

Applied ICT AS-Level Exam

Academic year 2015-16

Prepare The exams are on Monday 21st March and 24th May. You should use the time from now to then productively by spending **an hour** or so a night (a couple of hours a day at the weekends) quietly in your room reading through your work, making notes and revising.

During the exams, be ready, have the right equipment. Have the right amount of sleep (8 hours). The more preparation you do now means the less worry you will have later.

Exam Materials – Include pens, pencils, ruler, protractor, calculator, pair of compasses,

Applied ICT Exam Timetable:

Exam date	Exam type
21 st March 2016	Paper 2 Practical Exam
24 th May	Paper 1 Theory exam

Topics to revise for the exam.

- ICT Systems
 - How Organisations use ICT
 - The Impact of ICT
 - The Systems life Cycle
 - Document Production
 - Databases and Charts
 - Using Spreadsheets
- Input/output/control devices & Storage media
Control Systems/Working practices/Payroll
Online Services/Data Privacy and Security
Systems Analysis/Design/Development etc.
Word Processing Skills
Relational Databases/Complex Queries/reports
Advanced formulas [LEN,CONCATENATE]

Answers No matter how good your grades were, you can always do better. When reading the question, make sure you read it properly. Re-read it, and make sure you've understood it. Pick out the key words and take a moment to think about your answer and make sure it is actually answering the question.

In low scoring questions, worth 1 mark, you are expected to write a brief answer, if one word will do use it; if it needs a sentence write a *short* sentence. With medium scoring questions (2 to 4 marks) you need to give your answer making one valid point per mark (so for a 3 mark Q you must make 3 good statements etc). For questions worth more than 4 marks you need to be writing in complex sentences. You should be making a valid point and expanding (developing) or explaining that point using evidence.

When you have written your answer STOP! Go back and re-read the question and ask yourself, "does my answer actually answer all of that question?"



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/02

Paper 2 Practical Test

May/June 2013

2 hours 30 minutes

Additional Materials: Candidate Source Files

READ THESE INSTRUCTIONS FIRST

Make sure that your **Centre number**, **candidate number** and **name** are written at the top of this page and are clearly visible on every printout, before it is sent to the printer.

DO **NOT** WRITE IN ANY BARCODES.

Carry out **every** instruction in each task.

At the end of the exam put this **Question Paper** and **all** your printouts into the Assessment Record Folder.

The number of marks is given in brackets [] at the end of each question or part question.

Any businesses described in this paper are entirely fictitious.

This document consists of **5** printed pages and **3** blank pages.



You work for the University of Tawara. You are going to develop a database to record and extract information regarding the students, their courses and their personal tutors.

- 1 You must provide evidence of your work, including screenshots at various stages. Create a document named:

CentreNumber_CandidateNumber_Evidence.rtf

e.g. ZZ999_99_Evidence.rtf

Place your name, Centre number and candidate number in the header of your evidence document.

- 2 Look at the data in the files **J13STUDENT.TXT**, **J13COURSE.TXT** and **J13TUTOR.TXT**

Design your database structure with appropriate field names, key fields and data types. Some of this information is shown below.

J13STUDENT		J13COURSE	
Field name	Type	Field name	Type
⌘ Student_ID		Code	
First_Name		Course_Title	
		Faculty	
	Alphanumeric	Level	
	Alphanumeric	Full_Time	Boolean
	Alphanumeric		
Zip_Code			
Telephone		J13TUTOR	
Birth_Date		Field name	Type
Course_Code		Code	
Tutor_Code			
		Room	
		Email	
		Salary	Numeric: Currency, \$ with 2 decimal places
		Contract	Numeric: Decimal with 1 decimal place

⌘ denotes key field

- 3 Using a suitable software package, import the files to create your database.
- 4 Include in your evidence document screenshots that show the structure of the tables including the field types and key fields.

[37]

- 5 Establish the following relationship:
J13COURSE.Code 1 — ∞ *J13STUDENT.Course_Code* [2]
- 6 Establish an appropriate relationship to link the table J13TUTOR to the other data. [3]
- 7 Include in your evidence document screenshots that show the relationships between these tables. Make sure that there is evidence of the relationship type.
- 8 The *Contract* field contains the portion of the week that each tutor works. This value must be greater than 0 and the maximum value that can be stored is 1.
 Make sure that the database checks this data as it is entered, allowing only valid entries. If the data entered is rejected, a message should be displayed explaining the range of acceptable values.
 In your evidence document show clearly how you have restricted the data entry and any text displayed to the user. [6]
- 9 Examine the data in the *Level* field. Extract a list of the levels and place this in your evidence document sorted into alphabetical order. Ensure there are no duplicate entries. No other data is allowed in this field.
 Make sure the database checks this data as it is entered, allowing only valid entries. If the data entered is rejected, a message should be displayed explaining the list of acceptable values.
 In your evidence document show clearly how you have restricted the data entry and any text displayed to the user. [9]
- 10 Save and print your evidence document.
- 11 Create a new document named:
 CentreNumber_CandidateNumber_Testing.rtf
 e.g. ZZ999_99_Testing.rtf
- 12 Set this into landscape orientation. [1]
- 13 In the footer of this document place:
- your name, Centre number and candidate number on the left
 - an automated filename with the full file path on the right.
- Make sure that these align to the page margins. [2]
- 14 Enter the text **Testing the data entered is valid** as a heading in a bold, 32 point, centre aligned, sans-serif font. [5]

- 19** Rooms 2 to 10 are going to be closed and all students using them need to be contacted.

Extract and print a report grouped by room number, then tutor names. Apart from these two fields, include only the students' names, course titles and telephone numbers, sorted into ascending order on the second name, then first name.

Ensure that it is clear which names belong to the tutors and which belong to the students. Add a suitable title to the report. Ensure that your name, Centre number and candidate number are added to the header of the report before you print it.

Ensure the report fits on a single page wide. Print the report.

[9]

- 20** Calculate the number of students enrolled in each Faculty area. Only include Faculties where students have enrolled. Sort this data alphabetically by Faculty. Display this data as a table in your evidence document.

[8]

- 21** Create a chart that shows the number of students enrolled in each Faculty area. Do not include a Faculty if less than 20 students have been enrolled. Fully label your chart and add your chart to your evidence document.

[7]

- 22** One document is held on a shared network drive within the University. You will manage this document, but other users will also work on it.

In your evidence document, explain how you can control this document so that it can be edited by the multiple users.

[10]

- 23** Save and print your evidence document.

Write today's date in the box below.

Date

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General Certificate of Education Advanced Level

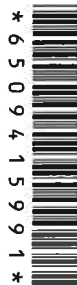
CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/11

Paper 1

May/June 2011

1 hour 15 minutes

Candidates answer on the Question Paper.

No additional materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

Do not use staples, paper clips, highlighters, glue or correction fluid.

You may use a pencil for any diagrams, graphs or rough working.

DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.

The businesses described in this paper are entirely fictitious.

This document consists of **19** printed pages and **1** blank page.



Scenario 1
Questions 1, 2, 3 and 4

*For
Examiner's
Use*

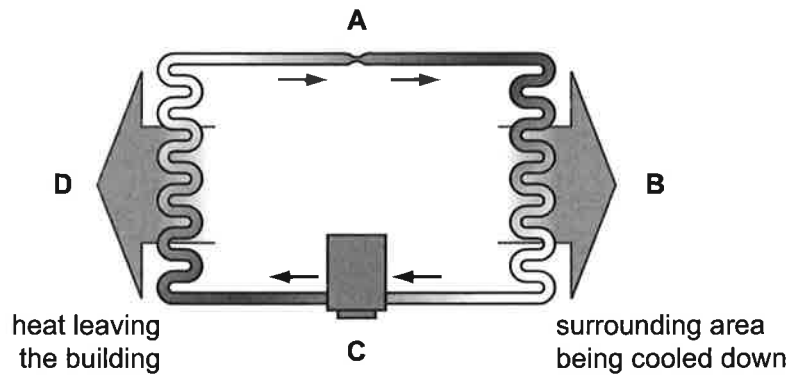
Asif is the headteacher of a school in Dubai. He is keen to increase the use of ICT in lessons. A room is being set aside for use as a computer room to help the teaching of geography and history. He has already made sure that the room has air-conditioning which is microprocessor-controlled.

He has asked Safina, a systems analyst, to research the current facilities and recommend which hardware and software should be purchased.

When she has completed the analysis and design phases of this project, Safina will need to supervise the setting up of the hardware and software for the new classroom. This will require an approach using construction project management.

1 Below is a diagram of a simple air conditioning system.

For
Examiner's
Use



(a) Write down what each of the components labelled **A**, **B**, **C** and **D** represents.

- A
- B
- C
- D [4]

- 2 (a) Safina has to obtain information about the current system from the network manager and the teachers.
Describe **one** advantage and **one** disadvantage for each of the **four** methods she could use to research the current system.

For
Examiner's
Use

Advantage of Method 1

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Disadvantage of Method 1

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Advantage of Method 2

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Disadvantage of Method 2

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Advantage of Method 3

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Disadvantage of Method 3

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Advantage of Method 4

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Disadvantage of Method 4

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..... [8]

(b) In her analysis of the current system, Safina identified the software and hardware required for the new system. Give detailed descriptions of **three** results of the analysis that enabled her to do this.

*For
Examiner's
Use*

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[6]

3 Using the scenario, describe **four** features of Computer Aided Learning.

For
Examiner's
Use

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[4]

4 Describe **four** features of construction project management which will improve the probability of finishing the project on time.

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[4]

Scenario 2
Questions 5 and 6*For
Examiner's
Use*

Square Peg Readers is a national chain of book shops in Pakistan. It has just set up an online shopping website so that customers can order books online and have them delivered to their home. As this is a new website the majority of customers will need to register with the system giving their personal details before they are able to use it.

After making a purchase many customers will want to check that the correct amount of money has been taken from their bank account. To do this they will use on-line banking.
Many shop assistants could become unemployed as a result of this new website.

5 (a) Describe **five** steps that a new customer would have to follow in order to register online with this system.

*For
Examiner's
Use*

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(b) Describe **three** security threats that the bank and the customer must guard against because of the use of on-line banking.

*For
Examiner's
Use*

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[6]

- 6 (a) Describe the working patterns the company could introduce to avoid staff redundancies or retrenchment.

For
Examiner's
Use

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- (b) The introduction of the website will affect the work of the technical staff. Describe **two** opportunities this may present.

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Scenario 3
Questions 7, 8 and 9

*For
Examiner's
Use*

The Wuhan-Yangtse is one of the largest water companies in China. It operates a call centre for customers to use when they have problems with their water supply. It has just computerised its payroll system so that payslips can be produced at the end of the month for each worker.

7 (a) Before the payroll system was created the database file structure was designed. Describe **four** features of a typical file structure.

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(b) Give **three** examples of the data that will be contained in the master file which will change for each worker every time the payroll application is run.

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(c) Describe, using examples of data from the master and transaction files, **five** steps in the processing used in the production of payslips.

*For
Examiner's
Use*

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9 Describe **five** differences between first party control and third party control and suggest which type Wuhan-Yangtse would choose to use in their call centre, giving a reason for your choice.

*For
Examiner's
Use*

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Choice

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[6]

Scenario 4
Question 10*For
Examiner's
Use*

Polar Bear Ltd. is a Tanzanian book publishing company. The manager, Issa, often works from home. When he is working from home, he needs to keep in contact with workers in the company office. This is achieved by using a landline connection to have phone conferences. The company's computer system is unreliable and not connected to the Internet.

10 (a) Describe **three** benefits and **three** drawbacks to the company of Issa working from home.

For
Examiner's
Use

Benefit 1

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Benefit 2

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Benefit 3

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Drawback 1

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Drawback 2

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Drawback 3

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[6]

(b) Describe **four** steps involved in Issa setting up a phone conference and give a description of the type of phone required.

*For
Examiner's
Use*

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Phone required

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