

BCS THE CHARTERED INSTITUTE FOR IT
BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

IT PROJECT MANAGEMENT

Monday 16th November 2020 – Morning

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

Time TWO hours

Answer any **Section A** question you attempt in **Answer Book A**

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

A1.

- a) Identify **THREE** important factors that might be considered as part of a feasibility study in assessing the business case for a project. Explain why each is important.
(9 marks)
- b) Describe the advantages and disadvantages of **THREE** methods that might be used in the requirements gathering phase of a development project.
(9 marks)
- c) Explain how the iterative process is used in an agile development project.
(7 marks)

A2.

- a) Tuckman and Jensen have suggested that project teams evolve through stages as they work through a project from its beginning to completion. Describe these stages of team evolution.
(15 marks)
- b) Explain the autocratic management style, giving **TWO** examples of how it could be modified to deal with the circumstances of a project.
(10 marks)

A3.

- a) The ISO 25000 series of standards (formerly ISO 9126) deal with the external quality characteristics of a software product. Explain with examples, **FIVE** of the quality characteristics that the standard (or its earlier versions) refers to.
(15 marks)
- b) The capability maturity model defines five levels of an organisation's increasing maturity in its software development process. Describe **EACH** of these **FIVE** levels.
(10 marks)

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

B4.

The sales department in your company, who have their own in-house sales system, are being relocated to new offices where they will have a new server-based sales database system. The IT department have set out an outline plan for the IT aspects of the move, with nine main tasks (with estimated durations):

Task	Description	Duration (Weeks)
A	Order and deliver the new database system and server	4
B	Design and install the network infrastructure	7
C	Order, deliver and install new PCs and printers	9
D	Test the database system, server and network	2
E	Test the PCs with the server and network	3
F	Copy existing sales data to the new database system	3
G	Copy other existing PC software to the new PCs	2
H	Test all software and database on the new PCs and server	1
I	Train users	2

Tasks A, B, C and I can be undertaken at the same time, but A and B must be completed before D can start. Tasks C and D must be completed before E can begin. E must be completed before F and G can start. F and G both must be completed before H can start. I must follow H.

- a) Draw a network diagram (Activity-on-Node) for this project, showing (on the diagram) the earliest and latest start dates, the earliest and latest finish dates, the duration and the float for each task.

Provide a node key explaining the layout and contents of the nodes used in your diagram.

Draw a Gantt chart for the same project tasks, showing **EACH** of these tasks, all dependencies and float, and **EACH** task's duration.

Highlight the critical path on **EACH** diagram.

What is the total duration of this critical path?

(17 marks)

- b) Discuss **TWO** advantages of the Gantt chart and **TWO** advantages of the network diagram.

(8 marks)

[Turn Over]

B5.

You work for a small software company which has won a contract with a new client to design, develop and implement a replacement database system. The client is a medical research organisation and has a very small IT section. Your company has little experience in this business area so has decided to use a new rapid development method for this project. You have been appointed project manager.

- a) Explain the difference between project and business risk. Give **THREE** examples of **EACH** of these two categories of risk that might affect your company when undertaking the IT project described above.
(8 marks)
- b) List and explain the **TWO** factors used in evaluating risk exposure. Explain how **EACH** of these factors might be assessed quantitatively.
(6 marks)
- c) Acting as risk manager, what document would you use to record the key details of all the risks that have been identified for this project? Identify and explain **SIX** of these key details.
(11 marks)

B6.

- a) Explain the main reasons for using the following when developing a new in-house computer system:
 - i) Change control;
 - ii) Configuration management.Highlight at least **TWO** advantages and **ONE** disadvantage of each.
(12 marks)
- b) List and explain briefly the **THREE** major elements of a configuration management system.
(6 marks)
- c) List and briefly explain **FIVE** major stages in the change control process.
(7 marks)

End of Examination