

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

**IT PROJECT MANAGEMENT**

Wednesday 17<sup>th</sup> April 2024 – 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 are allowed in this examination.

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**Section A**  
**Answer Section A questions in Answer Book A**

**A1.**

- a) Risk assessment and management are essential aspects of project management.
- i. Discuss in detail what is meant by the term risk management and why it is important.
  - ii. When should risk management occur? Justify your answer.

**(8 marks)**

- b) You work for a Sri Lankan software house that is developing a customised website for a company in Colombo that sells specialist Ceylon tea. The company are aggressively expanding and want to market their products more effectively worldwide.

They previously had a simple static website, but now wish to provide a more extensive site including e-commerce, together with detailed information about specialist teas and an advice service. They have no experience of e-commerce; they are not sure in what form the advice service should operate and they keep changing their minds about parts of the specification and budget available for the project.

Identify **FIVE** project risks that you need to consider.

**(5 marks)**

- c) To manage the risks, you will need to calculate risk exposure and prioritise the risks.
- i. Define the term Risk Exposure and explain in detail the difference between qualitative and quantitative methods of calculating it.
  - ii. Which method would you recommend for this project? Justify your answer.

**(8 marks)**

- d) Using **TWO** examples of the risks identified in part b), explain clearly what actions you would take to manage them.

**(4 marks)**

**[Turn Over]**

## A2.

You work for a manufacturing company that has recently taken over one of its specialist suppliers to reduce the risk of supply problems.

You have discovered that the company has a legacy stock database system which cannot communicate with the parent company systems and runs on an ageing server and unsupported Operating System. It has therefore been decided that a new, compatible database will be installed, and the data migrated to SQL Server on Windows Server 22.

You have been appointed project manager. The new system specification has been approved.

You have been allocated a project team of three database analysts, three development programmers and one tester, with selected users being made available for acceptance testing.

You have drawn up an outline project schedule for the development and implementation phases to include the following tasks and related staff allocations:

	Activity	weeks
A	Define new database functionality	4
B	Define new data entry and migration requirements	3
C	Define new data analysis and report outputs	3
D	Define database migration rules	2
E	Code and test new database tables and schema	2
F	Code and test data entry and migration routines	2
G	Code and test data analysis and report routines	4
H	Code and test database migration routines	1
I	Test and trial the data migration routine	1
J	Data quality and cleaning	3
K	Acceptance testing	3

Tasks A, B, C and D can all start at the same time.

Task E is dependent solely on task A.

Task F is dependent solely on task B.

Task G is dependent solely on task C.

Task H is dependent solely on task D.

Task I is dependent solely on task H.

Task J cannot start until tasks E, F, G, and I are completed.

Task K is dependent solely on task J.

- a) It has been suggested that a Gantt chart or Activity Network diagram could be useful for this project. Compare and contrast a Gantt chart with an Activity Network diagram.

**(10 marks)**

- b) Draw a full Activity on Node diagram for this project, showing clearly the earliest and latest start and end dates (as week numbers), and the float, for **each** node. Include start and end nodes.

**(8 marks)**

c) Explain what is meant by the term critical path, highlight it on your network and state the minimum duration for the project.

**(3 marks)**

d) Discuss how the Activity on Node diagram can be used to help identify resource requirements. You should include an explanation of resource type and resource clash in your answer.

**(4 marks)**

**A3.**

a) It is important to monitor project finances.

- i. Explain what information you would use to monitor and control project finances.
- ii. Explain what is meant by a cumulative/ expected expenditure chart and discuss its role in the process.

**(9 marks)**

b) If a report shows the project will significantly exceed budget, explain, with reasons, who has the responsibility to take action to control the over-spend and identify **THREE** typical mitigation responses.

**(6 marks)**

c) With the aid of an example diagram, explain in detail what is meant by Earned Value Analysis (EVA).

**(10 marks)**

**[Turn Over]**

**Section B**  
**Answer Section B questions in Answer Book B**

**B4.**

- a)
- i. The ISO 9001 quality management system is based on seven principles. Describe each of the **SEVEN** principles.
  - ii. Explain why ISO 9001 should not be relied upon as a measure of an acceptable level of quality for a product.
  - iii. Explain why an ISO 9001 accredited supplier might be preferred to a supplier that is not ISO 9001 accredited.
- (15 marks)**
- b) Explain what software quality assurance is and say how it differs from software quality control.
- (6 marks)**
- c) Describe **TWO** ways in which the Peer Review method is used in software quality control.
- (4 marks)**

**B5.**

- a) Describe **THREE** techniques that might be used in the requirements elicitation stage of a project to replace a business application.
- (6 marks)**
- b) Describe **FIVE** desirable properties that a well-defined set of software project objectives should possess.
- (7 marks)**
- c) Explain the following three methods of going live with the implementation of a new IT project and state a possible disadvantage in using the method.
- i. Parallel running
  - ii. Phased take-on
  - iii. Pilot changeover.
- (12 marks)**

**B6.**

- a) Explain the first **FOUR** stages in the Tuckman-Jensen model of project team evolution.

**(12 marks)**

- b) Explain the function and responsibilities associated with the following three roles within a project organisational framework.

- i. Project Board
- ii. Project Manager
- iii. Team Leader.

**(13 marks)**

**END OF EXAMINATION**