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)

INSTRUCTIONS:

1. *Please adhere to all instructions in the assessment booklet.*
2. *Independent work is required.*
3. *Five minutes per hour of the assessment to a maximum of 15 minutes is dedicated to reading time before the start of the assessment. 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 assessment venue during reading time, or during the first hour or during the last 15 minutes of the assessment.*
5. *Ensure that your name is on all pieces of paper or books that you will be submitting. Submit all the pages of this assessment's question paper as well as your answer script.*
6. *Answer all the questions on the answer sheets or in answer booklets provided. The phrase 'END OF PAPER' will appear after the final set question of this assessment.*
7. *Remember to work at a steady pace so that you are able to complete the assessment within the allocated time. Use the mark allocation as a guideline as to how much time to spend on each section.*

Additional instructions:

1. *This is an OPEN BOOK assessment.*
2. *Calculators are allowed*
3. *For open book assessments the students may have open access to all resources inclusive of notes, books (hardcopy and e-books) and the internet. These resources may be accessed as hard copies or as electronic files on electronic devices. All electronic devices batteries must be fully charged before the assessment as no charging of devices will be permitted during the sitting of the assessment. The IIE and associated brands accept no liability for the loss or damage incurred to electronic devices used during open book assessments.*
4. *Answer All Questions.*
5. *Instructions for assessments including practical computer work:*
   - *Use of good programming practice and comments in code is compulsory.*
   - *Save your application in the location indicated by the administrator (e.g. the Z:\ drive or your local drive).*
   - *Create a folder as follows: use the module code and your own student number and create a folder with a folder name as per the format shown here:*
   - ***StudentNumber_ModuleCode_Test**. Save all files (including any source code files, template files, design files, image files, text files, database files, etc.) within this folder.*

- *E.g. if your student number is 12345, and you are writing a test for the module ADDB7311, create a folder named **12345_ADDB7311_Test** and use this throughout the session to save all of your files.*

6. ***Important:** Upon completion of your assessment, you must save and close all your open files and double click the ExamLog application on your desktop. You must follow the instructions carefully to ensure that the information about the files that you have submitted for this assessment has been logged on the network. Specify the location of your source code on your question paper.*

The following set of relations has been set up for a local second hand car dealership. At present the database is small and only includes information about vehicles, customers and vehicle sales. The relationships between the tables must be derived from the data in each of the tables. The tables and the information required are as follows:

VEHICLE(VIN, MANUFACTURER, VEHICLE_MODEL, PRICE)
CUSTOMER(CUSTOMER_ID, CUSTOMER_NAME, CUSTOMER_EMAIL)
VEHICLE_SALES(SALES_ID, SALES_DATE, VIN, CUSTOMER_ID)

Sample Data is shown below:

VEHICLE:

VIN	MANUFACTURER	VEHICLE_MODEL	PRICE
100001	BMW	M3 Coupe	R 450 000
100002	AUDI	TT Roadster	R 180 000
100003	MAZDA	CX3	R 250 000

CUSTOMER:

CUSTOMER _ID	CUSTOMER _NAME	CUSTOMER _EMAIL
cust_101	Jeff Jones	jj@xcom.com
cust_102	Sally Williams	sally@ymail.com
cust_103	Sam Henry	sat@xsat.com

VEHICLE_SALES:

SALES _ID	SALES _DATE	VIN	CUSTOMER _ID
1	15/MAR/18	100002	cust_101
2	17/MAR/18	100001	cust_101
3	27/MAR/18	100003	cust_103
4	30/MAR/18	100003	cust_102

Question 1 (Marks: 20)

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.

Mark Allocation

Requirement	Mark	Examiner
Tables created successfully.	10	
Tables populated successfully	10	
TOTAL	20	

Question 2 (Marks: 10)

Create a SQL Query to display the customer who has purchased the most vehicles. In your query include the amount spent by the customer.

Sample Results

CUSTOMER_NAME	PURCHASE_COUNT	TOTAL
Jeff Jones	2	R 630000

Mark Allocation

Requirement	Mark	Examiner
Correct select statement used.	4	
Correct Tables used	4	
Correct output	2	
TOTAL	10	

Question 3 (Marks: 15)

Create a SQL query to display the manufacturer, vehicle model, vehicle price and the customer who bought the vehicle. In your query include the 10% commission value and the total paid by each customer.

Sample Results

MANUFACTURER	MODEL	PRICE	COMMISSION	TOTAL	CUSTOMER
BMW	M3 Coupe	R 450 000	R 45 000	R 495 000	Jeff Jones
AUDI	TT Roadster	R 180 000	R 18 000	R 198 000	Jeff Jones
MAZDA	CX3	R 250 000	R 25 000	R 275 000	Sally Williams
MAZDA	CX3	R 250 000	R 25 000	R 275 000	Sam Henry

Mark Allocation

Requirement	Mark	Examiner
Correct select statement used.	6	
Correct Tables used	6	
Correct output	3	
TOTAL	15	

Question 4 (Marks: 15)

Create a PL/SQL query to display the customer name, VIN and the vehicle price that was purchased. In your solution only display the results for a vehicle with a price of R300 000 or greater.

Sample Results

CUSTOMER NAME: Jeff Jones
VIN: 100001
PRICE: R450 000

Mark Allocation

Requirement	**Mark**	**Examiner**
Variables declared correctly.	6	
Correct select statement used.	6	
Correct output	3	
TOTAL	15	

END OF PAPER