

## **Cambridge Technicals (2016)**

### **IT**

#### **Level 3 - Moderated**

Level 3 Cambridge Technical Certificate in IT (**05838**)

Level 3 Cambridge Technical Extended Certificate in IT (**05839**)

Level 3 Cambridge Technical Introductory Diploma in IT (**05840**)

Level 3 Cambridge Technical Foundation Diploma in IT (**05841**)

Level 3 Cambridge Technical Diploma in IT (**05842**)

Level 3 Cambridge Technical Extended Diploma in IT (**05877**)

## **OCR Report to Centres September 2018**

## About this Examiner Report to Centres

This report on the 2018 Summer assessments aims to highlight:

- areas where candidates were more successful
- main areas where candidates may need additional support and some reflection
- points of advice for future examinations

It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

The report also includes links and brief information on:

- A reminder of our **post-results services** including **reviews of results**
- Link to **grade boundaries**
- **Further support that you can expect from OCR**, such as our CPD programme

## Reviews of results

If any of your candidates' results are not as expected you may wish to consider one of our Reviews of results services. For full information about the options available visit the [OCR website](#). If University places are at stake you may wish to consider priority service 2 reviews of marking which have an earlier deadline to ensure your reviews are processed in time for university applications: <http://www.ocr.org.uk/administration/stage-5-post-results-services/enquiries-about-results/service-2-priority-service-2-2a-2b/>

## Grade boundaries

Grade boundaries for this, and all other assessments, can be found on the [OCR website](#) .

## Further support from OCR



Attend one of our popular CPD courses to hear exam feedback directly from a senior assessors or drop in to an online Q&A session.

<https://www.cpdhub.ocr.org.uk>

## CONTENTS

**Cambridge Technicals (2016 suite)  
Level 3 IT  
Moderated units  
(05838-05842 & 05877)**

### OCR REPORT TO CENTRES

<b>Content</b>	<b>Page</b>
Level 3 Cambridge Technical in IT	5
Overview	5
General comments	6
Comments on individual units	8
Unit 4: Computer networks (Digital Technician pathway)	8
Unit 7: Data analysis and design (Data analyst pathway)	10
Unit 8: Project management	10
Unit 9 – Product development	11
Unit 12: Mobile technology	12
Sector update	13

## Level 3 Cambridge Technical in IT

### Overview

The OCR Level 3 Cambridge Technical in IT consists of the certificate and extended certificate which do not require meaningful employer involvement or the achievement of a specific pathway. The certificate consists of two external examinations (Units 1 & 2), whilst the extended certificate has an additional external examination requirement (unit 3).

The Diploma suite consists of the introductory diploma, the foundation diploma, diploma and extended diploma. These qualifications require meaningful employer involvement and the achievement of a specific pathway.

Many centres still assume that meaningful employer involvement requires mandatory work placement experience. Whilst this is obviously acceptable, it is also appreciated that it is not always feasible. Therefore, centres have used the school/college technicians to co-deliver sessions on one of the mandatory units e.g. unit 1 whilst other opportunities are investigated. A meaningful employer involvement form from the OCR website must be completed in preparation for the first moderation visit.

Moderators confirmed that there many of the centres are still leaving it very late in the year to arrange the moderation visits, with some centres still having visits in August. This can have an impact on the issue of results and UCAS points for learners. It is therefore important that centres discuss the two visit dates with the moderator as early as possible so that suitable dates can be booked. At certain times of the year, particularly towards the end of the academic year, moderators are extremely busy visiting centres and will have limited availability for visits to centres who have not arranged then in advance.

Some centres only elected to have one moderation visit and although the choice is that of the centre, it is advisable that the two visits are considered so that there are opportunities to address any issues with learner evidence should the need arise.

OCR provide INSETS, webinars and advisory telephone calls and the information relating to these can be accessed via <https://www.cpdhub.ocr.org.uk/desktopdefault.aspx>

The OCR community continues to be popular with centres where questions can be posed on any aspect of the suite of qualifications and answers forthcoming from other centres as well as the Chief moderator.

## General comments

There are 4 pathways within the diploma suite of qualifications as follows:

- Infrastructure technician
- Emerging digital technology practitioner
- Application developer
- Data analyst

All pathways have been selected by centres, but the emerging digital technology practitioner and application developer pathways are the most popular. Many learners have completed their qualifications this year with several them achieving D\*D\* and a high proportion the various distinction combination grade such as D\*D, DD and DM. The excellent results are down to the centres working extremely hard to get the best out of their learners. The results for the certificate and extended certificate qualifications were also very good with some learners achieving D\* and D grades.

Many centres elected to concentrate on the externally assessed units in the first year and then focus on the internally assessed unit for the subsequent year(s). Feedback from the moderators confirmed that whilst this worked well for some centres, many of the centres have decided to review their strategy for the next cohort and include some of the delivery for the internally assessed units to help motivate learners and to help alleviate the pressure on learners and assessors in the final year when results are required on completion.

Each of the mandatory pathway units have a model assignment available which centres can use as they are or change the context. Centres are advised to retain the style as they have been developed to enable learners to aim for the higher grades.

In addition, learner style work has been put together for each of the mandatory pathway units (4, 5, 6 & 7), covering the pass criteria only. A commentary is provided explaining why the evidence met the grade for pass and whether the evidence is strong or weak as well as how it can be improved. In addition, the commentary explains how the evidence could be extended to cover the merit and/or distinction criteria. These are available via OCR Interchange. The examinations officer is the person to speak to if you do not have direct access in your centre.

Although there are still occasions where the demands of the higher command verbs have not been sufficiently met, the moderators have confirmed that the evidence they are now seeing for the 2016 specification is much stronger than previously seen for the 2012. Centres have confirmed that they like the qualifications and the range of units offered.

Centres are reminded to use the Command Verbs document available on the OCR website to support learners in providing sufficient evidence of analysing, reviewing, justifying and evaluating. Moderators have reported that assessors accepting descriptions and explanations for review and evaluating in particular.

Centres are now becoming more adventurous with the types of evidence being presented and have confirmed that this has enabled a wider range of learner ability to achieve higher grades. This has included, videos, photographs, audio and product evidence as well as reports and presentations.

OCR Report to Centres – June 2018

Centre assessors are reminded of the following:

- The teaching content is the minimum of what should be taught. It is not a tick list for assessment and therefore learners are not expected to include every bullet pointed item to be included as part of their evidence. Learners are expected to select the relevant knowledge, skills and understanding that they have acquired during teaching and learning and apply them to the assignment context they are working to.
- Test plans must be iterative and not “end-loaded”. Learners should be recording the testing that invariably takes place during the development of the proto-types and where appropriate final products.
- Learners do not have to provide the same format of evidence. They can present the evidence in a format which suits them personally
- Ensure that internal standardisation is carried out across all grades for all units for all assessors for each unit they assess. Guidance and documentation is available at: <https://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-3-certificate-extended-certificate-introductory-diploma-foundation-diploma-diploma-05838-05842-2016-suite/> under Key Documents.
- Delivery guides are available for every unit under Teaching and Learning Resources. These will provide assessors with ideas for delivery for each learning outcome for each unit.
- Delivery guides are available for a project approach for delivery within each of the designated pathways also under Teaching and Learning Resources. Whilst they also include a form of assignment these must only be used for teaching and learning purposes and not for assessment.
- Centre are advised to arrange their two visit dates with their moderator as soon as possible as moderators are in high demand at certain times of the academic calendar, in particular in the months of May, June and July.

As with the last academic year, OCR will be offering INSETS, webinars and advisory telephone calls. Information can be obtained from the CPD hub using the following link:

<https://www.cpdhub.ocr.org.uk/desktopdefault.aspx>

In addition, OCR has a community which is very active and where centres can pose questions which are answered by the Chief Moderator and discuss ideas and share resources with other centres. The community can be accessed via the following link: <https://social.ocr.org.uk/>

An assignment checking service is also available where the assignments developed by centres can be reviewed by a member of the moderation team for a small fee. Detailed documented feedback is provided by the checker of the assignment. This service can be accessed via the CPD hub as above.

## Comments on individual units

### Unit 4: Computer networks (Digital Technician pathway)

Learners do not actual create a network in this unit. They are required to plan a computer network to meet a client requirements (LO2), present the network solution to the client (LO3) and then plan maintenance activities for the network (LO4).

Although learners are not required to actually build the network, it is important that centres have sufficient resources to enable them to “play” with networks in order to gain a better understanding. If learners do not have these resources made available, it hampers their ability to understand the concepts involved. Although centres can use the support of their network manager with visits to the server room, this does not replace the benefits of “hands on” experiences.

Centres are also reminded that the learners do not have to include everything they have been taught from the teaching content within their evidence. They are only required to select and use what is relevant to the assessment criteria and the context in which they are working.

LO1: Understand the concept of networks

P1: Explain how network addressing is used

For this assessment criterion they only need to consider section 1.8 of the teaching content. The explanation should include the purpose of network addressing.

Centres with excellent resources available excel at this unit with learners easily achieving the distinction grades. Where centres are limited or insufficient resources available, then learners even struggle to attain a pass.

Most centres use the OCR model assignment which is available.

### Unit 5 – Virtual and augmented reality (Emerging digital technology practitioner pathway)

This unit has proved particularly popular within centres with the vast majority of the evidence resulting from the OCR model assignment. Moderators have seen some excellent examples of prototypes using AR and VR. Learners appear to like the unit and centres have confirmed that it allows for more creativity and enables learners to use different technology which is the main appeal. Males and females do equally as well with this unit and in some instances have used QR codes to trigger the AR text or images.

Weaknesses in evidence is usually related to LO1 and LO4 where the assessment criteria have been misinterpreted by some centres. This has resulted in learners not always focusing on an identified VR and AR resource for:

M1: Explain the impact that an identified virtual reality resource has had on society

D1: Assess the impact that an identified augmented reality resource has had on society

On some occasions the resource selected was far too complicated to allow them to explain the impact on society e.g. flight simulators. Also, for D1, the learners are required to carry out an

*OCR Report to Centres – June 2018*

assessment of the impact and therefore they should offer a reasoned judgement of the standard impact on society informed by relevant facts.

**Unit 6: Application design (Application developer pathway)**

Whilst some learners have provided very good evidence for this unit there are a number of centres where weaknesses have been identified by the moderators.

Often the requirement for the outcome from this unit was interpreted as a mobile app, rather than reading application in its widest sense. Where centres have taken a wider view and particularly where they have combined the unit with one or more other units (a project approach), the evidence has tended to be more thorough and appropriately evidenced.

The prototypes for this unit have at times been unimaginative and little more than an interactive website. Centres are advised to refer to the table of prototypes under the level 2 section above.

Another area noted by the moderators was with respect to the requirement to gather client requirements for an application solution (P2). Where centres are using the OCR model assignment learners are extracting information from it and then “making up” the missing bits. Ideally, assessors should be taking on the role of the client and answer questions posed by the learners. Where centres used clients or undertook the role of the client, the evidence presented for gathering client requirements was particularly strong.

M2 requires learners to conduct a feasibility study of different solutions for the client requirements. The fact that more than one solution is required, and a feasibility study presented for each solution was missed by some centres. Centres are reminded that solutions are plural and therefore two would be sufficient.

P3: illustrate the requirements, functioning, and designs of an application solution, using diagrams. Centres are reminded that the illustrations will vary depending on what type of application solution is being developed.

D1: justify design choices identifying the advantages and disadvantages of each. Some centres accepted learners merely identifying the advantages and disadvantages rather than provide a justification for what they had chosen with respect to their design choices.

P4: present a proposed design solution to the identified client

M3: negotiate adaptations with the identified client to refine the design solution

It is important that moderators have clear evidence of the proposed design solution being presented to the identified client and then negotiating adaptations to refine the design solution. In centres where this has been presented in a strong and effective way, the evidence has consisted of video recordings, audio recordings, minutes of meetings, email exchanges etc.

The type of prototype varied from centre to centre with some using PowerPoint to develop a concept prototype, whilst others used appropriate prototype software to create a working version.

D2: implement improvements based on the analysed client and/or user feedback.

*OCR Report to Centres – June 2018*

There is usually good evidence of implementing improvements usually through version 1 and version 2 copies of the prototypes. Unfortunately, the evidence for analysis is invariably missing. It is important that learners provide evidence of analysing the feedback they receive and then show the implementation of the changes.

**Unit 7: Data analysis and design (Data analyst pathway)**

This unit currently is the least popular mandatory unit within the pathways available and when selected, the majority of centres have used the OCR model assignment. The evidence is usually very good and based on the development of relational databases.

The evidence for this unit has been combined successful with units 8 and 9 as a project approach. It has worked very well in the centres who have taken this approach with learners providing some excellent evidence.

**Unit 8: Project management**

This has been a very popular unit, which has often been combined with other units and best evidenced when this has been the case. Some centres have used the OCR model assignment and then gone on to use the artist scenario to create a prototype website for unit 21.

P1: explain the different phases within an identified project life cycle

Sometimes the “within an identified project life-cycle” is missed when evidencing the assessment criterion. Learners should select a project life-cycle and then explain the different phases.

D1: evaluate the importance of each phase of the identified project life cycle

The best evidence presented by learners is when they have considered projects that have been successful and some that have failed due to weaknesses in one or more of the phases.

P3: complete the documentation for the initiation phase for an identified project

Occasionally, there have been learners who have tried to explain what the PID (Project Initiation Document) should include, as opposed to producing a PID for their project.

P6: evaluate feedback from client and team in relation to the project

Some centres struggled with the requirements for P6 and encouraged learners to write their own evaluation of the project as opposed to taking the views of others into account.

M3: recommend potential improvements for future projects based on the outcome of the project evaluation

Some learners tended to suggest improvements to the product when in fact, they should have been recommending improvements to the actual project methodology they used.

## Unit 9 – Product development

This is another popular unit that is invariably combined with one or more other units as this is where the learners get the opportunity to create the full product.

Generally, the evidence presented was appropriate although some command verbs were not always interpreted correctly or suitably evidenced.

P1: outline the phases of the product development life cycle.

This particular assessment criterion often elicited responses that were far more detailed than they needed to be for the command verb 'outline'.

P2: develop a product requirements specification to meet an identified client's requirements.

In some cases, learners started off providing a description of what a requirements specification should include, rather than actually developing one. The command verb is 'develop' and therefore that is all the learner needs to do. They are not required to explain what a requirements specification is or what it contains.

P3: present an outline of the design solutions to the identified client and obtain feedback.

This was sometimes misread by centres as the requirement is for at least two design solutions to be presented to the client in order to obtain feedback. Some centres only encouraged their learners to present one solution.

Where centres did identify the requirement for two, the fact that it was only supposed to be an 'outline' of each was also missed resulting in learners creating more than one detailed design. Again, it was also unclear as to whether these design solutions had been presented and if so how.

M2: agree the inclusion of features that extend or enhance the functionality of the chosen design solution with the identified client.

Evidence was often limited when it came to the actual agreement of the inclusion of features. They tended to be stated as to what they were and the comment "the client wanted...." The evidence should also include how these features were agreed. This could be via video, audio discussions, minutes of meetings or email discussions.

D2: discuss with the identified client potential enhancements, upgrades and maintenance of the final product.

Evidence to meet the demands of the command verb 'discuss' was sometime weak and limited. Learners are required to give an account that address a range of ideas and arguments when considering potential enhancements, upgrades and maintenance of the final product.

OCR Report to Centres – June 2018

## Unit 12: Mobile technology

Another popular unit that was not always evidence well.

P1: describe different methods of mobile device connectivity.

This assessment criterion invariably resulted in learners trying to cover the teaching content and in particular 1.1, the devices listed, rather than just describing different method of mobile device connectivity which is based on 1.2 of the teaching content.

M1: compare and contrast different operating systems used in mobile technology.

This unit tended to suffer from the comparison shortcomings as opposed to any other unit. Centres are reminded that learners need to draw conclusion and provide a summary of their findings when comparing and contrasting.

D1: evaluate the suitability of mobile technologies for different situations.

Weaknesses included learners describing the uses listed in 1.4 of the teaching content rather than considering the advantages and disadvantages of different technologies in specific situations.

P2: carry out research on the impact of mobile technologies on businesses.

It was not always clear what research had been carried out, although there was often very good examination of ethical implications of the use of mobile technologies.

LO3: Be able to determine solutions for the use of mobile technologies.

LO4: Be able to present solutions for the use of mobile technologies.

Several centres have used the scenario from the text book relating to photographers and the need to link the photographs to the photographer. Centres should not use the scenario used as an example from the text book as it would not provide sufficient information, resulting in learners conducting limited investigation of client requirements with evidence for P3: investigate the mobile technological requirements for an identified business need and P4: plan a mobile technological solution for an identified business need were very similar. There was also a tendency to concentrate on either the devices required or the app required as opposed to the complete solution.

## **Sector update**

The growth of the digital economy and the emergence of new technologies has resulted in a skills shortage within the sector and a higher demand for graduates with appropriate qualifications. Skills shortage areas include cyber security due to organisations in the public and private sector prioritising the protection of the data they hold against accidental loss and malicious threats.

It was also noted that the Tech Partnership indicated that there were over 7,000 vacancies advertised for cyber security professionals. The most common job roles advertised in this area were security analysts, security consultants, security engineers, security managers and security architects.

Developers are also highly sought after where the job roles account for more than a quarter of all digital job roles advertised. Key growth areas include bug data, cloud, IT security, mobile and web development. In particular, the demand for cloud skills has increased by 98% over the last two years.

## About OCR

OCR (Oxford Cambridge and RSA) is a leading UK awarding body. We provide qualifications which engage people of all ages and abilities at school, college, in work or through part-time learning programmes.

As a not-for-profit organisation, OCR's core purpose is to develop and deliver general and vocational qualifications which equip learners with the knowledge and skills they need for their future, helping them achieve their full potential.

© OCR 2018

**OCR (Oxford Cambridge and RSA Examinations)**  
**The Triangle Building**  
**Shaftesbury Road**  
**Cambridge**  
**CB2 8EA**

### OCR Customer Contact Centre

Telephone: 02476 851509

Facsimile: 02476 421944

Email: [vocational.qualifications@ocr.org.uk](mailto:vocational.qualifications@ocr.org.uk)

[www.ocr.org.uk](http://www.ocr.org.uk)

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

**Oxford Cambridge and RSA Examinations**  
is a Company Limited by Guarantee  
Registered in England  
Registered Office:  
The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA  
Registered Company Number: 3484466  
OCR is an exempt Charity

**OCR (Oxford Cambridge and RSA Examinations)**  
Head office  
Telephone: 01223 552552  
Facsimile: 01223 552553

© OCR 2018

