

BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

IT PROJECT MANAGEMENT

Wednesday 28th September 2011 - Afternoon

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 are allowed in this examination.

Section A

Answer Section A questions in Answer Book A

- A1. a) i) Explain how tolerances can aid the control of projects.
(4 marks)
- ii) Describe SIX items that should be included in a regular progress report to the project sponsor.
(6 marks)
- b) Planning and monitoring are the first two steps in performing project control. Explain the steps that follow.
(9 marks)
- c) On a large project, control is often achieved by the use of stages. The project sponsor will make key decisions at the end of a stage. They might also decide to hold an assessment of the project within the actual stage. Describe THREE situations or conditions which would lead to a project assessment during a stage.
(6 marks)
- A2. a) Costs and benefits are two essential sections within a business case. List FIVE other sections that would be contained within a business case.
(5 marks)
- b) List FIVE categories or types of benefits that are associated with an IT project and provide an example for each one.
(10 marks)
- c) List FIVE estimating techniques that can be used to identify costs.
(5 marks)
- d) There are some projects that will be given approval even though the costs exceed the benefits in the business case. Describe ONE example of when this might be legitimate.
(5 marks)

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- A3. a) Draw a standard project organisation chart/structure. **(4 marks)**
- b) Which human or personnel theories would be the most useful in creating a project team? Justify your choice. **(8 marks)**
- c) i) Who is responsible for project success: the project manager or the project executive? **(1 mark)**
- ii) Justify your choice by describing THREE responsibilities of the project manager and THREE responsibilities of the project executive. **(12 marks)**

Section B

Answer Section B in Answer Book B

- B4. a) The phrase “fitness for purpose” is often used when assessing the quality and suitability of a new IT system. The international standard ISO 9126 sets out six standard characteristics by which software quality can be measured. List and explain briefly FIVE of these six characteristics.

(15 marks)

- b) Explain briefly the difference between quality assurance and quality control, giving an example of each.

(6 marks)

- c) List and explain briefly FOUR different quality control activities that can be used to identify and remove quality defects BEFORE the project reaches the testing phase.

(4 marks)

- B5. A small research organisation is extending its operation and database systems to cover the whole country. This will require extended software, additional equipment and more staff – all to be based mainly in the existing offices.

The outline plan for this rapid growth includes the following main tasks:

	Activity description	weeks
A	Confirm the hardware sizing for the extended requirements, the software changes, the number of new staff and the additional equipment required for them	3
B	Order, deliver and install all additional computing and communications equipment	10
C	Modify and extend all software for additional functionality	8
D	Recruit and train new staff	11
E	Capacity testing of extended software on enhanced hardware and communications equipment	1
F	Functional testing of all extended software	2
G	Full acceptance testing all extended software on new hardware;	2
H	Implement fully the extended systems.	1

Tasks B, C and D can all run simultaneously but all are dependent on task A.

Task E is dependent on tasks B and C

Task F is dependent only on task C

Task G is dependent on tasks E and F.

Task H cannot start until tasks D and G are completed.

- a) Draw a full Activity-on-Arrow diagram for this project, showing clearly the earliest and latest start and end dates, and the float, for each node. No start or end nodes are required.

Highlight and name the critical path, together with the minimum duration for the project.

(9 marks)

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- b) The staff recruitment and training (task D) takes two weeks longer than planned to be completed. Identify and explain briefly the resultant changes to the Activity-on-Node diagram and critical path.
(3 marks)

- c) Draw a Gantt chart for the revised project, incorporating the change to task D as specified in part (b). Show all task durations, dependencies, floats and the critical path.
(7 marks)

- d) Identify and explain TWO advantages of using a Gantt chart in comparison with an Activity-on-Node network diagram, and TWO advantages of using a network diagram compared with a Gantt chart.
(6 marks)

- B6. a) Explain the main purpose of using a configuration management system:
- i) during an IT systems development project;
 - ii) after the system has been installed when further software maintenance will need to be undertaken.

List and describe the THREE main elements of a configuration management system, and explain how they would be used during the project development phase (i) above.
(10 marks)

- b) Identify and describe at least FIVE different details held when defining a configuration item.
(7 marks)

- c) There are five stages in a change control system:
- submit the request for change
 - review the request for change
 - assess the feasibility of the requested change
 - consider the request, and decide whether to accept or reject
 - implement the accepted change
- i) Identify the people (or groups of people) who should be involved in each of these stages
- ii) Identify and explain in which of these stages the configuration management system should be referred to or updated.
(8 marks)