THE INDEPENDENT INSTITUTE OF EDUCATION

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.*

Note to Students

The following set of relations has been set up for a local private investment organisation. At present the database is small and only includes information about brokers, customers and transactions. 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:

BROKER (BROKER_ID, FIRST_NAME, SURNAME, EMAIL)
CUSTOMER (CUSTOMER_ID, FIRST_NAME, SURNAME, EMAIL)
TRANSACTIONS (TRANS_ID, TRANS_TYPE, TRANS_DATE, TRANS_AMT, BROKER_ID, CUSTOMER_ID)

Sample Data is shown below:

BROKER

BROKER_ID	FIRST_NAME	SURNAME	EMAIL
111	Lucy	Jackson	lack@yahoo.com
112	Molly	Jones	jonesm@gmail.com
113	Andrea	Paulson	ap@gmail.com

CUSTOMER

CUSTOMER _ID	FIRST _NAME	SURNAME	EMAIL
1001	Jack	Smith	js@yahoo.com
1002	Sam	Hewson	shew@gmail.com
1003	Alberto	Goodwin	good@isat.co.za

TRANSACTIONS

TRANS _ID	TRANS_TYPE	TRANS_DATE	TRANS_AMT	BROKER_ID	CUSTOMER_ID
Trans_101	Pension Pay-out	15-MAR-19	275 000	112	1001
Trans_102	Bitcoin Purchase	17-MAR-19	180 000	113	1003
Trans_103	Kruger Rands Purchased	22-MAR-19	150 000	113	1003
Trans_104	Mortgage Deposit	25-MAR-19	35 000	111	1002

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.

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

Question 2 **(Marks: 10)**

Create a SQL Query to display the broker name and how many transactions they were involved in.

Sample Results

BROKER_NAME	PURCHASE_COUNT
Andrea Paulson	2
Molly Jones	1
Lucy Jackson	1

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 broker ID, customer ID and the transaction amount. In your query include the 10% commission value and the total transaction amount.

Sample Results

BROKER_ID	CUSTOMER_ID	TRANS_AMT	COMMISSION	TOTAL
112	1001	R275 000	R27 500	R302 500
113	1003	R180 000	R18 000	R198 000
113	1003	R150 000	R15 000	R165 000
111	1002	R35 000	R3 500	R38 500

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 view called Transaction_Details that will display the customer ID, broker ID, transaction type and transaction date. In your solution only display the transactions that occurred between the 22 March 2019 and the 25 March 2019.

Sample Results

CUSTOMER_ID	BROKER_ID	TRANS_TYPE	TRANS_DATE
1003	113	Kruger Rands Purchased	22-MAR-19
1002	111	Mortgage Deposit	25-MAR-19

Mark Allocation

Requirement	Mark	Examiner
View created correctly	4	
Correct select statement used	5	
Correct Tables used	3	
Correct output	3	
TOTAL	15	

END OF PAPER