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Rewarding Learning

Information and Communication Technology

Assessment Unit A2 1

assessing

Module 4: Development of Information Systems

[A2W11]

A2W11

MONDAY 11 MAY, MORNING

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number on the Answer Booklet provided.
Answer **all seven** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 90, including a maximum of 4 marks 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.

Answer **all seven** questions.

1 **(a)** Data can be transmitted using fibre optic cable or co-axial cable. Compare these two types of cable in terms of:

   (i) Capacity.

   (ii) Signal interference.   [4]

   (b) Describe how packet switching can be used for data transmission.   [6]

2 A small business requires new payroll software.

   (a) Describe **three** ways in which a business could obtain new software and comment on the suitability of each **in this case**.   [9]

   (b) Describe **two** ways in which the quality of software could be measured once it has been installed.   [4]

3 An information system may be developed using the waterfall model or by prototyping.

   (a) Explain the role of the systems analyst in the waterfall model.   [4]

   (b) Describe the main features of prototyping.   [6]

   (c) Describe **two** reasons why prototyping might be preferred over the waterfall method. [4]

4 During system review it is reported that:

   ● Queries are taking a long time to run
   ● A particular report does not display the expected information.

   (a) Name and describe **two** types of software maintenance which will be required **in this case**.   [6]

   (b) Describe one other reason why the system might require software maintenance.   [2]

   During maintenance, a new module is added.

   (c) Describe the testing which will be required **in this case**.   [4]

5 One of the CASE tools which can be used during software development is a code generator.

   (a) Describe **two** benefits of using a code generator. [4]

   (b) Name and describe the main features of **three** other types of CASE tool. [9]

6 **(a)** Describe why each of the following is used on a network.

   (i) Auditing software

   (ii) Accounting software [6]

   (b) Describe the impact of each of the following factors on human computer interaction.

   (i) Ergonomical factors

   (ii) Psychological factors [6]

7 A college uses a relational database.

   Each pupil studies a number of subjects.

   Each subject has a number of modules.

   (a) Apart from many-to-many, state **two** ways in which entities can be related in a database. [2]

   (b) Name **three** entities you would expect to find in the database. [3]

   (c) Draw a fully labelled Entity Relationship (ER) diagram, which does not contain a many-to-many relationship, for this system. [7]

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