BCS International Diploma in Solution Development Syllabus

Version 2.2
January 2015

Contents

Change History

Any changes made to the syllabus shall be clearly documented with a change history log.
This shall include the latest version number, date of the amendment and changes made.
The purpose is to identify quickly what changes have been made.

Version Number	Changes Made
Version 2.2 October 2014	Updated language requirements for additional time and use of dictionaries.
Version 2.1 June 2012	Added the word 'International' to the qualification title
Version V2.0 May 2012	Removed references to ISEB. Added in Section 2.8 and Section 3. Added more to Sections 3.1 – 3.6. Removed the reference to IT Architecture.
Version 1.2	Updated logos

Rationale/Background

The oral examination for the BCS International Solution Development Diploma is taken by candidates on successful completion of a set of written examinations. It focuses on the application of their knowledge and also provides an opportunity to assess their interpersonal and problem solving skills. This is the highest level qualification within the solution development section of the PDS Certifications qualifications portfolio.

Aims and Objectives

The objective of the oral examination is to provide an holistic view of the candidates skills and to give them an opportunity to demonstrate their application of their abilities in a controlled environment.

Target Group

This qualification is aimed at practising solution developers and professionals from related disciplines, who wish to gain a detailed understanding of solution development best practice.

Entry Criteria

The entry criteria for this examination are:

- Examination passes in the BCS Certificates in Systems Development Essentials and Systems Modelling Techniques
- An examination pass in one of the knowledge-based specialist modules defined within the syllabus
- An examination pass in one of the practitioner specialist modules defined within the syllabus.

At least one of these examination passes must have been achieved within 12 months of the date of the oral examination unless an exemption has been agreed with BCS. Dispensation will normally only be given for candidates serving in the Armed Forces who have been unable to take the Oral Examination due to work commitments.

Structure of the Examination

The examination is conducted by two oral examiners and will take in the region of 50 minutes. The questions are concerned with the application of the solution development techniques and approaches studied in the individual modules passed by each candidate. No books or other learning materials can be taken into the examination by the candidate.

Objectives of the Oral Examination

The objectives of this oral examination are:

- To assess the candidate's level of knowledge of the solution development topics defined in this syllabus
- To assess the candidate's ability to apply the solution development techniques defined in this syllabus
- To assess the candidate's personal qualities against those required of a practising solution developer

Examination and Training Provider Information

This qualification is examined and awarded by BCS and there is no training pre-requisite for the written or oral examination. However, where the oral examiners identify omissions or errors in the training provided by accredited BCS Examination Providers or BCS Training Organisations, feedback regarding such issues will be provided to the relevant provider/organisation. Form BSD11 is the BCS document used to provide this feedback.

Candidate Information

Candidates are not required to attend training courses prior to sitting the oral examination. However, it is recommended that candidates revise thoroughly the subject areas identified in the syllabus content below. Although attendance at an Oral Examination Preparation Day offered by the Provider is not mandatory it is strongly recommended that candidates attend one so that they get a better understanding of what the actual oral examination will be like. It will also help candidates understand the rationale of oral examiners questioning.

Additional time for candidates due to a disability

Candidates who have a disability which may impact their ability to take and pass the oral interview may be eligible for additional time. An example would be if a candidate has a stammer. Please advise BCS at the time of booking the oral examination

Candidates can request extra time for an oral examination if they have a stammer or stutter. BCS will try to allocate the final interview slot of the day so that there are fewer time restrictions. Please let us know as early as possible so that the best time slot can be allocated. In exceptional circumstances, we may consider written responses to the interviewer questions.

1 Syllabus Content and Learning Objectives

The syllabus is structured into sections relating to major subject headings and numbered with a single digit section number. The syllabus content identifies the subject areas and topics to be examined. The knowledge (K) level from Bloom's Taxonomy is shown for each subject area. Bloom's Taxonomy is explained in section 4.3 of this syllabus.

1.1   Solution development principles (K Level 4/5)

- The rationale for solution development
- The holistic nature of solution development including systems development
- Relationship between solution development and other disciplines
    - Business analysis
    - Testing
    - Service management
    - Solution architecture
    - Project management

1.2   Solution development lifecycles (K Level 4/5)

- Solution development lifecycles
    - Waterfall
    - v-model
    - iterative
- Solution development practices
    - bespoke – including evolutionary/Agile
    - COTS
    - component based
- Roles and responsibilities
- Quality assurance including static testing
    - quality reviews
    - post implementation review
    - service level agreements)

Note Each candidate will have studied a specific development practice and questions related to sections 3.3 to 3.5 of this syllabus will be specific to this selected approach.

1.3   Solution development techniques (K Level 4/5)

- Fact finding and system investigation techniques
- Prioritisation
- Prototyping
- Escalation of issues
- Requirements engineering
    - requirement types
    - documenting requirements

1.4 Systems modelling techniques (K Level 4/5)

- Three representative models of a system (data, process and events)
- Rationale for logical and physical models
- Structured or object oriented/UML approaches
- Rationale for top down and bottom up model development
- Cross-checking of models with each other

1.5 Design and deployment (K Level 4/5)

- Controls and security
- Testing
- Implementation and deployment approaches
- Release management, configuration and version control
- Maintenance and evaluation
- CASE, CAST and application lifecycle tools

1.6 Knowledge-based specialism (K Level 2/3)

- The role and responsibility of the solution developer within the chosen module
- Relevance of the selected module to solution development
- Solution development within the lifecycle of the chosen specialism
- Techniques within the chosen module
- Professionalism and solution development
    - The role of the BCS in professional development of solution development
    - The importance of a code of conduct/professional standards

1.7 Practitioner specialism (K Level 2/3)

- Relevance to the solution development role
- Relevance to solution developer responsibilities
- Description of the chosen approach and techniques
- Application of the chosen approach and techniques

Terminology Used

The terminology used in the oral examination will conform to that adopted in BCS publications on related disciplines such as Business Analysis and Project Management.

Other Syllabuses which support this syllabus

The oral examination is based upon the latest syllabuses published by BCS. The syllabuses for the following qualifications provide the basis for the topics examined in the oral examination:

Core modules

- BCS Certificate in Systems Development Essentials
- BCS Certificate in Systems Modelling Techniques

Knowledge-based specialist modules – one selected for each oral examination

- BCS Foundation Certificate in Systems Development
- BCS Intermediate Certificate in Enterprise & Solution Architecture
- ISTQB-BCS Foundation Certificate in Software Testing
- BCS Foundation Certificate in IT Service Management

Practitioner specialist modules – one selected for each oral examination

- BCS Systems Design Techniques (renamed from the Systems Design and Implementation Techniques)
- BCS Business Analysis Essentials
- BCS Practitioner Certificate in Enterprise & Solution Architecture
- BCS Integrating off-the-shelf Software Solutions

Additional Information

Type	Oral
Duration	50 minutes. Candidates will be able to request additional time if they have a disability that would impact you during an oral examination such as a stammer.
Pre-Requisite for course and/or exam	Candidates must have passed written examinations in the two core modules, one knowledge-based specialist module and one practitioner module.
Invigilated/Proctored	No. Conducted by two oral examiners.
Closed	Yes, no reading material is allowed during the oral interview.
Pass Mark	Pass or fail
Delivery	Interview by two oral examiners

Reading List

Title: Introducing Systems Development
Author: Steve Skidmore and Malcolm Eva
Publisher: Palgrave Macmillan
Publication Date: August 2003
ISBN: 0333973690

Title: Systems Analysis and Design (2nd Edition)
Author: Donald Yeates and Tony Wakefield
Publisher: FT Prentice Hall
Publication Date: September 2003
ISBN: 0273655361

Title: Writing Better Requirements
Author: Ian F Alexander and Richard Stevens
Publisher: Addison-Wesley
Publication Date: July 2002
ISBN: 0321131630

Title: Scenarios, Stories and Use Cases
Author: Ian Alexander and Neil Maiden
Publisher: John Wiley and Sons
Publication Date: August 2004
ISBN: 0470861940

Title: User Centred Design volume of Business Systems Development with SSADM
Author: CCTA (now OGC)
Publisher: Stationery Office Books (now: The Stationery Office TSO)
Publication Date: September 2000
ISBN: 978-0113308767

Title: User Centred Design volume of Business Systems Development with SSADM
Author: CCTA (now OGC)
Publisher: Stationery Office Books (now: The Stationery Office TSO)
Publication Date: September 2000
ISBN: 978-0113308736

Title: Data Modelling volume of Business Systems Development with SSADM
Author: CCTA (now OGC)
Publisher: Stationery Office Books (now: The Stationery Office TSO)
Publication Date: September 2000
ISBN: 011330871X

Title: Systems Analysis and Design: A comparison of Structured Methods
Author: Dot J Tudor and Ian J Tudor
Publisher: Palgrave Macmillan
Publication Date: June1997
ISBN: 033372139X

Title: DSDM: Business Focuses Development (2nd Edition)
Author: DSDM Consortium with Jennifer Stapleton
Publisher: Addison Wesley
Publication Date: November 2002
ISBN: 9780321112248

Title: Agile Software Development with Scrum
Author: Ken Schwaber and Mike Beedle
Publisher: FT Prentice Hall
Publication Date: October 2001
ISBN: 978-0130676344

Title: UML 2 and the Unified Process (2nd Edition)
Author: Jim Arlow and Ila Neustadt
Publisher: Addison-Wesley
Publication Date: June 2005
ISBN: 978-0321321275

Title: Object – Oriented Systems Analysis and Design Using UML
Author: Simon Bennett, Steve McRobb and Ray Farmer
Publisher: McGraw Hill
Publication Date: July 2006
ISBN: 978-0077110000