Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

INFORMATION AND COMMUNICATION TECHNOLOGY   **0417/21**

Paper 2 Practical Test A   **March 2018**

MARK SCHEME

Maximum Mark: 80

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the March 2018 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **22** printed pages.

     Cambridge Assessment International Education   **[Turn over**

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Name, Centre Number, Candidate number

New Campus News

Produced by: Name

Good News!

We are now beginning our move to the new campus which is located just off the harbour road in Tawara Bay. This will

The first phase is now complete and this September we will begin to use the new science and technology park.

Moving to the new campus

As students and staff will know only too well, we have spent years in cramped accommodation in various buildings on the Hills Road in the centre of town with all the congestion on the streets and inadequate parking. Students will still find they can cycle to the new campus and there is ample parking designed for bicycles. Public transport by bus and the new tramway will connect the town to the bay, while staff parking will be allocated on site.

The new development is on the site of the former Tawara University Press and known as the "triangle" due to the site being confined within the bounds of the harbour, the sea and the rail head. That company has moved to new premises further along the bay and is focussing on digital media materials. While they do not see printed books as a thing of the past, many interactive learning materials will become the focus of their activities. They kindly donated the site to the University for our current expansion.

Over the next few years as the construction phases are completed we will leave the old buildings and occupy the new ones. In the meantime, there will be a period of

...on which has been planned in detail ...e the minimum of disruption to teaching, learning and research. For the pr... ...be ... ca... be located in the town until Phase 3 is completed.

Phase one complete

In the first building phase which is now complete, we have a new science park ... ... explore properties of materials down to the molecular, atomic and subatomic levels. There will be close collaboration between departments such as biology and engineering to develop new targeting and delivery of more effective drugs against intractable diseases. These teams will be closely linked on the new campus. This will be opened by the president of Tawara Territory for the first courses in September. We are now making final preparations for the move.

The digital college

...has beset our international communications until now.

Our vision is to have a fully digitally connected university suited to the twenty first century. Learning materials will be digitised and accessible from anywhere on the campus. Students and staff will be able to store their work centrally and access it from anywhere on site. Centrally stored documents will be able to be shared for

C:\folder\document.docx

Annotation boxes (mark scheme):

- Step 4 No extra text — Header candidate details left aligned — Page number right aligned — 1 — 1
- Step 6 Title **New Campus News** — 1 — TU-Title style applied — 1
- Step 8 Subtitle **Produced by:** Name — 1 — TU-Subtitle style applied — 1
- Steps 9 and 11 Text **Good News!** entered — 1 — TU-Subheading applied to all sub head text — 1
- Step 10 Change to 2 columns with 2 cm gap — 1 — TU-Body style applied — 1
- Step12 Image in correct place — 1 — Text wrapped round the image — 1 — Image aligned top of text and left margin — 1 — Image resized to fill about half column width with aspect ratio maintained — 1
- Step 4 Footer No extra text — file name and path right aligned — 1

Name, Centre Number, Candidate number   2

collaborative working and updating. When materials need to be printed, they will be

Steps 16 Table text imported and in correct position within column width with TU-Table style applied   1
No words split on text wrap   1
First two columns of row 1 are merged and text in this cell is centred   1
Text in all rows is centre aligned vertically   1
All gridlines shown when printed   1

also provide access to printers around the site.

Safe Internet usage

You will use the internet for much of the work you do. When you use the internet your web activity is stored by the university and your browser keeps a record of the sites you have visited in its history. Any websites you have visited are stored on the university system and are visible to university staff. When you enrol for your course you will need to sign and adhere to a safe internet usage agreement.

The rules of the safe internet usage are:

- Answer 1
- Answer 2
- Answer 3
- Answer 4

A fully developed agreement will be made available for new students and researchers for the start of the autumn term.

Step 13 Text entered **The rules of the safe internet usage are:**
entered as a new paragraph in
TU-Body style   1
Step 14 Four rules suggested   4
TU-Bullet style applied   1

Contributions to this agreement will be welcomed by the heads of department who are:

Name		Department
Kularia	Bhushan	Chemistry
Thakur	Gunwant	Electrical Engineering
Jobalia	Shailendra	Electronics
Singporewala	Gnanisha	Geography
Sheth	Pramod	Hindi
Abani	Sujith	History
Jain	Bhavesh	Literature
Shah	Zoeb	Maths
Assie	Neeraj	Mechanical Engineering
Thakkar	Nilesh	Physics

Step 17
Document and paragraphs complete
Spacing is consistent
No widows or orphans
No split lists or tables
No blank pages
columns balanced at top   1

Rules – four from
- Only give personal details / account details to secure websites
- Install up to date anti-spyware/antivirus software
- Switch on firewall
- Always keep gaming friends "in game"
- Do not disclose your location
- Turn off webcam after use / cover camera
- Never accept (social media) contact requests from people you do not know
- Only post content or photos you would not mind showing to your family
- Limit numbers of friends
- Set privacy to friends only
- Use an alias/nickname rather than real name
- Don't meet people you have only spoken to online
- Make sure websites being visited for transactions can be trusted (https or the padlock sign when using search engines)
- Only use websites recommended by teachers
- Never reply to spam emails
- Don't open attachments from unknown sources

Tawara University Faculty of Engineering

Step 24
Title **Tawara University Faculty of Engineering**   1

Staff_ID	First_Name	Family_Name	Job_Description	Department	Faculty	Base_Pay	Years_Service	Current_Salary
TU126	Rajiv	Mahitha	Professor	Mechanical Engineering	Engineering	£65,000.00	1	£65,400.00
TU99	Ankur					3,000.00	1	£13,400.00
TU194	Vipul					6,000.00	2	£26,800.00
TU61	Paresh					5,000.00	2	£65,800.00
TU159	Manish	Punjabi	Senior Lecturer	Mechanical Engineering	Engineering	£26,000.00	3	£27,200.00
TU97	Ashish	Jobanputra	Technician	Electrical Engineering	Engineering	£13,000.00	3	£14,200.00
TU14	Vizak	Aurangabadkar	Lecturer			£22,000.00	3	£23,200.00
TU38	Mangesh	Dalmia	Lecturer			£22,000.00	4	£23,600.00
TU206	Girish	Soni	Senior Lec			£26,000.00	4	£27,600.00
TU219	Arinder	Yogeeta	Technician	Mechanical Engineering	Engineering	£13,000.00	4	£14,600.00
TU213	Prabhat	Udhwani	Senior Lecturer	Mechanical Engineering	Engineering	£26,000.00	4	£27,600.00
TU133	Parvez	Mathuria	Senior Lecturer	Mechanical Engineering	Engineering	£26,000.00	5	£28,000.00
TU175	Rahul	Sethia	Reader	Mechanical Engineering	Engineering	£30,000.00	5	£32,000.00
TU18	Rahul Amit	Bafna	Technician	Mechanical Engineering	Engineering	£13,000.00	5	£15,000.00
TU70	Ashit	Godage	Senior Lecturer	Electrical Engineering	Engineering	£26,000.00	5	£28,000.00
TU185	Shriniwas	Shah	Technician	Electrical Engineering	Engineering	£13,000.00	6	£15,400.00
TU74	San				Engineering	£12,000.00	7	£14,800.00
TU47	Het				Engineering	£30,000.00	7	£32,800.00
TU112	Jiter				Engineering	£65,000.00	7	£67,800.00
TU56	Jitesh	Doshi	Lecturer	Electrical Engineering	Engineering	£22,000.00	7	£24,800.00
TU197	Nitin	Sheth	Reader	Electrical Engineering	Engineering	£30,000.00	7	£32,800.00
TU81	Mukesh	Italiya	Senior Lec				8	£29,200.00
TU170	Biren	Sanghvi	Professor				10	£69,000.00

Candidate name, Centre number and candidate number

Includes these fields in this order   1
Step 24 Selects Faculty includes *Engineering*, but excludes Job_Description   1
Post graduate research

Step 24 New field **Current_Salary**   1
Calculates Base_Pay plus 400*Years Service   1
Sorted ascending order of years of service   1

Step 24 Candidate details on every page of the report   1
Both currency fields displayed to 2 decimal places with same currency sign   1

Step 24
Landscape, one page wide, all base fields with all labels and data fully visible   1

Staff_ID	First_Name	Family_Name	Job_Description	Department	Faculty	Base_Pay	Years_Service	Current_Salary
TU68	Gurbux	Gandhi	Lecturer	Electrical Engineering	Engineering	£22,000.00	10	£26,000.00
TU85	Vinod	Jain	Professor	Electrical Engineering	Engineering	£65,000.00	10	£69,000.00
TU16	Vikas	Badhniwalla	Professor	Mechanical Engineering	Engineering	£65,000.00	10	£69,000.00
TU72	Ali	Gosalia	Lecturer	Electrical Engineering	Engineering	£22,000.00	13	£27,200.00
TU12	Neeraj	Assie	Head of Department	Mechanical Engineering	Engineering	£56,000.00	13	£61,200.00
TU110	Shishir	Kapoor	Senior Lecturer	Electrical Engineering	Engineering	£26,000.00	14	£31,600.00
TU71	Mahfuz	Golam	Administrative Assistant	Mechanical Engineering	Engineering	£12,000.00	14	£17,600.00
TU129	Shetal	Malladi	Administrative Assistant	Mechanical Engineering	Engineering	£12,000.00	15	£18,000.00
TU76	Manoj	Gupta	Senior Lecturer	Mechanical Engineering	Engineering	£26,000.00	16	£32,400.00
TU52	Anjay	Deshpande	Administrative Assistant	Mechanical Engineering	Engineering	£12,000.00	17	£18,800.00
TU215	Divyesh	Vakil	Lecturer	Mechanical Engineering	Engineering	£22,000.00	17	£28,800.00
TU27	Gopal	Bhurjee	Administrative Assistant	Mechanical Engineering	Engineering	£12,000.00	17	£18,800.00
TU94	Vipul	Jain	Senior Lecturer	Electrical Engineering	Engineering	£26,000.00	17	£32,800.00
TU211	Gunwant	Thakur	Head of Department	Electrical Engineering	Engineering	£56,000.00	19	£63,600.00
TU29	Sanjay	Chachra	Reader	Electrical Engineering	Engineering	£30,000.00	20	£38,000.00
TU217	Anil	Vora	Lecturer	Electrical Engineering	Engineering	£22,000.00	20	£30,000.00

Average time with the faculty   9

Step 24
Calculates average years of service, placed below this column   1
Has label **Average time with the faculty** to left of value   1

Candidate name, Centre number and candidate number   Page 2 of 2

Step 25 Includes this title   1

Departmental telephone directory

Name, Centre number, candidate number

First_Name	Family_Name	Job_Description	Department	Telephone	External_Phone
Neeraj	Arora	Technician	Biology	5501	+775365501
Rishi	Badamia	Reader	Biology	5502	+775365502
			Biology	5503	+775365503
Kedar	Gandhi	Senior Lecturer			
Inarayan	Jagani	Administrative Ass			
Mitesh	Jain	Professor			
Dinesh	Kalaniya	Professor			
Rajneesh	Lawana	Lecturer	Biology	5508	+775365508
Paras	Mane	Lecturer	Biology	5509	+775365509
			Biology	5510	+775365510
Aryan	Salian	Senior Lecturer	Biology	5511	+775365511
Sanjive	Ammoniac				+775365601
Sajid	Chhajed				+775365602
Pinkal	Dasgupta	Post graduate research	Chemistry	5604	+775365604
Pinkesh	Dasgupta	Senior Lecturer	Chemistry	5603	+775365603
Sachin	Doshy	Professor	Chemistry	5605	+775365605
Rajeev	Dugar	Administrative Assistant	Chemistry	5606	+775365606
Harish	Hiranandani	Administrative Assistant	Chemistry	5607	+775365607
Gaurang	Jain	Lecturer	Chemistry	5608	+775365608
Shashi	Kapoor	Post graduate research	Chemistry	5618	+775365618
Prakash	Khandelwal	Senior Lecturer	Chemistry	5609	+775365609
Satyanarayan	Khimasia	Reader	Chemistry	5610	+775365610
Bhushan	Kularia	Head of Department	Chemistry	5611	+775365611
Jayantilal	Kularia	Post graduate research	Chemistry	5612	+775365612
Amit	Mehta	Senior Lecturer	Chemistry	5613	+775365613
Amit	Padmanabhan	Reader	Chemistry	5614	+775365614
Khushru	Parekh	Administrative Assistant	Chemistry	5615	+775365615
Shantila	Shah	Senior Lecturer	Chemistry	5616	+775365616
Prashant	Shethia	Lecturer	Chemistry	5617	+775365617

Step 25 Shows only these fields in this order   1

Step 25
New calculated field *External_Phone*   1
Concatenates +77536 with internal phone number   1

Step 25 Selects Biology and Chemistry departments only   1

Step 25 Printed on a single page in portrait orientation. All base fields fully visible   1

Step 25 Sorted by Department ascending   1
…then family name and first name both in ascending order   1

12 July 2016   Page 1 of 1

Tawara University

Memo

To: Amit Shetty

Step 27 Print 4 relevant memos only   1

University Number: TU200

Date: 9 May 2018

Subject: Welcome to new graduates

From Head of Department   A Candidate CN999 9999

Hello Amit

Welcome to the department of Physics where you will begin your work on your Post graduate research project. I hope you will settle in quickly to the new routines of the department. Your office will be located in the Science and Technology building on the new site. You will receive an annual stipend of 8000. This will increase annually in line with the University's agreed pay scales. If you have not already done so, you should supply your bank details to the department bursar who will arrange for your salary to be paid monthly into your bank account.

You have been allocated an internal telephone number of 6529.

You should arrange to attend the new graduates introductory meeting and induction which will be held in room 101 at 2.00 pm next Wednesday.

Tawara University

Memo

To:	Premal Jain
University Number:	TU88
Date:	9 May 2018
Subject:	Welcome to new graduates
From Head of Department	A Candidate CN999 9999

Hello Premal

Welcome to the department of Physics where you will begin your work on your Post graduate research project. I hope you will settle in quickly to the new routines of the department. Your office will be located in the Science and Technology building on the new site. You will receive an annual stipend of 8000. This will increase annually in line with the University's agreed pay scales. If you have not already done so, you should supply your bank details to the department bursar who will arrange for your salary to be paid monthly into your bank account.

You have been allocated an internal telephone number of 6511.

You should arrange to attend the new graduates introductory meeting and induction which will be held in room 101 at 2.00 pm next Wednesday.

Tawara University

Memo

To:	Rajnikant Assie
University Number:	TU13
Date:	9 May 2018
Subject:	Welcome to new graduates
From Head of Department	A Candidate CN999 9999

Hello Rajnikant

Welcome to the department of Physics where you will begin your work on your Post graduate research project. I hope you will settle in quickly to the new routines of the department. Your office will be located in the Science and Technology building on the new site. You will receive an annual stipend of 8000. This will increase annually in line with the University's agreed pay scales. If you have not already done so, you should supply your bank details to the department bursar who will arrange for your salary to be paid monthly into your bank account.

You have been allocated an internal telephone number of 6502.

You should arrange to attend the new graduates introductory meeting and induction which will be held in room 101 at 2.00 pm next Wednesday.

Tawara University

Memo

To:	Ravi Shah
University Number:	TU183
Date:	9 May 2018
Subject:	Welcome to new graduates
From Head of Department	A Candidate CN999 9999

Hello Ravi

Welcome to the department of Physics where you will begin your work on your Post graduate research project. I hope you will settle in quickly to the new routines of the department. Your office will be located in the Science and Technology building on the new site. You will receive an annual stipend of 8000. This will increase annually in line with the University's agreed pay scales. If you have not already done so, you should supply your bank details to the department bursar who will arrange for your salary to be paid monthly into your bank account.

You have been allocated an internal telephone number of 6525.

You should arrange to attend the new graduates introductory meeting and induction which will be held in room 101 at 2.00 pm next Wednesday.

03/10/2016

> **Step 29**
> Import text file as slides   1
> First slide layout as title and subtitle with name   1

Candidate name, Centre number, candidate number

Tawara University

Welcome to our new Campus

Presentation by: (Your Name)

> **Step 30**
> Master slide created with at least four features (may be seen as optional additional evidence)   2
>   (2 for 4 features, 1 for 3 features, else zero)

Candidate name, Centre number, candidate number

Tawara University

The Building Programme

Planned Development Phases			
	Building	Departments	Completion date	
Phase 1	Science Park	Physics Chemistry Biology	May 2018	Completed
Phase 2	Engineering campus	Electrical Engineering Mechanical Engineering Chemical Engineering	September 2018	On target
Phase 3	Library		January 2019	On target
Phase 4	Arts buildings	History Languages Geography Social Sciences	July 2019	On target

> **Step 31**
> Table created on correct slide 5 rows and 5 columns   1
> Text placed in table with no split words   1
> **Step 32**
> New row with merged cells and text   1

1

03/10/2016

Candidate name, Centre number, candidate number

Tawara University

The Digital Experience

- A state of the art digital backbone
- Super-fast internal and external communications
- Low latency and contention
- Full site access for all staff and students

Candidate name, Centre number, candidate number

Tawara University

What it means for you

- Store your work centrally
- Access it from anywhere on the university campus
- Or from home
- Print from the nearest printer

> Step 33 Slides printed with 2 slides to the page layout with no overlap of items 1

2

03/10/2016

3

Evidence Document

Steps 1 and 2 – **Evidence 1**
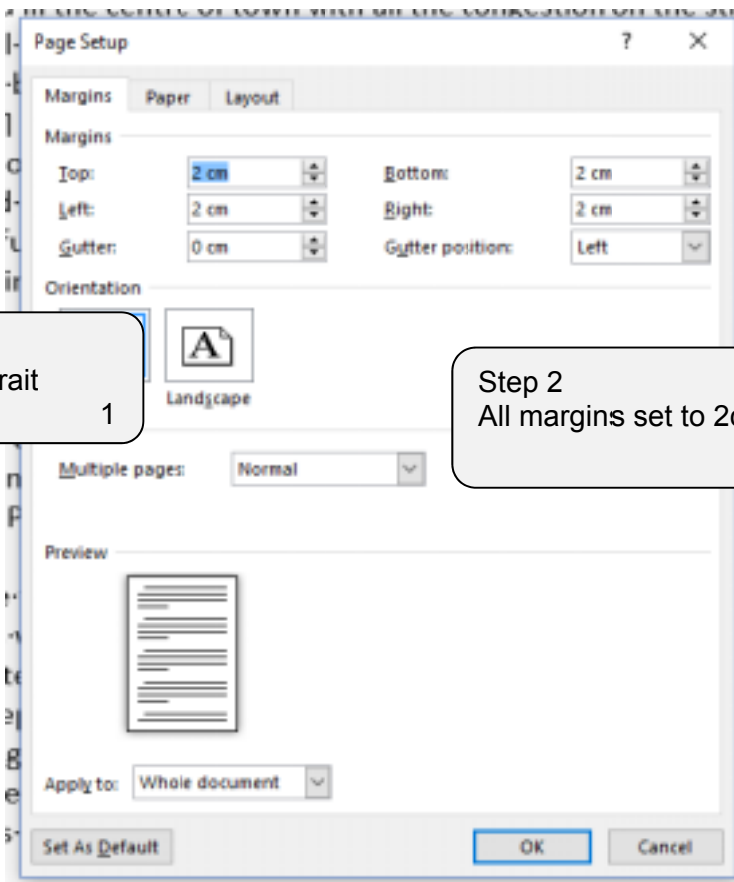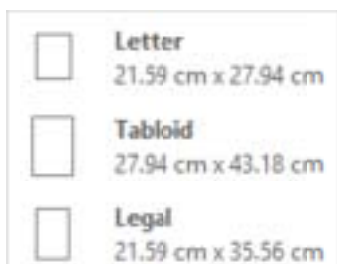
Step 1
Page size set to A4 with portrait orientation   1

Step 2
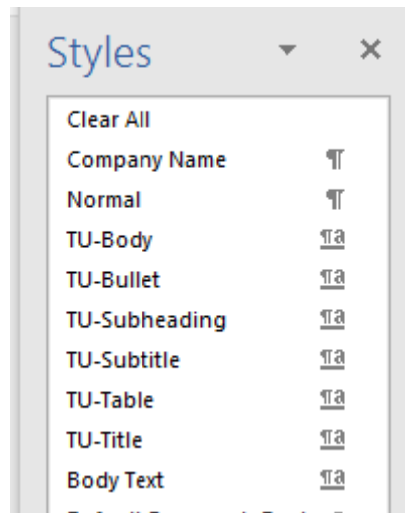All margins set to 2cm   1

Step 3 – **Evidence 2**
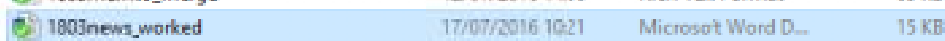
Step3
Document saved in format of software with new name and evidence of file type   1

Step 5 – **Evidence 3**
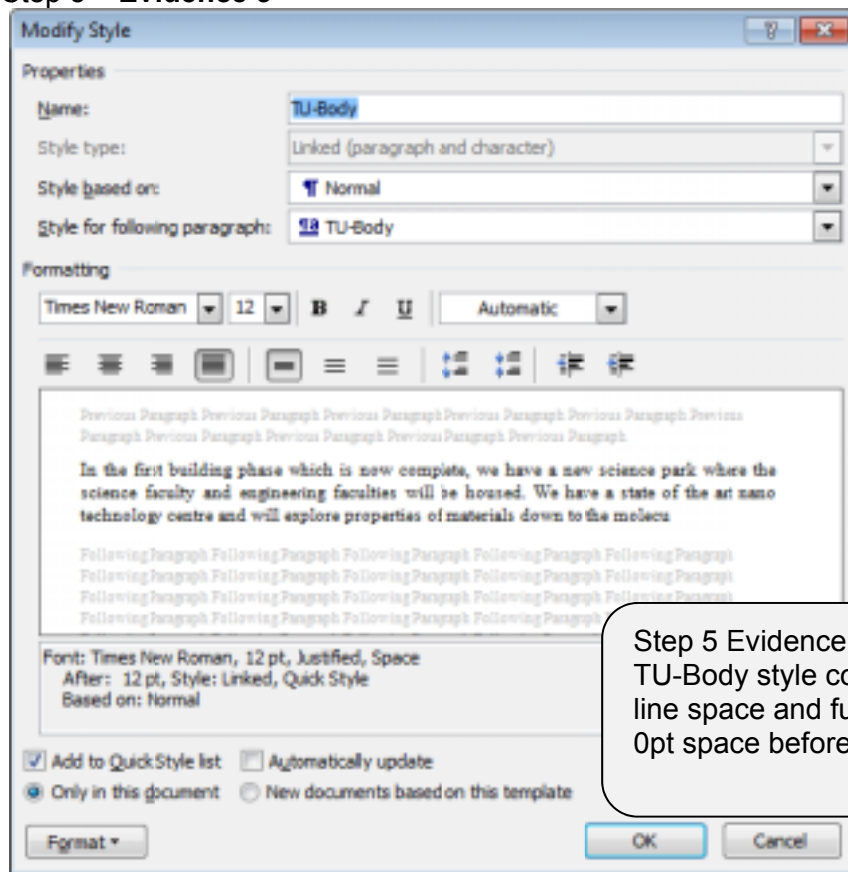
Step 5 Evidence for TU-Body style
TU-Body style correctly named, serif, 12 point single line space and fully justified   1
0pt space before, 12 point space after   1

Step 6 – **Evidence 4**

Step 6 Evidence that *TU_Title, TU_Subtitle, TU_Subheading, TU_Bullet, TU_Table* styles have been created   1

Step 20 – **Evidence 5**

1803STAFF	
Field Name	**Data Type**
Staff_ID	Short Text
Family_Name	Short Text
First_Name	Short Text
Job_Role_Code	Short Text
Department _Code	Short Text
Years_Service	Number
Telephone	Short Text

Step 18 *Staff* file imported
All field types appropriate to data   1
Telephone field set as Text   1
Staff ID field set as Primary key   1

1803JOBS	
Field Name	**Data Type**
Job_Code	Short Text
Job_Description	Short Text
Base_Pay	Currency

Step 19 *Jobs* file imported
Base_Pay set as currency or numeric   1
Job_Code field set as Primary key   1

All Access Obje... ⊙ «

Search... 🔎

Tables ⌃

   1803Departments

   1803jobs

   1803staff

1803jobs	1803Departments	1803staff	
Field Name		**Data Type**	
Dept_Code		Short Text	
Department		Short Text	
Faculty		Short Text	

Step 20 *Departments* file imported
All field data types text   1
Dept_Code field set as Primary key   1

Step 21 – **Evidence 6**
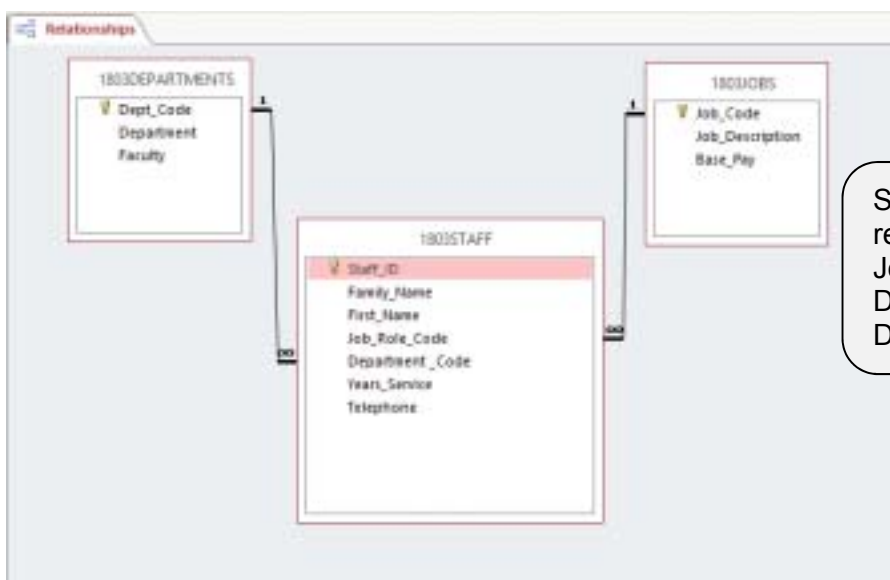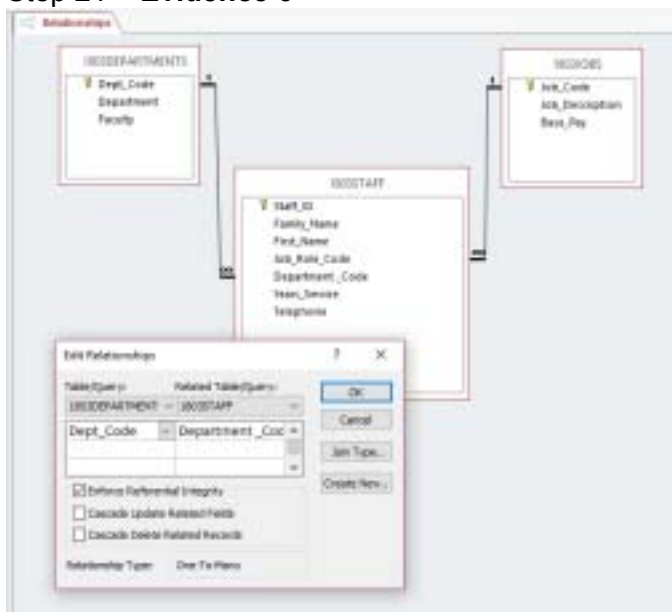
Step 21 Correct one to many
relationships set up
Job_Code to Job_Role_Code   1
Dept_Code to
Department_Code   1
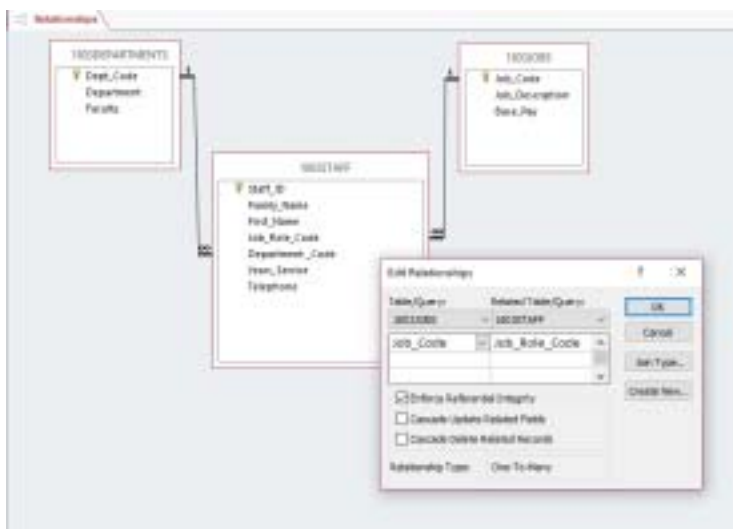
Step 23 – **Evidence 7**

Steps22/23 Data entry form created	1
Record entered – 100% accurate	1

Step 26 – **Evidence 8**

Within the memo image:

Tawara University

Memo

| To: | { MERGEFIELD First_Name } { MERGEFIELD Family_Name } |
|
University Number: | { MERGEFIELD Staff_ID } |
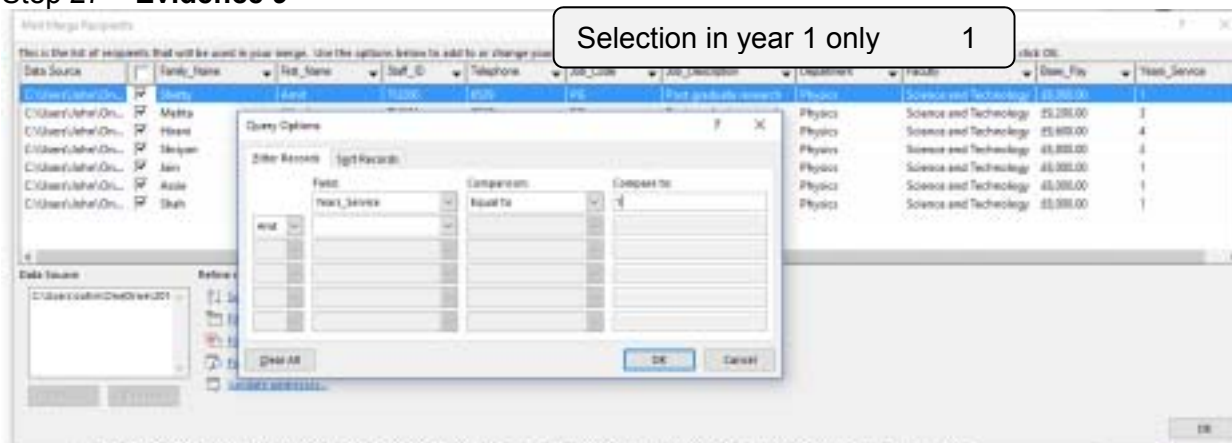| Date: | { DATE \@ "dd MMMM yyyy" * MERGEFORMAT } |
| Subject: | Welcome to new graduates |
| From Head of Department: | Name, Centre number, candidate number |

Hello { MERGEFIELD First_Name }

Welcome to the department of { MERGEFIELD Department } where y...
{ MERGEFIELD Job_Description } project. I hope you will settle in quickly to the new routines of the
department. Your office will be located in the { MERGEFIELD Faculty } building on the new site. You
will receive an annual stipend of { MERGEFIELD Base_Pay }. This will increase annually in line with
the University's agreed pay scales. If you have not already done so, you should supply your bank
details to the department bursar who will arrange for your salary to be paid monthly into your bank
account. |

You have been allocated an internal telephone number of { MERGEFIELD Telephone }.

You should arrange to attend the new graduates introductory meeting and induction which will be held
in room 101 at 2.00 pm next Wednesday.

Callout box (mark scheme annotation):

Step 26 Display Staff_ID and salutation fields	1
Display date field code with dd MMMM yyyy format	1
Display all fields in body of memo	1
Text replaced with candidate details	1

Step 27 – **Evidence 9**

Callout box (mark scheme annotation):

Selection in year 1 only	1

Step 28 – **Evidence 10**

Advantages

Only 1 letter has to be typed; saving time

| Evaluation of mail merge   max 4 |

Only the master letter / data source has to be proofread; therefore saving time.

Data source may already exist which saves time

Can select on any criteria <u>which saves time creating it</u>

New data sources can be added/used year on year

Faster than typing 6000 individual letters/sending 6000 individual emails

Disadvantage

If errors are in the master letter then 6000 incorrect letters are sent

If a fault is identified AFTER the mailmerge then all hard copy will be wasted; taking up time and money

Slower checking/typing 6000 individual <u>personalised</u> letters than just one

If there are errors in the data source then they may not be checked until after mail merge then the process becomes more difficult

Higher level of staff skill/specialised training required

Accept reasoned conclusion for 1 mark

You must have at least one advantage and one disadvantage to gain full marks

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Optional additional evidence for presentation – **Evidence 11 Optional**

E.g. animations or transitions, etc.