MODULE NAME:	MODULE CODE:
ADVANCED DATABASES	ADDB7311

ASSESSMENT TYPE:	**TEST (PAPER ONLY)**
TOTAL MARK ALLOCATION:	**60 MARKS**
TOTAL HOURS:	**1.5 HOURS (+10 minutes reading time)**
STUDENT NAME:	
STUDENT NUMBER:	

INSTRUCTIONS:

1. *Please adhere to all instructions in the test booklet.*
2. *Independent work is required.*
3. *Ten minutes are dedicated to reading time before the start of the test. You may make notes on your question paper, but not in your answer sheet. Calculators may not be used during reading time.*
4. *You may not leave the test venue during reading time, or during the first hour or during the last 15 minutes of the test.*
5. *Ensure that your name is on all pieces of paper or books which you will be handing in. Hand in all the pages of this test question paper as well as your answer script.*
6. *Save your work every five minutes.*
7. *Use Oracle 11g™ to complete the questions.*
8. *Copy your answers (SQL and results) to a Microsoft Word™ document, saved as AdvancedDatabases_YourNameSurname_StudentNumber in your local folder.*
9. All ***code*** and ***output*** (captured using the Snipping Tool™) needs to be copied to a MS-Word™ document.
    a. An ***SQL query*** is meant to represent a standard syntax SQL query.
    b. A ***PL/SQL query*** requires at least an anonymous code block that could contain variables, cursors, conditionals and loop structures.
10. *The phrase "END OF PAPER" will appear after the final set question of this assessment.*
11. *Remember to work at a steady pace so that you are able to complete the test within the allocated time. Use the mark allocation as a guideline as to how much time to spend on each section.*

Additional instructions:

12. *This is an OPEN BOOK test.*
13. *You are required to answer all of these sections.*
14. *Answer <u>all</u> the questions.*

Question 1 (Marks: 60)

The following set of relations has been set up for a new local college to track student's results. At present the database is small and only includes information about students, courses and results. The relationships between the tables must be derived from the data in each of the tables.

The tables and the information we require are as follows:

STUDENT(StudID, Firstname, Surname, Email)

COURSE(CourseID, CourseName, Credits)

RESULTS(resultID, Results, StudID, CourseID)

Sample Data is shown below:

STUDENT

STUDID	FIRSTNAME	SURNAME	EMAIL
1011	Kevin	Jones	kj@isat.co.za
1022	Bob	Ferreira	bf@imail.com
1033	Clark	Le Roux	cerou@mca.com
1044	Anda	Johnson	aj@isat.co.za
1055	Mark	Waters	watersm@nrom.co.za

COURSE

COURSEID	COURSENAME	CREDITS
1	Java Concepts	15
2	PHP for beginners	10
3	Android Development	12

RESULTS

RESULTID	RESULTS	STUDID	COURSEID
101	58	1011	1
102	52	1033	2
103	85	1022	1
104	45	1011	2
105	92	1055	3

Q.1.1	You will need to create the above tables to complete the test. Please create the tables and populate them using SQL Developer or SQL*Plus.	(20)
Q.1.2	Write a SQL query that will display the combined student name, course the student is studying and the result obtained. Sample Results: NAMES COURSE RESULTS Kevin, Jones PHP for beginners 45% Kevin, Jones Java Concepts 58% Bob, Ferreira Java Concepts 85% Clark, Le Roux PHP for beginners 52% Mark, Waters Android Development 92%	(5)

Requirement	**Mark**	**Examiner**
Correct select statement used.	2	
Correct Tables used	2	
Correct output	1	
TOTAL	5	

Q.1.3	Create a PL/SQL query that will display the combined student first name and surname, the course name and the result obtained for student 1033. Sample Results: *anonymous block completed* *The student results is: Clark, Le Roux, PHP for beginners, 52%*	(8)

Requirement	**Mark**	**Examiner**
Variables declared correctly.	2	
Correct select statement used.	2	
Correct use of cursor	2	
Correct method to display output	1	
Correct use of loop	1	
TOTAL	**8**	

Q.1.4	Create a PL/SQL query that will display all student id numbers and how many results have been captured for the student. In your query make use of variables and a cursor. Sample Results: *anonymous block completed* *The result count for 1011 is : 2* *The result count for 1033 is : 1* *The result count for 1022 is : 1* *The result count for 1055 is : 1*	(8)

Requirement	Mark	Examiner
Variables declared correctly.	2	
Correct select statement used.	2	
Correct use of cursor	2	
Correct method to display output	1	
Correct use of loop	1	
TOTAL	**8**	

Q.1.5 Create a view called Course_Credits that will display the course name and the course credits that are greater than 12. (6)

Sample Results:

COURSENAME	CREDITS
Java	15

Requirement	Mark	Examiner
View created correctly.	2	
Correct select statement used.	2	
Correct method to display output.	2	
TOTAL	6	

Q.1.6 Create a PL/SQL query that will display whether a student has received a distinction, pass or fail. If the result is 75% and greater display distinction. If the result is greater than or equal to 50% display pass. If the result is less than 50% display fail. In your query make use of student id 1011 and result ID 101. (7)

Sample Results:
anonymous block completed
Student ID: 1011
Result: 58%
Outcome: is a pass

Requirement	Mark	Examiner
Variables declared correctly.	2	
Correct select statement used.	2	
Correct use of selection structures.	2	
Correct method to display output.	1	
TOTAL	7	

Q.1.7 Create a user called pat_jones with the password *pat12345*. Assign select privileges to pat_jones for the Results table. (2)

Requirement	Mark	Examiner
User created correctly.	1	
Privileges assigned correctly.	1	
TOTAL	2	

Q.1.8	Create a sequence called result_id that will start at id 106 and increments by 1.	(4)

Requirement	**Mark**	**Examiner**
Sequence created correctly.	2	
Sequence starts at 106 and increments by 1.	2	
TOTAL	4	

END OF PAPER