CT026-3-1 SYSTEMS ANALYSIS AND DESIGN
FINAL EXAM
DURATION: TWO (2) HOURS

SECTION A – 10 MULTIPLE CHOICE QUESTIONS
EACH QUESTION CARRIES 2 MARKS. ANSWER ALL QUESTIONS
THIS SECTION CARRIES 20 MARKS

1. _____is an IT professional who solves the business problems using information technology.
    a) Systems analyst
    b) Network administrator
    c) Project manager
    d) Database administrator

2. Which of the following in the SDLC includes preliminary investigation?
    a) Analysis
    b) Planning
    c) Design
    d) Implementation

3. Which of the following is not a fact-finding technique?
    a) Third-party inquiry
    b) Interview
    c) Questionnaire
    d) Observation

4. Which one is not a functional requirement?
    a) Security of the system
    b) Availability of system
    c) Registration option of a system
    d) User friendly

5. Hawthorne should be considered during ___ _____.
    a) Observation
    b) Interview
    c) Sampling
    d) Research

6. Software entities (classes, modules, functions, etc.) should be open for extension but closed for modification is referring to _____ principal.
    a) DRY
    b) KISS
    c) Open/ Close
    d) Loose coupling

7. Testing two or more programs that depend on each other to make sure that the programs work together properly called _____.
    a) Unit testing
    b) Integration testing
    c) System testing
    d) Acceptance testing

8. Which of the following is one of the types of reports?
    a) Hybrid report
    b) Exception report
    c) Mini report
    d) Test report

9. Which type of maintenance can be mostly applied immediately after implementation and to fix errors?
    a) Corrective
    b) Adaptive
    c) Perfective
    d) Preventive

10. Hotel Hilton's reservation system is an example for
    a) Enterprise computing system
    b) Transaction processing system
    c) Knowledge management system
    d) User productivity system

(Total = 20 Marks)

SECTION B – 3 WRITTEN QUESTIONS

ANSWER ALL QUESTIONS

THIS SECTION CARRIES 80 MARKS

Case Study

Restaurant Management System

A famous bistro whose motto is "Quality food for all". The bistro has been running the business for the last five years with certain operational difficulties. The owner is serious about making the business process effective to serve the customers in a minimal time. In this line, the manager is given a responsibility to set up a computerized system to handle the food orders on time, thereby wanting to replace their legacy system with a new "Restaurant Management System". The system is expected to perform several operations which include processing of the order, inventory, and generate reports and so on as described below in more detail.

The food orders placed by the customers are processed and sent to the kitchen. The invoice is generated once the order is placed and the customers are expected to pay the bill. Every order is recorded for inventory and sales report generation purposes. When slack in the inventory is notified, the manager places purchase orders to the respective suppliers. The bistro manager is very cautious in maintaining all the inventory records for future references. The manager must be able to generate exclusive reports about the sales and inventory statuses at any time.

Note: *State any assumptions made to support your answer.*

QUESTION B1

i. Based on the given scenario, **draw** a context diagram for the "Restaurant Management System".

(15 marks)

ii. Construct a data dictionary for an external entity and data flow.

(15 marks)

QUESTION B2

The owner of the restaurant asked you to design some new output designs/reports for the "Restaurant Management System". Describe **TWO (2)** objectives of output design. Also, Explain the **THREE (3)** types of report and provide a relevant example of each type of report.

(20 marks)

QUESTION B3

Answer the following questions for a system deployment plan of "Restaurant Management System".

i. What are the main deployment activities that make the "Restaurant Management System" available for use?

(21 marks)

ii. Explain what System Change-over Strategies is and explain any **TWO (2)** system change-over strategies that can be done for this "Restaurant Management System"

(9 marks)

(Total = 80 Marks)

****** END OF EXAMINATION ******