

**BCS THE CHARTERED INSTITUTE FOR IT**

**BCS HIGHER EDUCATION QUALIFICATIONS  
BCS Level 5 Diploma in IT**

**IT PROJECT MANAGEMENT**

**Friday 29<sup>th</sup> September 2017 – 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 <b>non-programmable</b> calculators are allowed in this examination.
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**Section A  
Answer Section A questions in Answer Book A**

- A1. Agile based projects make use of combined iterative and incremental practices.
- a) Describe the process of iterative design in an agile project. **(9 marks)**
  - b) Describe the process of incremental builds in an agile project **(9 marks)**
  - c) What type of project would be most suited to agile development? **(7 marks)**
- A2. a) Describe the steps commonly used in estimating project effort by analogy. **(10 marks)**
- b) Describe any THREE disadvantages when attempting to estimate by expert judgement. **(9 marks)**
  - c) Describe any TWO productivity drivers you might consider when estimating the effort required to complete an IT project. **(6 marks)**
- A3. a) Cost monitoring is used in project progress monitoring and control. In relation to project monitoring explain the following terms:
- i) Planned Value (PV) **(4 marks)**
  - ii) Actual Cost (AC) **(4 marks)**
  - iii) Schedule Performance Indicator (SPI) **(4 marks)**
  - iv) Earned Value (EV) **(4 marks)**
  - b) Explain the basic approach in using any function point analysis technique for measuring development project size. **(9 marks)**

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

- B4.** Your company has decided to buy in and install an off-the-shelf (OTS) stock control package to replace the existing manual system. This will need new computer equipment and network cabling throughout the offices. You are to manage this project. You have drawn up an outline project plan to include the following main tasks:

A	Interview stock control staff, draw up and agree a list of main requirements	6 weeks
B	Assess alternative OTS packages and select the most appropriate.	6 weeks
C	Specify and order all the required new hardware and communications.	3 weeks
D	Test and install all the new hardware and equipment.	9 weeks
E	Modify and test the package software.	15 weeks
F	Install the package software	1 week
G	Specify & obtain the stock data required to implement the system	6 weeks
H	Draw up a training plan.	3 week
I	Train the users	9 weeks
J	Draw up an acceptance test plan test	3 weeks
K	Acceptance testing	4 weeks
L	Load data and implement the new system.	3 week

- a) Draw a work breakdown structure (WBS) diagram for the project, showing all the planned tasks. This WBS should contain at least two levels. Explain the main differences between this WBS and a product breakdown structure (PBS) diagram for the same project. **(7 marks)**
- b) The dependencies between the 12 tasks listed above are:
- B depends on A
  - C, E, H and J all depend on B
  - D depends on C
  - F depends on D and E
  - G depends on E
  - I depends on H
  - K depends on F, I and J
  - L depends on G and K

Draw a full Gantt chart for the project, to show all dependencies, free float and highlighting the critical path. **(10 marks)**

- c) At the end of week 24, tasks A, B, C, D, H, I and J have been completed on schedule, and task E is continuing on schedule. However it is realised that task F will now take 4 weeks, still starting from week 28.

Re-draw the Gantt chart to reflect and display this progress to date, making any necessary changes, and highlight the critical path. **(8 marks)**

- B5 a) List FIVE ways in which you can find out the users' requirements for a system.  
**(5 marks)**
- b) Identify TWO situations when you should NOT involve the users in requirements gathering. Explain why you would not want to involve them.  
Identify and explain TWO other situations when it is important to involve the users.  
**(8 marks)**
- c) Explain the purpose, the role of the users and the project documentation/products that should be used in each of the testing phases of a project listed below.
- (i) Unit testing
  - (ii) System Testing
  - (iii) Acceptance Testing
- (12 marks)**
- B6. a) Draw a template for a risk register or risk log showing the key headings across the top of the register/log.  
**(11 marks)**
- b) Your company creates software for hospital equipment and its best-selling product is used to monitor heart patients. It is an expensive product but hospitals are always happy to pay a high price because of its quality. A new improved version is due to be rolled out in the next 12 months. This new version will save 10 lives a month. As project manager you have identified a number of risks. The key risk is that a major holiday period is due at a critical stage of the project when many staff will be requesting leave. Therefore there is a risk that shortages of staff will cause a delay.  
Explain THREE appropriate actions that you could take to deal with this risk of possible staff shortages.  
**(6 marks)**
- c) Identify the FIVE standard types of risk strategy (mitigating action) that could be used to manage an individual risk.  
To which of these types of strategy do each of the actions that you have described in part b belong?  
**(8 marks)**