

| | | |
|-------------|---------------|------------------|
| Surname | Centre Number | Candidate Number |
| Other Names | | 0 |



GCSE

4333/01



S15-4333-01

INFORMATION AND COMMUNICATION TECHNOLOGY

UNIT 3: ICT in Organisations

P.M. THURSDAY, 21 May 2015

1 hour 30 minutes

| For Examiner's use only | | |
|-------------------------|--------------|--------------|
| | Maximum Mark | Mark Awarded |
| Total | 80 | |

INSTRUCTIONS TO CANDIDATES

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

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet.

If you run out of space, use the continuation pages at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

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

Quality of written communication will be assessed in question **12**.



MAY1543330101

Answer all questions.

1. Tick (✓) the correct box to show whether the devices listed below are used for either *Input* or *Output*. [4]

| DEVICE | INPUT | OUTPUT |
|-----------------|----------------------------|----------------------------|
| Graphics tablet | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| Speaker | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> |
| Webcam | 5 <input type="checkbox"/> | 6 <input type="checkbox"/> |
| Mouse | 7 <input type="checkbox"/> | 8 <input type="checkbox"/> |

2. Name a type of network topology and draw a **diagram** of the network topology, labelling the position of the workstations on that network. [2]

Name:

Diagram:



3. Examine **Graphic A** and **Graphic B** below.

Although both graphics appear the same, Graphic A is a *bitmap* graphic and Graphic B is a *vector* graphic.



Graphic A



Graphic B

(a) Tick (✓) the correct box to show whether the statements below apply to a bitmap or vector graphic. [5]

| STATEMENT | BITMAP | VECTOR |
|-----------------------------------------------------------------------------------------|----------------------------|-----------------------------|
| Graphics can be scaled up without loss of quality. | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| Graphics are made up of pixels. | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> |
| Graphics that use points, lines, curves and shapes stored as mathematical equations. | 5 <input type="checkbox"/> | 6 <input type="checkbox"/> |
| The larger the graphic, the more pixels are needed and so the file size becomes larger. | 7 <input type="checkbox"/> | 8 <input type="checkbox"/> |
| If small graphics are enlarged, the graphic can become blurred. | 9 <input type="checkbox"/> | 10 <input type="checkbox"/> |

(b) Graphics published on web pages should be optimised.

(i) State what is meant by *optimisation of graphics for the web* and give **one** way of optimising a graphic. [2]

.....

.....

.....

.....

4333
010003



- (ii) Give **one** advantage of optimising graphics for publishing on a web page. [1]

.....

.....

4. Animators use many different techniques.

- (a) **Name** the animation techniques described in the table below. [3]

| Description | Animation Technique |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Live actors are filmed. Frames are then traced over to produce a cartoon effect animation. | |
| Clay figures are photographed, moved and photographed again. This is repeated since each photograph forms a frame that can be played in sequence to produce an animation. | |
| The process of getting the computer to create the in-between frames between key frames in an animation. | |

- (b) Describe what is meant by *onion skinning*. [2]

.....

.....

.....

.....

- (c) Describe in detail what is meant by a *story board*. [2]

.....

.....

.....

.....



5. Many musicians use ICT.

(a) **Name** the interface that allows computers and musical instruments to communicate with each other. [1]

.....

(b) Give **three different** uses or advantages of music composition software. [3]

.....
.....
.....
.....
.....
.....

(c) Some signals from a computer need to be converted so they can be output. Describe why this conversion is needed to play music through a speaker. [2]

.....
.....
.....

(d) Give **one** benefit and **one** drawback of using *WAV* sound files against using *MP3* sound files. [2]

Benefit:

.....
.....

Drawback:

.....
.....

4333
01005



6. Some computers use a *Graphical User Interface (GUI)*.

(a) **Tick (✓)** the correct boxes below to show which **two** statements are true for a GUI. [2]

| STATEMENT | Tick (✓) |
|------------------------------------------------------------------------|-------------------------------|
| A GUI consists of Windows, Icons, Menus and Pointers. | 1 <input type="checkbox"/> |
| A GUI is less demanding on memory compared with a text-only interface. | 2 <input type="checkbox"/> |
| A GUI allows you to customise your desktop. | 3 <input type="checkbox"/> |
| A GUI does not allow the use of an on-screen keyboard. | 4 <input type="checkbox"/> |

(b) Different Human Computer Interfaces are used with different devices. For **each** interface named below give a suitable input device and a *different* example of its use. [2 x 2]

BIOMETRIC:

Suitable input device:

Example of use:

.....

.....

VOICE DRIVEN:

Suitable input device:

Example of use:

.....

.....

(c) (i) State the name given to the **type** of interface that is a text-only interface. [1]

.....



(ii) Give **two** advantages of using a text-only interface. [2]

Advantage 1:

.....

Advantage 2:

.....

.....

7. (a) Complete the following sentences about websites, using only the terms given in capitals below.

- | | | | |
|-------------------|-----------------|------------|-----------------|
| HTML | SEARCHED | URL | LAN |
| WEB SERVER | HOSTED | POS | INTRANET |

(i) The unique address for every website on the internet is called a [1]

(ii) is a language used to create a web page. [1]

(iii) In order to allow people to view a website over the internet it must be on a [2]

(b) State what is meant by the following **two** website terms. [2]

| Term | Meaning |
|-----------|---------|
| Home page | |
| Hotspot | |



(c) Give **one** reason why you would use a *template* when creating a website. [1]

.....
.....

(d) Banner advertisements are often placed in a prominent location on a web page.
State the **name** given to this type of banner. [1]

.....

8. (a) Give **two advantages** and **two disadvantages** of computerised data logging. [4]

Advantage 1:

.....
.....

Advantage 2:

.....
.....

Disadvantage 1:

.....
.....

Disadvantage 2:

.....
.....

(b) Many pilots learn to fly using flight *simulation models*.
(i) State what is meant by a simulation model. [2]

.....
.....
.....
.....



(ii) Give **two** advantages of using simulation modelling. [2]

Advantage 1:

.....

.....

Advantage 2:

.....

.....

(iii) Give **one** disadvantage of using simulation modelling. [1]

.....

.....

.....

9. *Expert systems* are used by car mechanics.

(a) State **one** use made of an expert system by a car mechanic. [1]

.....

.....

(b) Give **two** *advantages* of using an expert system. [2]

Advantage 1:

.....

.....

Advantage 2:

.....

.....



(c) Give **two disadvantages** of using an expert system. [2]

Disadvantage 1:

.....

.....

Disadvantage 2:

.....

.....

(d) State what is meant by the term *artificial intelligence (AI)*. [1]

.....

.....

.....

10. Many web based email accounts use *cloud computing* technology. The email software and email data are not stored on a local computer; instead they are stored in the email company's computer cloud.

(a) State what is meant by the term *cloud computing*. [1]

.....

.....

.....

(b) Give **one** advantage of *cloud computing*. [1]

.....

.....

.....

(c) Give **one** potential risk with *cloud computing*. [1]

.....

.....

.....



11. Some organisations have an online shopping (*e-commerce*) facility.

Discuss the advantages of an e-commerce system to the organisations **and** to the customers. [6]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

TURN OVER FOR QUESTION 12.



12. Using ICT has had an effect on the way people work. *Videoconferencing* is one of these impacts.

Describe what is meant by videoconferencing and discuss in detail the **advantages** and **disadvantages** of videoconferencing to both the employer **and** to their staff. [10]

Remember that the quality of written communication will be assessed in this question.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



Area with horizontal dotted lines for writing.

END OF PAPER



BLANK PAGE

**PLEASE DO NOT WRITE
ON THIS PAGE**



| Question number | <p align="center">Additional page, if required. Write the question number(s) in the left-hand margin.</p> |
|-----------------|----------------------------------------------------------------------------------------------------------------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Examiner only



