January 2019

Time: 2 hours	Paper Reference **31761H**

Information Technology

Unit 2: Creating Systems to Manage Information

Part B

You must have:
activity6.rtf, activity7.rtf, partB_database.accdb or partB_database.mdb

Instructions

- **Part A** and **Part B** contain the material for the completion of the set tasks under supervised conditions.
- There are 40 marks for **Part A** and 26 marks for **Part B**, giving a total mark for the set tasks of 66.
- **Part A** and **Part B** are specific to each series and this material must be issued only to learners who have been entered to take the tasks in the specified series.
- Learners **must only** have access to **Part B** during this examination session.
- This booklet should be kept securely until the start of the 2-hour supervised assessment period.
- **Part A** materials **must not** be accessed during completion of **Part B**.
- **Part A** and **Part B** should be submitted together for each learner.
- This booklet should not be returned to Pearson.
- Answer **all** activities.

Information

- The total mark for this paper is 26 marks.

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Instructions to Invigilators

This paper must be read in conjunction with the unit information in the specification and the *BTEC Nationals Instructions for Conducting External Assessments (ICEA)* document. See the Pearson website for details.

Refer carefully to the instructions in this task booklet and the *Instructions for Conducting External Assessments (ICEA)* document to ensure that the assessment is supervised correctly.

The 2-hour **Part B** set task must be carried out under examination conditions.

Electronic templates for activities 6 and 7 are available on the website for centres to download for candidate use.

Learners must complete this task on a computer using the templates provided and appropriate software. All work must be saved as PDF documents for submission.

Invigilators may clarify the wording that appears in this task but cannot provide any guidance in completion of the task.

Invigilators should note that they are responsible for maintaining security and for reporting issues to Pearson.

Maintaining Security

- Learners must not bring anything into the examination environment or take anything out.
- Centres are responsible for putting in place appropriate checks to ensure that only permitted material is introduced into the examination environment.
- Internet access **is not** permitted.
- Learner's work must be regularly backed up. Learners should save their work to their folder using the naming instructions indicated in each activity.
- During any permitted break, and at the end of the examination, materials must be kept securely, and no items removed from the supervised environment.
- Learners can only access their work under supervision.
- User areas must only be accessible during the examination session and only by the individual learners.
- Any materials being used by learners must be collected in at the end of the examination.
- Following completion of **Part B** of the set task, all materials must be retained securely for submission to Pearson.
- **Part A** materials must not be accessed during the completion of **Part B**.

Outcomes for submission

Each learner must create a folder to submit their work. Each folder should be named according to the following naming convention:

[Centre #]_[Registration number #]_[surname]_[first letter of first name]_PartB

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345_F180542_Smith_J_PartB

Each learner will need to submit 3 PDF documents and their final database within their folder.

The 3 PDF documents should use these file names:

Activity 6:   activity6_[Registration number #]_[surname]_[first letter of first name]
Activity 7:   activity7_[Registration number #]_[surname]_[first letter of first name]
Activity 8:   activity8_[Registration number #]_[surname]_[first letter of first name]

An authentication sheet must be completed by each learner and submitted with the final outcomes.

Instructions for Learners

Read the set task information carefully.

Plan your time carefully to allow for the preparation and completion of all the activities.

Internet access is **not** allowed.

You will complete this set task under supervision and your work will be kept securely at all times.

You must work independently throughout the examination and must not share your work with other learners.

Your invigilator may clarify the wording that appears in this task but cannot provide any guidance in completion of the task.

Part A materials **must not** be accessed during the completion of **Part B**.

Outcomes for submission

You must create a folder to submit your work.

Each folder should be named according to the following naming convention:

[Centre #]_[Registration number #]_[surname]_[first letter of first name]_PartB

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345_F180542_Smith_J_PartB

You will need to submit 3 PDF documents and your final database within this folder.

The 3 PDF documents should use these file names:

Activity 6:   activity6_[Registration number #]_[surname]_[first letter of first name]
Activity 7:   activity7_[Registration number #]_[surname]_[first letter of first name]
Activity 8:   activity8_[Registration number #]_[surname]_[first letter of first name]

You must complete an authentication sheet before you hand your work into your **invigilator**.

Part B Set Task Brief

You are advised to spend 10 minutes reading the Task Scenario and the activities you are to complete.

You may make notes and/or highlight information to use in the completion of the documents you need to produce for your task.

Task Scenario

'Mason and Thompson Letting Agency' has partially developed a database that will eventually merge with the database you created in Part A.

The letting agency has a branch in many towns across the UK.

Each branch has a manager.

A manager can manage more than one branch.

Property owners register at a branch.

Owners can have from one to ten properties.

Owners rent out their properties.

Owners pay the agency a monthly property management fee.

The database will record information about the property owners and branches.

Part B Set Task

You must complete ALL activities within the set task.

Produce your documents using a computer.

Save your documents in your folder ready for submission using the formats and naming conventions indicated.

Activity 6: Forms (1 hour 10 minutes)

Note
- The structure of the tables provided should not be changed in any way e.g. do not add validation, do not change data types.
- You will be required to use all of the tables.

(a) Create an efficient interface that will facilitate database input by producing:

   (i) an input form to add an owner.

- The form should be ready for data entry.
- The user should be able to select a branch.
- The owner's surname and branch ID must be present.
- The number of properties must be within the specified range.
- Valid data should be appended to the owner table and a save message displayed.
- A suitable error message should appear where invalid data has been used.

   (ii) input form to update the property management fee for a branch.

- The form should not include validation for any fields.
- The form should not include an automated routine to save the data.
- The user should be able to select the branch address.
- These details should then be displayed:
    - Town
    - Manager surname
    - Property management fee.
- The user should be able to input the percentage of potential increase for the property management fee as a whole number. For example 3
- These details should then be displayed:
    - the new management fee including the increase.
    - the yearly income generated from the new management fee.

Evidence your interface as screenprints using the given **activity6.rtf** template.

Your screenprints must show:

- the **DESIGN** view and **FORM** view of all the forms you have created
- the **DESIGN** view of any queries you have created and used with the forms including fields and criteria
- the **DATASHEET** view of any queries you have created and used with the forms
- details of any calculations, validation and macros/code you have created and used with the forms

Ensure sufficient information is provided to allow a competent third party to maintain the database.

Save the evidence of your interface as a PDF in your folder for submission as **activity6_[Registration number #]_[surname]_[first letter of first name]**

You are advised to spend 1 hour and 10 minutes on this activity.

(Total for Activity 6 = 14 marks)

Activity 7: Interface testing (20 minutes)

Test the interface of your relational database using suitable test data (normal, erroneous and extreme as appropriate).

You must provide evidence of **form level** testing that proves:

1. The owner form is ready for data entry when the form opens.
2. An invalid branch cannot be selected.
3. The number of properties cannot be above the range.
4. The number of properties cannot be below the range.
5. A record will save in the owner table if the owner details are present and valid.
6. After a branch address has been selected on the management fee form these details should appear:
   - Town
   - Manager
   - Property management fee.
7. After the potential percentage increase has been input these details should be calculated and displayed:
   - the new management fee including the increase
   - the yearly income generated from the new management fee.

Complete the test log to show how you have tested your input forms using the given **activity7** template.

Save your test log as a PDF in your folder for submission as **activity7_[Registration number #]_[surname]_[first letter of first name]**

You are advised to spend 20 minutes on this activity

(Total for Activity 7 = 6 marks)

Activity 8: Interface evaluation (20 minutes)

Evaluate your interface.

You should consider the quality, performance and usability of the interface you have created in terms of how well it ensures:

Owner form

- The owner form is ready for data entry when the form opens.
- An invalid branch cannot be selected.
- The number of properties cannot be above the range.
- The number of properties cannot be below the range.
- A record will save in the owner table if the owner details are present and valid.

Edit branch management fee form

- After a branch has been selected on the management fee form these details should appear:
  - Town
  - Manager
  - Property management fee.
- After the potential percentage increase has been input these details should be calculated and displayed:
  - the new management fee including the increase
  - the yearly income generated from the new management fee.

Save your evaluation as a PDF in your folder for submission as
activity8_[Registration number #]_[surname]_[first letter of first name]

You are advised to spend 20 minutes on this activity.

(Total for Activity 8 = 6 marks)

TOTAL FOR PART B = 26 MARKS