BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

IT PROJECT MANAGEMENT

Monday 23rd March 2020 - Morning

Answer **any** FOUR questions out of SIX. All questions carry equal marks.

Time: TWO hours

Answer any Section A questions you attempt in Answer Book A
Answer any Section B questions you attempt in Answer Book B

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

Only **non-programmable** calculators allowed in this examination.

Section A

Answer Section A questions in Answer Book A

A1.

You have been appointed IT manager to a group of specialist shops that sell sports goods from a number of different sports goods suppliers. This is a very competitive market. Each shop must be able to answer immediately any telephone or internet-based enquiries concerning its current stock and price.

The existing computer-based stock system, which was developed some time ago by the in-house IT section, is no longer adequate. A decision has been made by your senior management to adopt a new, more advanced stock recording and web-based enquiry system that allows potential customers to enquire about the availability of particular shoes at a local store and reserve them for collection.

Such systems are available as an **off-the-shelf** (OTS) package, but your management are concerned that these packages might be too restrictive and thus not suitable for the wide range of shoes that your company sells. The alternative would be to design and develop a new in-house system. However, your current IT section has little experience of web-based systems.

a) Write a memorandum to the senior management setting out **THREE** advantages and **THREE** disadvantages of acquiring an 'off-the-shelf' system as opposed to developing a new application in-house using your own staff, bearing in mind the scenario outlined above.

(15 marks)

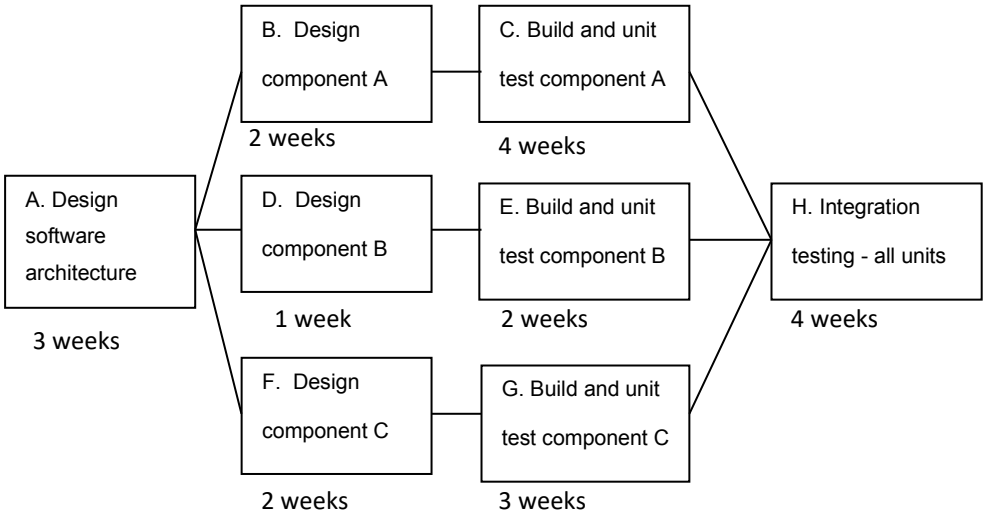
b) A decision has been made to acquire an off-the-shelf package. Describe **FIVE** activities that would now be needed to select and acquire the software and then to set up a fully operational stock system.

(10 marks)

[Turn Over]

A2.

The activity network for the development of a small IT system, which comprises three main software components, is shown below:



A lead software architect always undertakes the software architecture design.

Software developers only carry out the designing, building, and unit testing of software components (only two software developers are available).

A system tester only carries out the integration test.

The weekly rates for these staff are:

Staff type	Weekly rate
Lead software architect	£1,200
Software developer 1	£800
Software developer 2	£600
System tester	£500

a) Explain the process by which staff resources are allocated to the activities identified as needed for a project.

(10 marks)

b) For the project described above, implement the approach you have described in (a) to produce a table/diagram or Gantt chart showing the staff allocated to each activity, and the planned timing of the activity. Note that only two software developers are available. Calculate the staff cost of the project.

(11 marks)

c) Discuss how you might re-plan the project if the lead software architect could also carry out the designing, building, and unit testing of software components.

(4 marks)

[Turn Over]

A3.

a) Documentation is often overlooked at installation. List **FOUR** important documents that will be handed over at go-live and discuss their importance.

(8 marks)

b) Before any system can go live it must be acceptance tested by the users. List and explain **THREE** different areas that are covered during acceptance testing.

(8 marks)

c) Describe **THREE** ways in which the success of a system can be measured after it has become operational.

(9 marks)

[Turn Over]

Section B

Answer any Section B questions you attempt in Answer Book B

B4.

a) Describe **EACH** of the following:

- Feasibility study;
- Requirements analysis;
- Systems design.

(12 Marks)

b) i) Explain the key differences between incremental and iterative development methods.

(5 marks)

ii) Explain the advantages and disadvantages of using incremental development methods in an agile development process.

(6 marks)

iii) Explain **ONE** advantage of using an iterative development approach in an agile project.

(2 Marks)

B5.

a) Describe **FIVE** of the main principles that the ISO 9001 quality management systems standard are based on.

(10 Marks)

b) Explain the purpose of quality assurance procedures and processes.

(7 Marks)

c) Explain what is meant by a 'peer review' and describe **ONE** advantage and **ONE** disadvantage of using a peer review to monitor project quality.

(8 Marks)

B6.

a) A development project is found to be behind in progress. Discuss **THREE** options that a project manager could implement in order to bring the project back on schedule.

(9 marks)

b) Describe **TWO** key techniques that might be used in the early stages of a development project to ensure quality by the identification of defects.

(6 Marks)

c) Explain how the **earned value analysis** (EVA) technique is used in monitoring costs and progress in an IT project.

(10 marks)

END OF EXAMINATION