BCS The Chartered Institute for IT

THE BCS PROFESSIONAL EXAMINATIONS

BCS Level 5 Diploma in IT

IT PROJECT MANAGEMENT

Tuesday 27th April 2010

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

Time: TWO hours

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

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.*

Section A

Answer Section A in Answer Book A

A1.

The Tyre-It Company sells and fits tyres from a number of different manufacturers to a wide variety of motor vehicles. This is a very competitive market and it is important that the company always has a ready stock of the most popular car tyre brands. It must also be able to answer immediately any telephone enquiry for the price and number of tyres of a specific type available at that time.

In addition, good management information and the strict control of costs are essential in order for the organisation to maintain its competitive position.

It has become clear that the existing computer-based stock system, which was developed by the in-house IT section, is no longer adequate and a decision has been made by the Tyre-It senior management to adopt a new more advanced stock recording and enquiry system.

Some major tyre manufacturers offer such systems as an off-the-shelf (OTS) package, but the Tyre-It management are concerned that such packages might be too restrictive and thus not suitable for the wide range of tyres that it sells. The alternative would be to design and develop a new in-house system. However, the IT section has no experience of on-line or cost-based systems.

a) Write a memorandum to the Tyre-It management setting out the advantages and disadvantages of acquiring an 'off-the-shelf' system as opposed to developing a new application in-house using its own staff, bearing in mind the scenario outlines above

(15 marks)

b) A decision has been made to acquire an off-the-shelf package. Describe the activities that would now be needed to select and acquire the software and to set up a fully operational stock system. **(10 marks)**

A2.

A well-known major professional institution has decided to replace its existing, in-house membership database with a package-based system. It has drawn up a short-list of four off-the-shelf packages, but none meet its outline requirements completely. An outline plan for the remaining tasks in this project has been drawn up as follows:

Task	**Description**	**Duration**
A	Compare the four packages and select one	6 weeks
B	Amend this selected package	10 weeks
C	Specify and design data for system testing	6 weeks
D	Design and prepare a user training course	4 weeks
E	Design and develop a data migration program	8 weeks
F	Carry out system testing	3 weeks
G	Run the user training course	4 weeks
H	Test the data migration program	4 weeks
I	Carry out user acceptance testing	3 weeks
J	Implement the replacement database system	1 week

Tasks B, C, D and E are all dependent on task A.

Task F cannot start until tasks B and C are both completed.

Task G cannot start until tasks B and D are both completed.

Task H is dependent solely on task E.

Task I cannot start until tasks F, G and H are all completed.

Task J is dependent solely on task I.

b) Draw an Activity on Node diagram for this project, showing all dependencies and the earliest start time, latest finish time, duration and float for each task.

Highlight the critical path and calculate its duration.

(12 marks)

a) At the end of task A it is realised that task B can be reduced from 10 to 6 weeks, but task F should be extended from 3 to 5 weeks.

Re-calculate ALL the earliest and latest start times, and floats to reflect these two changes and identify any changes to the critical path.

(8 marks)

b) In some circumstances a Gantt chart might be used as an alternative to a network diagram.

i) Give TWO advantages, with a brief explanation of each, of using a Gantt chart when compared with a network diagram.

ii) Give TWO advantages, with a brief explanation of each, of using a network diagram when compared with a Gantt chart.

(5 marks)

A3.

Using the example of the Tyre-It Company set out in Question 1, assume that the decision has been made to use the in-house IT team to develop and install a completely new custom-built system. The system requirements have been agreed with the main user departments and an outline plan of design, build, test and implementation activities, together with resource requirements, has been produced.

a) Explain the process by which the project manager would assign staff resources to the activities of the project.

(12 marks)

b) Identify any amendments that may be required to the original plan as a result of this resource allocation.

(4 marks)

c) Identify any other factors, not already discussed above, which the project manager may need to consider when creating this project team.

(9 marks)

Section B

Answer Section B in Answer Book B

B4.

a) Why do we carry out monitoring and control on a project?

(5 marks)

b) Project managers often have to create routine reports, for example, weekly or monthly. Describe THREE reports that the project manager may have to write that are NOT routine and explain why they need to be written.

(12 marks)

c) In order to decide if your project is on schedule what FOUR key pieces of information must you possess and how do you obtain them?

(8 marks)

B5.

The increased popularity of 'lightweight' project methods, for example Agile, has lead to some people questioning the need for well-established structured methods. There is no method that is always best: each is more appropriate in certain circumstances.

a) To what kind of project is an Agile approach most suited?

(3 marks)

b) List FOUR benefits of prototyping. **(8 marks)**

c) What FOUR essential things do you need to run a JAD (Joint Application Development) workshop? **(8 marks)**

d) What is meant by the expression 'time-boxing'? **(6 marks)**

B6

a) Identify THREE types of ‘go-live’ strategy that could be used on a project.

(6 marks)

b) Documentation is often overlooked at installation. List FOUR important documents that are will be handed over at go-live.

(4 marks)

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

(3 marks)

d) Choose ONE of the three listed and describe it in more detail.

(6 marks)

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

(6 marks)