

#### **Cambridge Assessment International Education**

Cambridge International General Certificate of Secondary Education

#### INFORMATION AND COMMUNICATION TECHNOLOGY

0417/22

Paper 2 Practical Test A

May/June 2018

MARK SCHEME
Maximum Mark: 80

Pub	IIS	ne	a

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 May/June 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

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This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

Cambridge Assessment
International Education

[Turn over

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#### **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.

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#### **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.

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May/June 2018 0417/22 Cambridge IGCSE - Mark Scheme **PUBLISHED** 

Name, Centre number, Candidate number-

**Header:** Name. Centre number. candidate number left aligned. page number right aligned, no placeholders

1 mark

# Get Ahead With An Apprenticeship

Produced by: Candidate m

nationa

Title Data entry 100% accurate.

1 mark

TA-Title style seen in EV3 and applied - sans-serif, 30pt, centre, bold, italic, no space after 1 mark

**Subtitle:** Name inserted, TA-Subtitle style seen in EV3 and applied – sans-serif, 18pt, left underlined only, 0 space after 1 mark

een the government and the employer. As he same benefits and conditions as other and work for at least 30 hours per week. 20 days paid haliday per year, plus bank holidays. An apprenticeship takes between one and five years to complete,

**Image** 

Subheadings (5)

Image inserted in correct position Aligned to top of text and left margin, text wrapped Resized to 4 cm wide, aspect ratio maintained

ector. 1 mark 1 mark 1 mark

sector. The training is specifically tailored to the skills and knowledge required to be a ge as not only do they have better long term salary prospects, but they also have excellent climb the career ladder within the workplace.

Structure

Employability Skills

Employers across all industries are looking for more than just

academic qualifications. An offer of employment will often depend

Most apprenticeships are covers the work-base

TA-Subhead style applied - matches style

Apprentice

up of three el Columns

al h<del>umeraey, meraey, 11</del>

chnical kno Section break correct position liv 2 columns, 2 cm column spacing

1 mark 1 mark

threatens the sustainability of businesses around the leaving the education system often lack the workplace bloyers want, such as problem solving, team working

defined in Evidence Document 2 1 mark There are different levels of apprentices in that can be up depending on existing skills and qualifications:

**Bullets** 

TA-Bullet style seen in EV3 and applied to correct text –

sans-serif 14pt. italic

1 mark

√ Advanced apprenticeship (level > Bullets indented 2 cms from left margin, ✓ shaped bullet, single line, 0 space after

√ Higher apprenticeship (levels 4-7)

✓ Intermediate apprenticeship (level

✓ Degree apprenticeship (levels 6-7)

All apprenticeships start at a Level 2, or Intermediate Apprenticeship. Once this is achieved the learner is able to progress onto Advanced Apprenticeships (Level 3) and in some cases onto a Higher Apprenticeship (Level 4) after that.

in a highly competitive job market.

### **Engineering Apprenticeships**

moment their apprenticesing begins and this puts them a step aneat

There is a massive shortage of engineering skills in this country and in order to meet demand there is a need to attract a greater talent pool

Footer: Filename with path right aligned, no placeholders

1 mark

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into engineering over the next five to ten years. There has been particularly strong growth in the take up of engineering apprenticeships in recent years and this is seen as the way forward.

The engineering sector currently employs 5.4 million people across 542,440 engineering companies. It is predicted that by 2020 engineering companies will have 1.86 million job openings which will require engineering skills. Current intermediate level apprenticeship vacancies available are:

Vacancy_ID	Vacancy	Wage
TT488098	Apprentice Field Service Engineer	£150.00
TT418265	Control System Engineering Apprentice	£150.00
TT490111	Apprentice CAD Engineer	£153.80
TT418025	Apprentice Software Engineer	£160.60
TT418058	Apprentice IT Support Engineer	£175.50 <
TT539159	Apprentice Maintenance Engineer	£180.00
TT436069	Apprentice Fork Lift Truck Engineer	£203.00
TT418057	Apprentice Microsoft Software Engineer	£225.00
TT539384	Mechanical Design Engineering Apprentice	£230.00
TT418060	Apprentice IT Engineer	£260.50

These positions offer good benefits in terms of pay, time spent training, level of skill imparted, and the prestige and future career opportunities. Additional funding from the government will result in 20,000 higher apprenticeship places in professional careers such as engineering over the next three years. This will offer solid progression routes for those starting an apprenticeship now.

### **Traineeships**

Traineeships are designed for unemployed young people aged 16 to 24 who want to get an apprenticeship or job but lack the skills and

experience that employers are looking for. Many employers offer both traineeships and apprenticeships so it may be possible to progress to an apprenticeship with the same employer.

Traineeships are unpaid and last from six weeks to six months. A high quality work placement is central to the training programme which aims to develop workplace skills. It also covers work preparation skills such as CV writing, interview preparation, job search skills, self-discipline and inter-personal skills. English and maths are included along with industry specific content and vocational qualifications.

**Higher Apprenticeships** 

#### **DB Extract**

RTF extract imported, correct position, within column width,	
data on 1 line, fully visible, no title on extract	1 mark
Correct fields with field headings displayed, correct order	1 mark
Vacancy contains Engineer	1 mark
Level is Intermediate	1 mark
Wage is >=£150	1 mark
Sorts Wage in ascending order	1 mark
TA-Table style seen in EV3 and applied to correct text	
(serif, 12pt, left, 0 space after each row)	1 mark

work in industry. Those starting a university course now are predicted to graduate with at least £60,000 of debt due to the rising cost of tuition fees and living expenses. Understandably many students do not want to start their working careers with these crippling debts. Higher apprenticeships offer a great alternative to a traditional full-time university degree. Learners split their time between college or university and the workplace. They can earn as much as £300 to £500 a week, receive on and off the job industry training, gain degree level qualifications and have many progression opportunities available to them. All without paying hefty tuition fees or running up student debts.

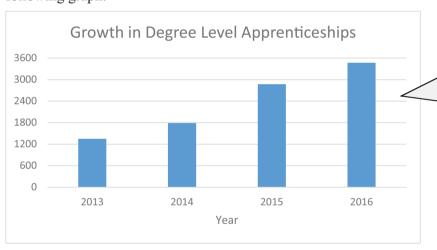
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Name, Centre number, Candidate number

and building the high level technical skills needed for the jobs of the future.

In the past apprenticeships were seen as the only option for those not achieving the grades to progress to university. This is no longer the case. There are some very challenging apprenticeship schemes available, with tough application processes and fierce competition for places.

Higher Level apprenticeship numbers are rising steadily. There were 19,800 Higher Level apprenticeship starts in 2014 which is up 2% on the previous year. The growth in the number of higher apprenticeships advertised over recent years can be seen in the following graph:



#### Chart

Vertical bar chart created using correct data, year labels present
Chart in correct place, within margins, all data fully visible
Chart title 100% accurate
Y-axis maximum displays 3600
Y-axis increments of 600
Category axis label Year, no legend or other titles

1 mark
1 mark
1 mark
1 mark

The UK government is committed to expanding the number, range and quality of apprenticeships that offer training to degree level. The

Apprentic organisat their wag

Page layout

TA-Body text seen in EV3 and applied to all text – serif, 12pt, justified, single line, 0pt before, 6pt space after

1 mark

May/June 2018

levy aims Doc complete/paras intact, A4, landscape, margins 2cm, spacing consistent,

Higher at cols balanced at top, no widows/orphans, split lists, chart or extract, no overlap in chart, no blank pages, 6pt after extract 1 mark

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Title

Correct, 100% accurate, large font size, fully visible 1 mark

#### Calculated field

Heading 100% accurate Bonus Wage calculated (\*1.04) - correct values Same currency symbol as Wage, 2dp

Name, Centre number,

1 mark 1 mark

*[*Imber

1 mark

### Vacancies list for August

						. /
Vacancy	Level	Closing_Date	Employer_Name	Day_Release	Wage	Bonus_Wage
Apprentice Backend Developer	Advanced	20-Aug-18	Edigital Advanced Services	Yes	£274.75	£285.74
Business Administration Apprentice	Advanced	07-Aug-18	Holder Law Specialists	No	£247.90	£257.82
Apprentice Mobile Developer	Advanced	28-Aug-18	Digital Solutions Ltd	Yes	£235.75	£245.18
IT Networking Apprentice	Advanced	29-Aug-18	Dreamscape Web Services	Yes	£230.62	£239.84
Mechanical Design and Technical Engineering Apprentice	Advanced	10-Aug-18	AMEC Nnc Ltd	Yes	£230.00	£239.20
Social Media Apprentice	Advanced	31-Aug-18	Flash Mountain Media Enterpri	se Yes	£230.00	£239.20
Electrical Design Engineering Apprentice	Advanced	07-Aug-18	Rossi Sparks Electrics	Yes	£230.00	£239.20
Welder/Fabrication Apprentice	Advanced	27-Aug-18	Rossi Sparks Electrics	Yes	£230.00	£239.20
IT Software Engineer Apprentice	Advanced	08-Aug-18	Technical System Projects Ltd	Yes	£225.00	£234.00
Change and Transformation Apprentice	Advanced	24-Aug-18	Ombudsman Services Energy	Yes	£221.15	£230.00
Apprentice Mechanical Engineer	Advanced	25-Aug-18	MGC Engineering Company	No	£180.50	£187.72
Business Administration Apprentice	Advanced	13-Aug-18	Kernow Medical Services	Yes	£168.75	£175.50
IT Test Engineer Apprentice	Advanced	20-Aug-18	Ruddlemoor Digital Services	Yes	£156.60	£162.86
Electrical Apprentice	Advanced	03-Aug-18	Tatum Electrical	Yes	£150.00	£156.00
Digital Marketing/SEO Apprentice	Advanced	21-Aug-18	Techno Group Limited	Yes	£150.00	£156.00
Marketing Assistant Apprentice	Advanced	24-Aug-18	Sonus Marketing	Yes	£150.00	£156.00
Digital Marketing Apprentice	Advanced	31-Aug-18	Dreamscape Web Services	Yes	£145.50	£151.32
Apprentice Asset Engineer	Advanced	29-Aug-18	United Energy Care	Yes	£145.00	£150.80
Digital Content Apprentice	Advanced	15-Aug-18	Progressive Futures	Yes	£133.00	£138.32
Apprentice Butcher	Advanced	03-Aug-18	Crealy Farm Shop	Yes	£132.00	£137.28
Annualisa Cuarlia Dasianad	Advanced	14-Aug-18	Flash Mountain Media Enterpri	se No	£132.00	£137.28
Both records Digital Content Apprentice/	Advanced	29-Aug-18	Oakes Nuttall Professional	Yes	£123.75	£128.70

Apprentice Butcher present

1 mark

Sort ascending on Level, then descending on Wage, no grouping 1 mark Specified field headings and data, correct order 1 mark Landscape, one page wide, all base fields present, fully visible 1 mark Closing\_Date displays dd-MMM-yy, Day\_Release as Yes/No, Wage currency 2dp 1 mark Select records (40):

Level is Advanced or Higher 1 mark Closing Date is <= 31-Aug-18, Subject Name <> Accounting 1 mark

© UCLES 2018 Page 7 of 16 Vacancy

**Business Analyst Apprentice** Social Media Apprentice

Apprentice Software Developer Apprentice Administrator Apprentice Web Designer

Apprentice Mechanic

Apprentice Dental Nurse Apprentice Engineer

Apprentice Software Engineer Apprentice Production Engineer **Digital Business Apprentice** Project Management Apprentice Apprentice Quantity Surveyor Cyber Security Apprentice

Apprentice Technician - Heavy Vehicle

Microsoft IT Technical Support Apprentice

Apprentice Business Intelligence Developer Software Support and Database Analyst

### 0417/22

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Level	Closing_Date	Employer_Name	Day_Release	Wage	Bonus_Wage
Advanced	10-Aug-18	Reeves Insurance Services	Yes	£123.00	£127.92
Advanced	13-Aug-18	Yellow Spider Media Limited	No	£115.50	£120.12
Advanced	15-Aug-18	Tawara Motors Ltd	Yes	£109.20	£113.57
Advanced	23-Aug-18	Sherman Motors of Excellence	Yes	£109.20	£113.57
Advanced	20-Aug-18	Digital Solutions Ltd	No	£103.00	£107.12
Advanced	16-Aug-18	Positive Recruitment Solutions	No	£102.40	£106.50
Advanced	17-Aug-18	Online Digital Services	Yes	£102.38	£106.48
Advanced	13-Aug-18	IT Service Solutions	Yes	£101.01	£105.05
Advanced	23-Aug-18	The Smile Clinic	Yes	£81.90	£85.18
Higher	17-Aug-18	Tiger Tank Cars	Yes	£330.00	£343.20
Higher	29-Aug-18	Willow Project Services	Yes	£298.07	£309.99
Higher	13-Aug-18	Prospect Engineering	No	£280.08	£291.28
Higher	29-Aug-18	Techno Group Limited	Yes	£250.12	£260.12
Higher	16-Aug-18	Carter Engineering	Yes	£250.00	£260.00
Higher	05-Aug-18	<b>Progress Solution Services</b>	Yes	£250.00	£260.00
Higher	31-Aug-18	Digital Solutions Ltd	Yes	£230.62	£239.84
Higher	22-Aug-18	Harper Associates	No	£200.00	£208.00

Number of jobs

**Digital Solutions Ltd** 

15-Aug-18

Higher

Calculates correct number of vacancies, positioned under Level field 1 mark Label Number of jobs to left of value, 100% accurate 1 mark

Yes

£160.00

£166.40

May/June 2018

#### Task 5 - Mail merge

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ryame.	Peune	numper,	CSULCHUSS	e number

### Tawara Training

16 Guineaport Road BRISTOL United Kingdom

Tel: 01643 882781

18 May 2018

Master document printed, Name replaces Candidate Name, Name, Centre number and candidate number in the header

1 mark

Dear «First Name»

Further to your recent interview, I am delighted to offer you the position of "Vacancy" with «Employer». This is a full-time position for a fixed term of two years with an initial probationary period of one month. The weekly wage is «Wage», and the normal working hours are from 8.30 am to 5.00 pm each weekday. You will be entitled to 4 weeks annual leave plus bank holidays.

As part of your apprenticeship a Training Plan will be agreed with you. You will receive supervised

on-the-job training and will be released to attend college for one day per week.

I hope that your this position plea return a copy to me.

**Merge Fields inserted** – placeholders and <> correctly replaced, punctuation and spacing maintained

«First\_Name» | «Vacancy» | «Employer». | «Wage», 1 mark «First\_Name» | «Family\_Name» | «Employer» | «Vacancy» 1 mark «Level», | «Framework» | «Start Date» | «End Date»

Yours sincerely

1 mark

#### A Candidate

Training Manager

#### APPRENTICESHIP AGREEMENT

«First_Name» «Family_Name»
«Employer»
«Vacancy»
«Level», «Framework»
«Start_Date»
«End_Date»

#### Signatories:

Apprentice:	Date:
Employer:	Date:

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## Cambridge IGCSE – Mark Scheme **PUBLISHED**





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10 May 2018					
Dear Also					
Purfeer to your record inheritors. It with Orders House Medic Ltd. To probationary period of one month from 8.30 are to 5.00 gre such versionlys.	is a fall-time. The weekly i	position for reagn is \$15	a fived by 25, and it	rs of two poers A a normal workers	p hours are
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I hope that your association with t the provitors presse sign is cropy of within a copy to us as soon as po-	Tihu Agorento	estive Agree	each in the	v space indicate	d below, well
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Result of merge - 3 letters printed i.e. Zenib Bibi, Muhammed Khan, Alex Munro only 1 mark

#### Task 6 - Presentation

Slides imported as title with bulleted list, no blank slides, no text changed, no overlap, master slide used to display name, Centre and candidate numbers,

slide numbers

Slide 1 – Title slide, title and subtitle centred, name inserted

an Inc Innan

1 mark 1 mark

Neme, Earths number, candidate number

### EARN WHILE YOU LEARN!

A guide to apprenticeships by: Candidate Name

1

Nerva, Centre number candidate number

### Key Benefits

- earn a salary (average wage £170 per week)
- · get paid holidays
- · get paid for attending college
- receive training and gain qualifications
- · learn job-specific skills
- can progress to degree level

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14/05/2018

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### Who is Eligible?

- · anyone above 16 years old
- · lives in England
- · eligible to work in England
- · employed in a relevant job for at least 30 hours a week
- · not in full time education
- does not already hold a Degree

.3

Hame, Caritie number, Landdow number

### **Progression Routes**

Levels of Apprenticeship					
Name	Level	Length	Equivalent educational level		
Intermediate	4.	12 - 18 moretu	0 GCSS passes of grades A* to C NVG Lavel 3		
Maruel	*	18 - 48 mortis	E.A. Wolf (James) BVQ (Jayer 3 Rational Certificate) Octome		
righer:	*		Higher recolor certificate (Hot) Certificate of Higher Education (Certific) SVC Leviel 2		
region.	- 7		Higher hactorial Diptoma (HAD) Diptoma of Higher Education (DiptiE) Foundation Degree		
		24 MANTE +	Eachelon's Degree with workurs in a 5th Hors, Etc. Hors, Graduate Cartificate Options Oriotory Degree (without Horses)		
Depres	90		Master's Degree Podgraduate Cart'issou'Diploma Master's Degree(e.g. NA, MSc, Mile, NPNI) Integrated Master's Degree (e.g. MK)		

Slide 4 - layout changed to title and plain 4 · 7 table, all gridlines displayed
All data copied into table

New row inserted as first row text entered – 100% accurate

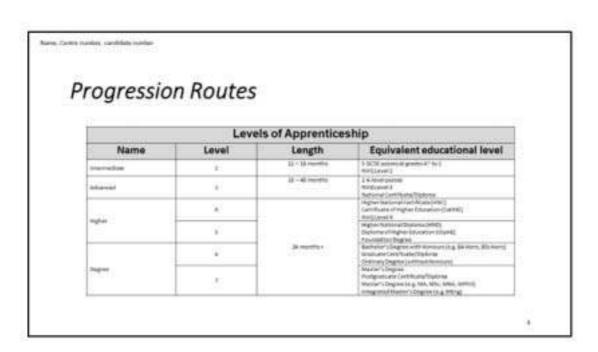
1 mark
First row cells merged, title centred over 4 columns

Only rows 1 and 2 shaded, bold and 20pt font size

1 mark
Print slides 1-4 only, handouts 2 slides to page

1 mark

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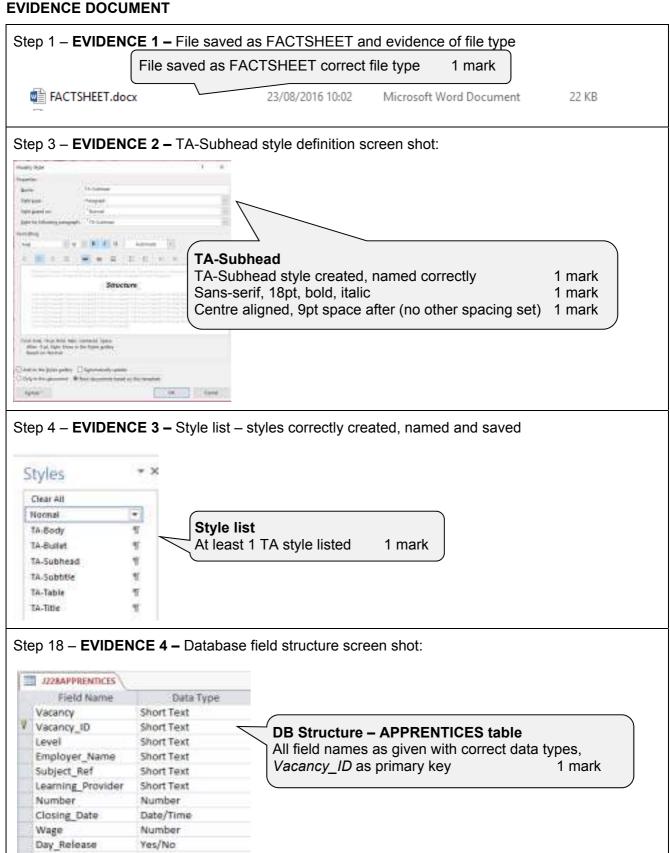


Always get advice on the best qualification to suit you and your future plans.

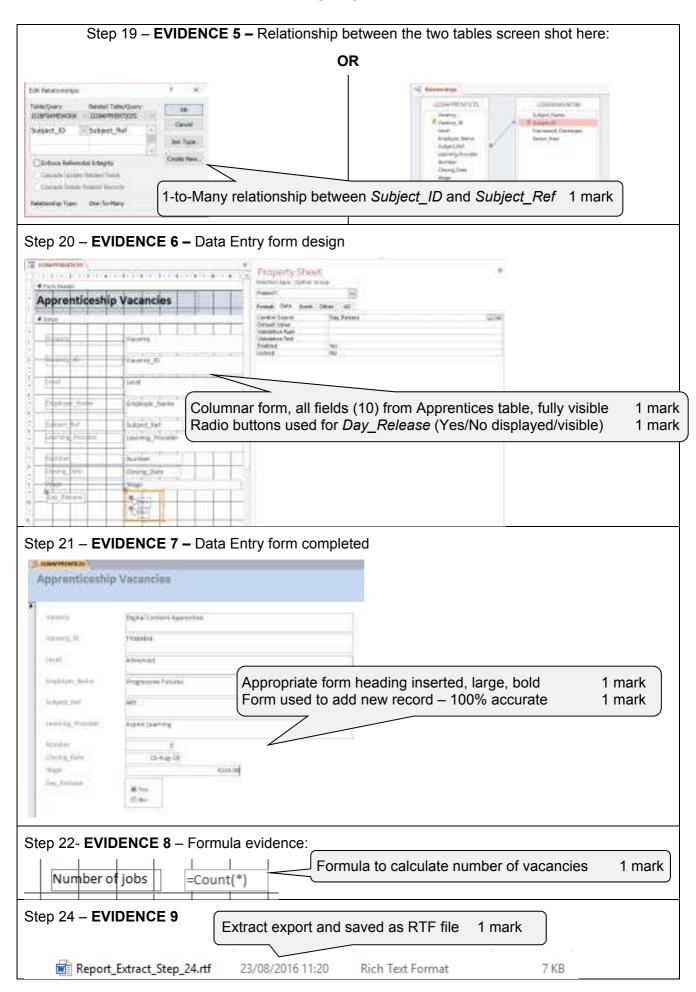
#### Print Progression Routes slide with notes -

Text inserted as presenter notes for correct slide, single slide printed as notes Presenter notes text entered with 100% accuracy 1 mark 1 mark

4



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#### Step 25 – **EVIDENCE 10** – AO1

(a) Describe what is meant by data verification:

Reducing/preventing errors when data is copied from one medium to another/checking accuracy of data entered exactly matches original source [1 mark]

(b) Name two methods of data verification and for one of these methods explain how it could be used with this database

Double (data) entry [1 mark]

Visual (verification/check)

[1 mark]

#### One from:

Double (data) entry – data entered twice (using two people) and the <u>computer</u> compares the two entries

Visual (verification/check) – comparing data on screen with the original source

[1 mark]

1 mark

#### Step 28 – **EVIDENCE 11** – AO3

#### Many jobs are now being replaced by IT systems.

Evaluate in your own words the effects of IT on potential employment **for these apprentices**.

Fewer jobs available as taken over by robots/computer controlled warehouses/labour intensive work

Reduction in manual workers

Creation of new ICT jobs

Increase in jobs in writing software/programs

Increase in jobs relating to maintenance of robots and IT equipment

Increase in jobs relating to web designers/advertising

Increase in computer engineers/project managers/systems analysts

People need to be trained in new technology

Tend to work in a cleaner/safer working environment

People may not have full time/permanent jobs (part time jobs/compressed hours/job sharing)

Working from home/remote/workers do not need to be in a fixed location/near factory

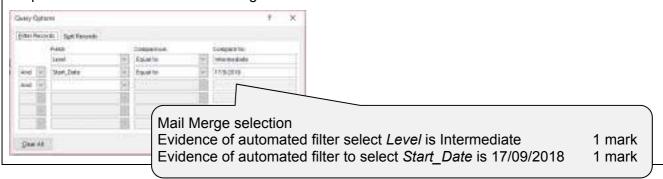
1 mark per statement [4 marks]

### Step 29 - EVIDENCE 12 - - date field screen shot:

Evidence of date field for today's date with correct format dd MMMM yyyy

### { DATE \@ "dd MMMM yyyy" \\* MERGEFORMAT }

#### Step 32 – **EVIDENCE 13-** – Mail merge selection:



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