



GCE A LEVEL

1530U30-1



Z22-1530U30-1

WEDNESDAY, 15 JUNE 2022 – AFTERNOON

**INFORMATION AND
COMMUNICATION TECHNOLOGY – A2 unit 3
Use and Impact of ICT**

2 hours 30 minutes

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

Answer **all** questions in Section A and **one** question group in Section B.

Use both sides of the paper. Write only within the white areas of the booklet.

Write the question number in the two boxes in the left-hand margin at the start of each answer, for example

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Leave at least two line spaces between each answer.

INFORMATION FOR CANDIDATES

The intended marks for questions or part questions are given in brackets []. You are advised to divide your time accordingly. The total number of marks available is 90.

You are reminded of the necessity for good written communication and orderly presentation in your answers.

Quality of written communication will be assessed in question

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SECTION A

Answer **all** questions.

0	1	Well-designed Human Computer Interfaces (HCIs) have made computers easier to use. For each of the following three factors, describe two different examples of user requirements which should be taken into account when designing a user interface. [3 × 2]
		Layout appropriate to task On screen help Use by disabled people
0	2	Two types of computer networks are <i>peer-to-peer</i> and <i>client server</i> . Other than <i>cost</i> , discuss the advantages and disadvantages of these two types of network. [6]
0	3	A poor Management Information System (MIS) can affect the efficiency of an organisation. Describe six factors which can contribute to a poor MIS. [6]
0	4	Cloud computing services have become increasingly important and are widely used by many organisations. Discuss the advantages and disadvantages of using 'cloud computing' services. [8]
0	5	Many companies work collaboratively with other companies and convert their data and documents into a standard format before transferring them across a network. This process is an example of Electronic Data Interchange (EDI). Describe different advantages and disadvantages to these companies of using EDI. [6]
0	6	When reviewing their IT systems, organisations need to conduct a risk analysis to estimate how much money they need to spend on minimising risk. Other than the <i>risk itself</i> , describe the three main factors involved in a risk analysis. [3 × 2]
0	7	<i>"Some technologies, such as the use of facial recognition on mobile phones and CCTV cameras at passport control in airports bring many benefits to society, but also some concerns."</i> Describe any benefits or concerns to individuals or society of using facial recognition. [6]
0	8	As part of their original task, a systems analyst would have completed an investigation of the current system and produced a feasibility report. Other than <i>hardware and software</i> , describe in detail three areas of the system that would be investigated by the systems analyst. [6]
0	9	Remote management is very important for network management. Other than <i>logging off</i> users or <i>shutting down</i> stations, describe six tasks suitable for remote management of workstations. [6]
1	0	Discuss four advantages and four disadvantages that teleworking gives <i>an employee</i> . [8]
1	1	The introduction of new IT systems can lead to a company reorganising which will impact upon the workforce and work patterns. Describe in detail four of the fears that workers could have when a new IT system is brought in. [4 × 2]

SECTION B

Answer **either** questions 12 to 14 **or** questions 15 to 17.

1	2	<p>Accurate, complete and up-to-date information <i>adds value</i> to organisations by aiding decision making. Describe, using different examples, two ways in which an organisation can do this. [2 × 2]</p>
1	3	<p>Security policies contain operational procedures for the protection of data and preventing misuse of data. Other than <i>screening</i> potential employees, describe, using distinct examples, four possible operational procedures for preventing misuse of data. [4 × 2]</p>
1	4	<p>When using a company's IT facilities, employees are governed by a code of conduct. Other than <i>penalties</i>, give three examples of what could be contained in a code of conduct, describing the different problems they are designed to prevent. [3 × 2]</p>

1	5	<p>A holiday cottage hire company uses a relational database management system for organising its bookings. Customers only ever hire one cottage at a time. Part of one table in the holiday cottage hire company database is likely to be:</p> <p style="margin-left: 20px;">COTTAGE [<u>CottageID</u>, Type, Name, Area, PostCode, NumberOfBedrooms, CostPerDay]</p> <p style="margin-left: 20px;">with CottageID being the primary key.</p> <p>Give two other tables you would expect to see in this database, identifying any primary or foreign keys. [6]</p>
1	6	<p>Using examples, explain what is meant by the following terms with regard to relational databases: [3 × 2]</p> <ul style="list-style-type: none"> • Data consistency • Data independence • Data integrity
1	7	<p>Big data is the processing of data stored in volumes too large for traditional analytical tools. Describe, using examples, three different ways 'Big data' can be used by organisations. [3 × 2]</p>

END OF PAPER