Enterprise Application Development in Java EE - *Exam Paper*
Duration: 90 minutes | Marks: 15

***Question*:**

In 2006, Hanoi University of Science and Technology have plan to build system : **S**tudent **I**nformation **S**ystem(sis), to manage all student with some information below:

- Student information include: student id, student name, address.
- Score of student include: student id, subject id, score 1, score 2.
- Subject include: subject id, subject name, credit .

Using knowledge in subject Enterprise Application Development in Java EE to development this system.

1. A Employee of Training department inserts students (when clicked (+ **Student**)).
2. A Employee of Training department inserts the score of subjects for any student (when clicked **(+Score)**).
3. Display student information on the website like the picture below. Each student and a subject have Grade = 0.3×score 1 + 0.7 × score2. with table convert Score to Grade below.

Score	**Grade**
8.0 to 10	A
6.0 to 7.9	B
4.0 to 5.9	D
less than 4.0	F

Database information:

Database Name: sis

Script to create table and data:

// create table script

```
create table student_t (
student_id int auto_increment primary key,
student_code varchar(20) not null,
full_name varchar(100) not null,
address varchar(255)
);
create table subject_t (
subject_id int auto_increment primary key,
subject_code varchar(20) not null,
subject_name varchar(100) not null,
credit int not null
);
create table student_score_t (
student_score_id int auto_increment primary key,
student_id int,
subject_id int,
```

```
        score1 decimal(5,2),
        score2 decimal(5,2),
        constraint fk_student_id foreign key (student_id) references
        student_t(student_id),
        constraint fk_subject_id foreign key (subject_id) references
        subject_t(subject_id)
        );
// Insert sample data
insert into subject_t (subject_code, subject_name, credit) VALUES
        ('JAVA', 'Java Programming', 4),
        ('PHP', 'PHP Programming', 3),
        ('WDA', 'Web Development and Applications', 3);
insert into student_t (student_code, full_name, address)
        VALUES ('2007A10', 'Nguyễn Văn A', 'Hà Nội');
insert into student_score_t (student_id, subject_id, score1,score2)
        VALUES (1, 1, 8.5,7.0);
```

Marking Schema:

Question	**Mark**
Question 1 Create Entity Subject Create Entity Student	**3**
Question 1 Insert Student from website	**3**
Question 2 Create Entity Score	**3**
Question 2 Insert Score from website	**3**
Question 3 Display information student	**1**
Question 3 Convert score to Grade	**1**
Bonus Point: Design good UI/UX	**1**
Total	**15**