MODULE NAME:	MODULE CODE:
ADVANCED DATABASES	ADDB7311

ASSESSMENT TYPE:	**REVISED TEST PAPER**
TOTAL MARK ALLOCATION:	**60 MARKS**
TOTAL HOURS:	**The time given to students to complete this assessment will be indicated on your module in Learn.**

By submitting this assessment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. *Please **adhere to all instructions**. These instructions are different from what is normally present, so take time to go through these carefully.*
2. ***Independent work is required**. Students are not allowed to work together on this assessment. Any contraventions of this will be handled as per disciplinary procedures in The IIE policy.*
3. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks.***
4. *All work must be adequately and correctly referenced.*
5. *You should paraphrase (use your own words) the concepts that you are referencing, rather than quoting directly.*
6. *Marks will be awarded for the quality of your paraphrasing.*
7. *This is an open-book assessment.*
8. *Assessments must be typed unless otherwise specified.*
9. ***Ensure that you save a copy of your responses.***
   a. *Complete your responses in a Word document*
   b. *The document name must be your **name.student number.Module Code**.*
   c. *Once completed the assessment, upload your document under the **submission link** in the correct module in Learn.*
10.

Additional instructions:

- *Answer All Questions .*
- *Instructions for assessments including sketches and diagrams:*
  - *You need to create the drawing on a piece of paper (A4) using either pen or pencil.*
  - *Your drawing does not have to be to scale.*
  - *Annotate each component of your drawing as indicated in the question.*
  - *Please work neatly so that you do not lose marks because your lecturer cannot read your writing.*
  - *Either (i) Scan your pages OR (ii) clearly photograph your pages.*

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- *Label your photographs/scans as follows:* ***name.student number.Module Code.Page 1; (for each drawing)***

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Question 1 (Marks: 10)

Discuss the reasons why databases have advantages over manual data processing systems.

Question 2 (Marks: 5)

A database is divided into layers or tiers to manage data effectively. Briefly explain the differences between the two database architecture tier types.

Question 3 (Marks: 10)

Explain what a trigger is and explain the three trigger types available in Oracle. Demonstrate your understanding of the three triggers by drawing a diagram.

Question 4 (Marks: 10)

Discuss what Procedural Language/ Structured Query Language (PL/SQL) is and why developers would use it over SQL querying to manipulate data in a database.

Question 5 (Marks: 10)

Mike is a database administrator who has recently joined an online car rental company who captured and stored data in Microsoft Excel spreadsheets. He is tasked with creating a database and migrating all the data into a relational database management system. Mike wants to implement an Oracle database, but is unsure of the Oracle 11g edition to use.

Explain to Mike the various program categories that will enable him to operate a database in Oracle. Discuss at least three of these program categories.

Question 6 (Marks: 5)

Differentiate between Sequences and Synonyms and how they can be used to ensure better data management.

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Question 7 **(Marks: 10)**

The optional clauses of the select statement, if used, must be used in a specific order. Discuss the purpose of the optional clauses in the order they appear.

Requirement	Mark	Examiner
Optional Clauses	8	
Order is correct	2	
Total	10	

END OF PAPER

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