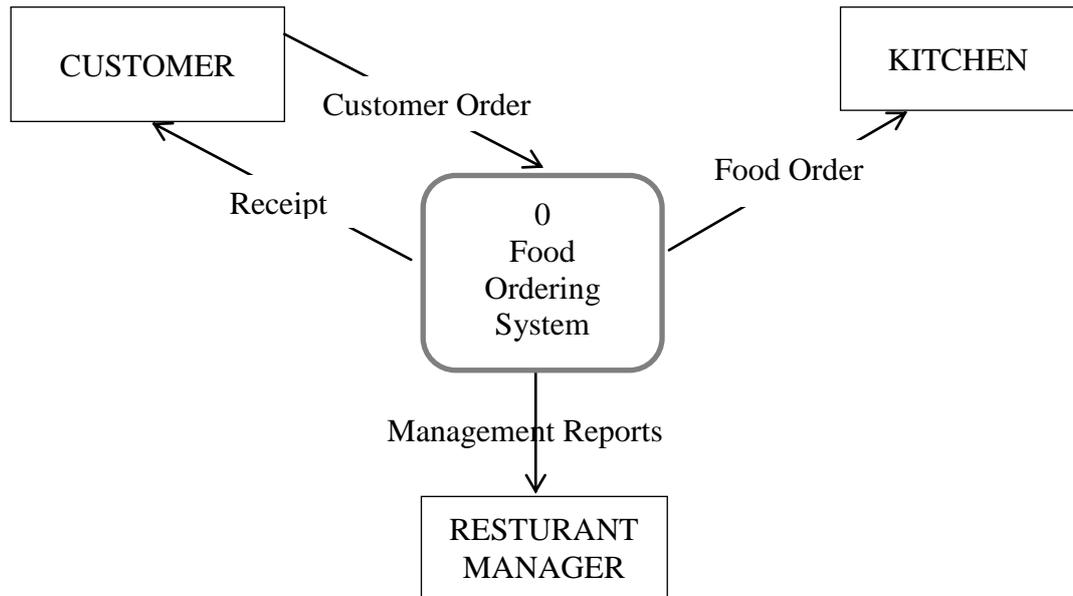
- I. Choose the correct answer(s) from the following statements. **(10 Marks)**
- (i) The term \_\_\_\_\_ is used to refer to any person or group who will be affected by the system, directly or indirectly.  
(a) member                      (b) stakeholder                      (c) organization
  - (ii) \_\_\_\_\_ is the process of interacting with stakeholders in the system to collect their requirements.  
(a) Requirement discovery    (b) Requirement gathering    (c) Requirement analysis
  - (iii) There are \_\_\_\_\_ types of interviews.  
(a) Three                      (b) Two                      (c) One
  - (iv) \_\_\_\_\_ can be particularly useful for adding detail to an outline requirements description.  
(a) Interviews                      (b) Scenarios                      (c) Viewpoints
  - (v) \_\_\_\_\_ is an observational technique that can be used to understand social and organizational requirements.  
(a) Interview                      (b) Ethnography                      (c) Viewpoint
  - (vi) The data flow diagram symbol which represents data flow is the  
(a) Square                      (b) arrow                      (c) circle
  - (vii) Decision table description of data processing is  
(a) non-procedural specification    (b) procedural specification    (c) imprecise specification
  - (viii) \_\_\_\_\_ finds the amount of time required for the cumulative cash flow from a project to equal its initial and ongoing investment.  
(a) BEA                      (b) ROI                      (c) NPV
  - (ix) A cost that can be easily measured in dollars and with certainty is called \_\_\_\_\_.  
(a) intangible cost    (b) one-time cost    (c) tangible cost
  - (x) Data in motion is called \_\_\_\_\_.  
(a) data store                      (b) process                      (c) data flow
- II. Define **any five** from followings. **(10 Marks)**
- (a) Base line project plan
  - (b) Decision table
  - (c) Candidate key
  - (d) Stakeholder
  - (e) Block diagram
  - (f) Client-server architecture
- III. Write Short notes on **any four** from the followings **(20 Marks)**
- (a) Three generic types of viewpoint
  - (b) Two fundamental ways of subsystem to exchange information
  - (c) Advantages of using a distributed approach to system development
  - (d) Three principal stages to a change management process
  - (e) Major components of client server model

IV. Answer **any two** from the followings. (20 Marks)

- (a) What activities have to carry out to get the requirement engineering process's goal? Explain it.
- (b) Describe the advantages and disadvantages of a shared repository.
- (c) Discuss about the client server architecture.

V. (a) Let assume, we are to receive \$100 at the end of three years. How do we calculate the present value of amount, assuming the interest rate is 8% per year compounded annually? (10 Marks)

(b) Draw **level-0 diagram** to convert the following context diagram. (10 Marks)



VI.(a) A marketing company wishes to construct a decision table to decide how to treat clients according to three characteristics: Gender, City Dweller, and age group: A (under 30), B (between 30 and 60), C (over 60). The company has four products (W, X, Y and Z) to test market. Product W will appeal to female city dwellers. Product X will appeal to young females. Product Y will appeal to Male middle aged shoppers who do not live in cities. Product Z will appeal to all but older females. Draw a **decision table** for the marketing company and also simplify the decision table. (10 Marks)

(b) A university wants to design a database with the following entities: A library has many books and many readers. One reader can borrow many books; one book can be borrowed by many readers at different times. If a book is lent to a reader, the lending date and return date must also be recorded. Attributes about book and readers are given below:

Book: book number, book name, author, price, publishing date, status;

Reader: card number, reader name, gender, address, phone number;

Draw an **ER diagram** about book and reader, if necessary; add associative entity to represent the relationship between book and reader. (10 Marks)