BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

IT PROJECT MANAGEMENT

Friday 8th October 2021 – 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.

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A1.

a) Explain the following three project change control processes;

   i)   Request for change (RFC);

(3 marks)

   ii)   Review request for change;

(3 marks)

   iii)   Feasibility of change assessment.

(3 marks)

b) Describe **TWO** advantages and **TWO** disadvantages of using a bought in off-the-shelf software package for use in a business change project.

(7 marks)

c) Explain **FOUR** of the criteria you would use in selecting customisable software application components for integration into an existing software build project.

(9 marks)

[Turn Over]

A2.

A project is being planned for the provision of a specialist product help-desk for three product lines. The plan has identified a range of activities labelled from A to N.

- The initial activities A, B, C, and D are in parallel.
- Activities A, B, and C provide technical documentation for each line.
- Activity A has a duration of 5 days.
- Activities B and C have durations of 6 days each.
- Activity D is the staff recruitment process and has a duration of 30 days.
- Activity E depends on activities A, B, and C.
- Activity E provides workflow instructions for the product lines and has a duration of 3 days.
- Activities F, G, and H run in parallel and provide online software for the product lines and are dependent on activity E.
- Activities F and G have durations of 6 days each.
- Activity H has a duration of 9 days.
- Activity I provides third-party data from an external supplier and is dependent on activity F.
- Activity I has a duration of 4 days.
- Activity J provides in-house data and is dependent on activities G and H.
- Activity J has a duration of 2 days.
- Activities K and L run in parallel and depend on activity I, they provide legal and compliance services.
- Activities K and L have a duration of 4 days each.
- Activity M provides staff resource it is dependent on activity D.
- Activity M has a duration of 7 days.
- Activity N is the end node. It provides for training, testing and go-live preparation.
- Activity N is dependent on activities K, L, and M.
- Activity N has a duration of 7 days.

a)
  i) Draw an Activity on Node diagram to show the relationships between the activities listed above.

  (6 marks)

  ii) For each activity node, calculate the earliest start, earliest finish, latest start, and latest finish and record the values in an activity box or table.

  (10 marks)

  iii) Identify the nodes in the critical path of the network.

  (2 marks)

b) The third-party data supplier at node I has now revised the duration of activity I from the original 4 days to 20 days. Explain the consequences of this change for the critical path and subsequent management of the overall project.

  (7 marks)

A3.

a) Explain ways in which the product quality approach differs from the process quality approach to software quality management.

(6 marks)

b)

i) Explain the underlying principles of the capability maturity model (CMM).

(4 marks)

ii) Describe each of the **FIVE** levels of the capability maturity model (CMM).

(15 marks)

[Turn Over]

Section B
Answer Section B questions in Answer Book B

B4.

a) Explain the role of a project manager.

(5 marks)

b) Explain the strengths and weaknesses of the personality type of the following three of Belbin's key team roles:

i)   Shaper;

(4 marks)

ii)   Resource investigator;

(4 marks)

iii)   Monitor evaluator.

(4 marks)

c) Explain ways in which job satisfaction factors that affect individual motivation can be taken into account in job design that enhances motivation of individual members within a team.

(8 marks)

B5.

a) Describe the basic steps in the project monitoring and control cycle.

(6 marks)

b) Explain the advantages and disadvantages of using the following three control strategies to bring a project that is behind in actual progress back on its planned progress.

i)   Increase resources;

(4 marks)

ii)   Extend the timeframe;

(4 marks)

iii)   Reduce project scope.

(4 marks)

c) Explain and give an example of how a cumulative resource chart can show project progress.

(7 marks)

B6.

a) Explain the advantages and disadvantages of using the following two qualitative methods of assessing specific project risk.

    i)   Expert opinion;

                                                (4 marks)

    ii)   Brainstorming.

                                                  (4 marks)

b) Describe each of the following three risk terms

    i)   Risk impact;

                                                (3 marks)

    ii)   Risk exposure;

                                                  (3 marks)

    iii)   Risk proximity.

                                                  (3 marks)

c) Explain what generic software risks are and state why generic risk lists are not regarded as useful in assessing specific project risks.

                                                (4 marks)

d) Explain how a probability impact grid can be used to prioritise project risks.

                                                (4 marks)

End of Examination