BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 4 Certificate in IT

INFORMATION SYSTEMS

Tuesday 3rd October 2023 - Afternoon

Time: TWO hours

Section A and Section B each carry 50% of the marks.
You are advised to spend about 1 hour on Section A (30 minutes per question)
and 1 hour on Section B (12 minutes per question).

Answer any <u>Section A</u> questions you attempt in <u>Answer Book A</u>
Answer any <u>Section B</u> questions you attempt in <u>Answer Book B</u>

The marks given in brackets are **indicative** of the weight given to each part of the question.

Calculators are **NOT** allowed in this examination.

Section A
Answer 2 questions (out of 4). Each question carries 30 marks.

A1.

    a) Describe the **THREE** levels of management, and the different types of information that may be required by **each**.

                  (12 marks)

    b) Describe **THREE** different project management techniques.

                  (12 marks)

    c) Describe the activities that might be needed to maintain a system.

                  (6 marks)

A2.

A company that develops healthcare software wishes to improve its quality assurance activities.

    a) Describe the use of UNIT, LINK and SYSTEMS testing.

                  (12 marks)

    b) Explain what user acceptance testing involves and why it is important.

                  (8 marks)

    c) Describe **TWO** quality assurance approaches that can improve the quality of system designs and coding.

                  (10 marks)

A3.

A tourism organisation wishes to develop a new website to promote tourism in a particular city.

    a) Explain the differences between Throw-away and Evolutionary prototyping for use with the new website.

                  (10 marks)

    b) Describe the differences between the functional and non-functional requirements for the website.

                  (10 marks)

    c) Describe the differences between the logical and physical design of the website.

                  (10 marks)

A4.

A large manufacturing company is intending to implement a new software system that incorporates a number of business functions including sales, production, and accounts systems.

a) Describe **THREE** different approaches to systems implementation that could be used by the manufacturing company.

(12 marks)

b) Describe **THREE** approaches to training user staff that could be used by the manufacturing company.

(12 marks)

c) Describe what is meant by a 'Post-implementation review', and why such reviews are important.

(6 marks)

B5.

    a) Explain what is meant by the term cloud databases.

                                                    (4 marks)

    b) State **FOUR** advantages to an organisation of using a cloud database.

                                                    (4 marks)

    c) State **FOUR** disadvantages to an organisation of using a cloud database.

                                                    (4 marks)

B6.

    a) Explain the following terms, giving examples:

          i.   Information;
        ii.   Data.

                                                      (4 marks)

    b) What is meant by the following mathematic terms, showing examples:

          i.   Medium;
        ii.   Mean.

                                                    (8 marks)

B7.

Explain the following terms, giving examples:

    a) Operational data.

                                                      (4 marks)

    b) Strategic data.

                                                      (4 marks)

    c) Tactical data.

                                                      (4 marks)

B8.

The use of Multimedia is often seen as essential to the success of many websites. Explain, with examples, the guidelines you would recommend for the use of **THREE** different types of multimedia.

                                                (12 marks)

B9.

Without reference to cost or time, explain the advantages and disadvantages of any **ONE** prototyping technique.

                                                (12 marks)

B10.

Focusing solely on software, describe solutions that can be implemented to ensure that a blind person can successfully use a web page.

                                                (12 marks)

B11.

What is meant by the following terms related to software maintenance?

    a) Legacy System;
    b) Software Bug;
    c) Version Control;
    d) Software Patch.

                                                (12 marks)

B12.

A company wishes to create a user group to support an internal project.

Which roles and jobs should be included within this user group?

                                                (12 marks)

End of Examination