VINH LONG UNIVERSITY OF TECHNOLOGY EDUCATION
**PRACTICE CENTER**


# TEST PROJECT

# PRACTICAL SKILLS


# MODULE 1: SYSTEM ANALYSIS AND DESIGN & DATABASE DESIGN

# MAJORS: SOFTWARE TECHNOLOGY

**Exam Paper Code: SAT05**

| SCHOOL LEADERSHIP | CHIEF SUBCOMMITTEE ON EXAM DEVELOPMENT |
|---|---|
|  |  |

**Vinh Long, 12/2020**

| Student's name | Date of birth | Placement | Module 1 |
|---|---|---|---|
| | | | **System Analysis and Design & Database Design** |

# GUIDE CONTESTANTS

### Module 1: System Analysis and Design & Database Design

**Time:**
- Preparation Time:  05 minutes
- Time Duration:  150 minutes
- Break Time:  10 minutes

**Scores:**

| | Exam content | Marks |
|---|---|---|
| 1 | System Analysis and Design | 50 |
| 2 | Database Design | 50 |
| | **Total Marks** | **100** |

**Candidates are required to note:**
- Ensure safety standards of health and computer
- Do the test independently without discussing while doing the test
- Comply with regulations of exam room and proctor's instructions
- Fill the information in the form
- Complete all requirements in the content of the exam
- Do not use documents, the Internet and other communication devices during the assignment
- If the exam does not have special requirement for the file name and storage location, contestants save all exam file name in the folder as following format**:**

  **D:\WorkSkills\System Analysis and Design & Database Design**

  *<Student's Name>_< Student code >[.< extension >]*

| Student's name | Date of birth | Placement | Module 1 |
|---|---|---|---|
| | | | **System Analysis and Design & Database Design** |

# CONTENT OF THE TEST

**Question 1:**

Considering the purchase and sale management system in supermarkets as follow:

A supermarket needs to build a management system for the goods on display at the supermarket. The supermarket has the following activities:

Supermarkets import goods from suppliers. Suppliers supply many items in different quantities. Each item has information such as item code, item name, unit of calculation. Each item is made by only one manufacturer. Information about the manufacturer includes manufacturer's code, manufacturer's name, and nationality. Items of the same category but different manufacturers will have different codes. Every time import goods, need to save the goods import slip. Every time you import goods, you need to save the goods import slip. Each goods import slip includes information such as: code of the import slip, imported items, imported from any supplier, quantity, unit price, date of entry. Information about the supplier includes supplier code, full name, address.

The supermarket has a lot of stalls selling items. However, each item is only for sale at a certain counter. Each counter has information such as counter number, counter name, location.

The customers will come to the supermarket to buy. Every time a customer makes a purchase, the system will print out sales slip including information of coupon code, customers, items, quantity, unit price. Information of customer includes customer code, customer name, address.

Please do the following request:

   a. Draw ER model for the above system.

   b. Convert ER model to logical data model.

**Question 2:**

Based on the previous ER model (Question 1), write SQL statements to do the following:

1. Create a database and name it **Supermarket Management** then create tables with reasonable data types.

2. Create constraints on tables to ensure the accuracy and reliability of the data.

3. Insert 3 valid records into each table.

4. Selects all fields from Item table and the manufacturer's name where the item is made.

5. Create a view that selects item's name purchased by Nguyen Van An.

6. Create a procedure that inserts a new record into the Customer table.

| Student's name | Date of birth | Position |
|---|---|---|
|  |  | **Computer Network Design** |

# GENERAL TRANSCRIPT

| | Exam content | Maximum Marks | Achieved Marks |
|---|---|---|---|
| 1 | System Analysis and Design | 50 | |
| 2 | Database Design | 50 | |
| **Total Marks** || **100** | |

## TEST TIME

| Get to know the equipment | | Time Duration | | Break Time | | | |
|---|---|---|---|---|---|---|---|
| Starting time | | Starting time | | Starting time | | Starting time | |
| Ending time | | Ending time | | Ending time | | Ending time | |

## TEACHERS' SIGNATURE

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
|  |  |  |  |  |