cea
Rewarding Learning

Centre Number

Candidate Number

Information and Communication Technology

Assessment Unit A2 1

assessing

Module 3:
Information Systems

[AP211]
MONDAY 1 JUNE, MORNING

AP211

> **TIME**
>
> 2 hours.

> **INSTRUCTIONS TO CANDIDATES**
>
> Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
> **You must answer the questions in the spaces provided.**
> **Do not write outside the boxed area on each page or on blank pages.**
> Complete in blue or black ink only. **Do not write with a gel pen.**
> Answer **all seven** questions.

> **INFORMATION FOR CANDIDATES**
>
> The total mark for this paper is 120 including a maximum of 5 for quality of written communication.
> Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

1   A hospital makes extensive use of ICT.

(a)   The hospital uses a centralised database.

Describe the main features of a centralised database.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(b) Explain how each of the following could be used to keep data about patients secure.

Data encryption _____

_____

_____

_____

_____

_____

Access rights _____

_____

_____

_____

_____

_____

_____ [8]

The hospital plans to use an expert system to help diagnose illnesses.

One component of the expert system will contain the knowledge and rules to be used.

(c) Explain how this component will be created.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(d) Name and describe **two** other components of an expert system.

Name _____

Description _____

_____

_____

_____

_____

Name _____

Description _____

_____

_____

_____

_____

_____ [6]

24AP21105

2 A system is being developed using the waterfall life cycle model. The end user is directly involved in a number of stages.

(a) Describe the role of the end user during the Analysis stage.

_____

_____

_____

_____

_____

_____ [3]

(b) Describe one other way in which the end user is directly involved during the development of the system.

_____

_____

_____

_____

_____

_____

_____ [4]

24AP21106

CASE tools may be used when an information system is developed using Rapid Application Development (RAD).

(c) Describe how an information system is developed using RAD.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ [5]

(d) Explain how a project management CASE tool could be used.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

[Turn over

24AP21107

(e) Name and describe **two** other CASE tools.

Name _____

Description _____

_____

_____

_____

Name _____

Description _____

_____

_____

_____ [6]

BLANK PAGE

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

24AP21109

3 The user interface is an important part of a computer system.

(a) Name and describe **two** psychological factors which should be considered in the design of the user interface.

Factor _____

Description _____

_____

_____

_____

_____

_____

Factor _____

Description _____

_____

_____

_____

_____

_____ [8]

(b) One type of user interface is a command line interface.

(i) Describe the main features of a command line interface.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(ii) Identify **two** benefits of a command line interface.

1. _____

_____

2. _____

_____ [2]

[Turn over

BLANK PAGE

DO NOT WRITE ON THIS PAGE

4 A company's employees work in teams. Data about these teams is stored in a database.

(a) Explain what is meant by each of the following.

Data independence _____

_____

_____

_____

Data redundancy _____

_____

_____

_____ **[4]**

Details of two teams are shown below.

Team ID	Team Name	Employee ID	Employee Name	Dept ID	Dept Name
T001	Sales	E021	Green	D011	Marketing
		E036	Plum	D011	Marketing
		E034	Brown	D012	IT
		E045	Black	D012	IT
		E056	White	D013	Finance
T002	Research	E021	Green	D011	Marketing
		E022	Grey	D012	IT
		E045	Black	D012	IT
		E056	White	D013	Finance

(b) Produce an ER diagram, which does not contain a many-to-many relationship, for the data represented in the table.

[6]

(c) Normalise the data in the table to 3NF showing all your work.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ [6]

[Turn over

5 Parallel running can be used during system changeover.

(a) Describe one benefit of parallel running.

_____

_____

_____

_____ [2]

(b) Name and describe **two** other changeover methods.

Name _____

Description _____

_____

_____

_____

Name _____

Description _____

_____

_____

_____ [6]

User support and training is provided for users of an information system.

(c) Explain how a user could get help with a specific problem from each of the following:

A help desk _____

_____

_____

_____

_____

A user group_____

_____

_____

_____

_____ [6]

(d) Evaluate the use of video conferencing for training users of the new system.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ [5]

BLANK PAGE

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

6 Organisations using ICT must comply with relevant legislation.

(a) Describe the main features of

The Computer Misuse Act

_____

_____

_____

_____

_____

_____

_____

The Data Protection Act

_____

_____

_____

_____

_____

_____

_____ [8]

9682

(b) A company has implemented an acceptable use policy.

Describe the main responsibilities of employees when using ICT.

_____

_____

_____

_____

_____

_____

_____ [4]

7 As more people shop online, there is an increased risk of fraud.

Write a report explaining

- How ICT can be used to carry out online fraud

- Measures a retailer could take to minimise the risk of online fraud

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ [10]

THIS IS THE END OF THE QUESTION PAPER

DO NOT WRITE ON THIS PAGE

DO NOT WRITE ON THIS PAGE

24AP21124