

ISO 20000 Information Technology Service Management Systems Professional

Syllabus



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The Experts in certifying Professionals

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1. Introduction

ISO/IEC 20000: IT Service Management (ITSM) is the recognized International standard, which defines the requirements for a service provider to deliver managed services of an acceptable quality for its customers. This standard is framework independent. As Information Technology (IT) becomes more vital to organizations seeking to achieve strategic goals on a daily basis, top performing IT service providers need to demonstrate world class service capabilities aligned to strategic goals. The ISO/IEC 20000 standard for IT Service Management allows an organization to demonstrate achievement of excellence and compliance with global best practices for quality in IT Service Management.

PEOPLECERT's ISO 20000 Professional level qualification covers the **knowledge** required for a candidate to prove a solid understanding of the content and requirements of the international standard, **ISO/IEC 20000: IT Service Management** as well as the **skills** to apply and/or implement the **practical aspect** of the standard. In short, the Professional certification covers the knowledge required to gain an **understanding** of the **content** and **requirements** of the international standard ISO/IEC 20000: IT Service Management as well as the **skills** required to successfully apply and implement all the practical content of the standards, for anyone involved in any IT Service Management implementation or improvement activity. **PEOPLECERT's ISO 20000 Professional** level qualification is also the first step in achieving the **Auditor** or the **Consultant** level of certification, since after successfully passing the Professional level of this qualification an additional level of certification can be achieved depending on which supplemental certification is achieved (Peoplecert's ISO 19011 or Peoplecert's ISO 10019 plus a Personal Attributes Assessment Test).

It is **recommended** that candidates attempting this level of the certification possess fundamental knowledge of IT service management principles and processes. It is **mandatory** that candidates at this level of certification attend associated accredited training course and hold PEOPLECERT's ISO 20000 Foundation level certificate, ITIL Foundation Certificate or other equivalent.

2. Target Group/Audience

This qualification is the **second level** of the ISO/IEC 20000 certification scheme provided by Peoplecert, and is aimed at anyone working within a service provider organization (internally or externally) who may require to have and demonstrate a solid **knowledge** and **understanding** of the **ISO/IEC 20000 standard** and its **practical content**. The certification can also cater for candidates seeking certification at a highly practical and not only theoretical level in regards to Service Management System implementation activities based on ISO/IEC 20000 and or candidates who need to prove not only their understanding of the subject but also their ability to **practically apply** ISO/IEC 20000 within their organization.

This qualification will provide the **Professional** level of knowledge to its holders and will certify that they have a solid understanding of the standard and its practical content, catering for the **advanced** level of knowledge for:

- (a) staff responsible for managing implementation of the standard in a service provider organization
- (b) external or internal auditors¹
- (c) external consultants or managers²

¹ Requires successfully sitting an additional supplemental test on ISO 19011 and a Personal Attributes Assessment Test

² Requires successfully sitting an additional supplemental test on ISO 10019 and a Personal Attributes Assessment Test

This certification will prove that a candidate has sufficient understanding of ISO/IEC 20000 and its **application** in order to be able to analyze and apply their knowledge and competencies onto a wide range of activities that would support organizations in achieving and/or retaining ISO/IEC 20000 certification. A lower level of knowledge is covered in the previous level (Foundation) of the ISO 20000 certification scheme provided by PEOPLECERT.

3. Learning Objectives

As this is the **Professional** level course, candidates will be introduced to the more advanced principles and elements of the ISO/IEC 20000 standard for IT Service Management as well as the applicability of these elements, and more specifically:

- **ISO/IEC 20000-1:** the formal specification which defines the requirements that must be achieved.
- **ISO/IEC 20000-2:** which describes a code of practice
- **ISO/IEC 20000-3:** which provides guidance on scope definition and applicability of ISO/IEC 20000-1

Holders of PEOPLECERT's ISO 20000: IT Service Management **Professional** Certification will be able to demonstrate their knowledge, ability, understanding and competence in **applying** the standard in terms that they are able to:

- Understand the purpose, use and application of all parts of the standard.
- Know all definitions and principles of quality management services in accordance with ISO/IEC 20000.
- Understand the scope, aims and use of the ISO/IEC 20000 Specification and Code of Practice.
- Explain and apply all requirements set in ISO/IEC 20000-1.
- Understand, create and apply a service management plan.
- Help and advise organizations on the implementation of continual improvement processes.
- Understand, explain and advise on issues regarding applicability, eligibility and scoping.
- Manage incidents from initial identification through to closure and review.
- Know how assessments, reviews and internal audits of IT Service Management systems against the requirements of the standard are used.

4. Examination

The ISO 20000 Professional Certification Exam is designed to validate a candidate's knowledge of the contents, requirements and application of the standard along the ISO/IEC 20000 – IT Service Management certification path. The exam focuses on the following four categories in the cognitive domain of **Bloom's taxonomy**³:

- **Knowledge**
- **Comprehension**
- **Apply**
- **Analyze**

4.1 Entry Criteria/Training Requirements

There are **specific** entry criteria for candidates of the ISO 20000 **Professional** level examination. It is **mandatory** that candidates at this level of certification attend formal and accredited training

³The Bloom's taxonomy defines **six (6)** levels of learning in the **cognitive** domain (know, comprehend, apply, analyze, evaluate, create), which are both sequential and cumulative and move from the simple to the complex. In order to achieve the 6th level of learning, it must be ensured that the previous five levels have been mastered.

on the subject with a minimum duration of **16 hours** and that they hold a PEOPLECERT's ISO 20000 Foundation level certificate, ITIL Foundation certificate or other equivalent. A detailed breakdown of these training hours, per topic area is provided in the syllabus section.

4.2 Assessment Approach

The assessment approach used focuses on the basic categories of Knowledge, Comprehension, Application and Analysis.

Knowledge is defined as recalling previously learned material, from facts to theories and represents the lowest level of learning outcomes in the cognitive domain. Such learning outcomes are turned in assessment objectives that include knowing and recalling such as:

- Common and/or basic terms, definitions, concepts and principles
- Specific compliance requirements and facts
- Processes, procedures and assessment methods

Comprehension is the lowest level of understanding and entails the ability to grasp the meaning of the material taught, including some sort of interpretation, translation or estimation during the process. Such learning outcomes and in turn assessment objectives go beyond simply recalling information and may include:

- Understanding facts, concepts and principles
- Interpreting material (i.e. charts, graphs, text)
- Justifying a Process, procedure and assessment method

Application is a level where candidates need to combine their knowledge and understanding/comprehension on a subject and be able to create an abstraction. More specifically, candidates are expected to apply their knowledge and understanding so that abstractions, general principles, or methods to specific concrete situations are made. Such learning outcomes and in turn assessment objectives go beyond simply recalling information and may include:

- use ideas, principles and theories in new, particular and concrete situations
- being able to choose appropriate procedures, apply principles, use a specific approach or identify the selection of options at a given situation
- apply what is learnt into a new situation
- apply rules, methods, concepts, principles, laws, and theories

Learning outcomes in this area require a higher level of understanding than those under comprehension.

Analysis is the level that goes beyond application as the candidates need to be able to break down information into its component parts so that its organizational structure may be understood and to make inferences. More specifically, candidates need to break down, discriminate, diagram, detect, differentiate and illustrate which are all important tasks at this level of learning and include the previous levels of knowing, comprehending and applying. Such learning outcomes and in turn assessment objectives go beyond knowing, understanding and applying and may include:

- see patterns that they can use to analyze a problem
- develop divergent conclusions by identifying motives or causes
- make inferences
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- find evidence to support generalizations
- identify parts, analyze the relationship between parts, and recognize the organizational principles involved

Learning outcomes here represent a higher intellectual level than comprehension and application

because they require an understanding of both the content and the structural form of the material. The assessment incorporates the above learning outcomes as it uses assessment objectives that cater for the above cognitive domain categories.

4.3 Examination Format

The following table details the examination format:

Delivery	Computer (web) or Paper based
Type	40 Multiple choice questions <i>Single answer, one of four possible answers</i> <i>Each question is awarded one (1) mark</i>
Duration	1 ½ hours (90 minutes) <i>For non-native speakers or candidates with a disability, an additional 30 minutes of extra time is allowed.</i>
Pass Mark	65% (26/40)
Invigilator / Supervisor / Proctor	Yes <i>Physical or Web proctoring</i>
Open Book	No <i>No materials are allowed in the examination room</i>
Prerequisites	Formal Training (16 hours) PEOPLECERT’s ISO 20000 Foundation level certificate (or other equivalent course).
Distinction	N/A

The tests are derived from a regularly updated question test bank (QTB) based on the test specification detailed below. Questions are used interchangeably among test sets. The overall difficulty level of each test is the same with any other test. A candidate is never assigned the same test in the case of multiple examination attempts.

4.4 Detailed Syllabus

The syllabus contains references to the established ISO/IEC 20000 standard and is structured into sections relating to **major subject headings** and numbered with a single digit section number. The **recommended minimum training hours, per Syllabus Category** are also provided in this table.

Note that for the Professional level of certification all questions pertaining to the Knowledge set are **knowledge, understanding, application** and **analysis** items (levels 1 through 4) with emphasis on the two higher levels.

At the end of the training session, allow at least **an extra hour** for the candidates to familiarize themselves with the exam process and the sample questions, for attempting the sample test and/or answering the sample test for better preparation for the exam.

Category	Ref	Knowledge Set
ITSMS-6.1 Introduction	ITSMS-6.1.1	Scope of ISO/IEC 20000
	ITSMS-6.1.2	Recognize industry standards/best practices in Service Management and Quality management systems, such as: ITIL®, SixSigma®, CobiT, ISO/IEC 9000, ISO/IEC 27001
	ITSMS-6.1.3	Differences and relationships between ITIL® and ISO/IEC 20000
Proposed Training Time: 30 minutes		
ITSMS-6.2 Service Management Systems (SMS)	ITSMS-6.2.1	Purpose and use of SMS
	ITSMS-6.2.2	Management's responsibilities
	ITSMS-6.2.3	Governance
	ITSMS-6.2.4	Documentation Management
	ITSMS-6.2.5	Resource Management
	ITSMS-6.2.6	Establish and improve SMS: requirements, planning, implementing, monitoring, maintaining.
	Proposed Training Time: 180 minutes (3 hours)	
ITSMS-6.3 Information security management	ITSMS-6.3.1	Introduction to Information Security Management
	ITSMS-6.3.2	Security policy requirements
	ITSMS-6.3.3	Importance of security's part in the control processes: change and release and deployment management
	ITSMS-6.3.4	Purpose of security control
	ITSMS-6.3.5	Access management for physical and intellectual property
	Proposed Training Time: 150 minutes (2 ½ hours)	
ITSMS-6.4 Design and Transition of Services (new or changed)	ITSMS-6.4.1	Objectives and Requirements
	ITSMS-6.4.2	Design and development
	ITSMS-6.4.3	Transitioning new or changed services
	Proposed Training Time: 45 minutes	
ITSMS-6.5 Service Delivery Processes	ITSMS-6.5.1	Introduction to Processes
	ITSMS-6.5.2	Service Level Management (SLM): concepts and responsibilities
	ITSMS-6.5.3	Requirements for continuity and availability management
	ITSMS-6.5.4	Activities related to monitoring and managing availability
	ITSMS-6.5.5	Budgeting and Accounting
	ITSMS-6.5.6	Financial management
	ITSMS-6.5.7	Capacity management
	Proposed Training Time: 150 minutes (2 ½ hours)	

Category	Ref	Knowledge Set
ITSMS-6.6 Relationship processes	ITSMS-6.6.1	Business Relationship Management (BRM): <ul style="list-style-type: none"> • Documenting and interfacing with relevant parties • Communication with the customer • Customer complaint procedures • Managing service review meetings
	ITSMS-6.6.2	Supplier management: <ul style="list-style-type: none"> • Managing contracts and performance • Roles and relationships with suppliers • Communication with the suppliers • Managing disputes
Proposed Training Time: 75 minutes (1 ¼ hours)		
ITSMS-6.7 Resolution processes	ITSMS-6.7.1	Incident and service request management: restoration of service to the users, handling breaches of service targets, managing the fulfillment of service requests
	ITSMS-6.7.2	Problem management: procedures and activities, management of known errors
Proposed Training Time: 180 minutes (3 hours)		
ITSMS-6.8 Control processes	ITSMS-6.8.1	Configuration management: Scope and information requirements, control of information on CIs
	ITSMS-6.8.2	Change management: change process, emergency change process, schedule of changes
	ITSMS-6.8.3	Release and deployment management: requirements of a release plan, designing and implementing a release
Proposed Training Time: 90 minutes (1 ½ hours)		
ITSMS-6.9 Management system auditing	ITSMS-6.9.1	Defining the scope
	ITSMS-6.9.2	Scope clauses
	ITSMS-6.9.3	Types of audits and assessments
	ITSMS-6.9.4	Roles and responsibilities
	ITSMS-6.9.5	Coverage and governance of the processes
	ITSMS-6.9.6	Internal audit
	ITSMS-6.9.7	Standard application
Proposed Training Time: 60 minutes (1 hour)		

4.5 Test Specification

The examination will consist of **nine (9)** sections with the following structure:

Category	Description	Exam (%)
1	ITSMS-6.1 Introduction	2.5%
2	ITSMS-6.2 Service Management Systems (SMS)	25.0%
3	ITSMS-6.3 Information security management	15.0%
4	ITSMS-6.4 Design and Transition of Services (new or changed)	2.5%
5	ITSMS-6.5 Service Delivery processes	15.0%
6	ITSMS-6.6 Relationship processes	7.5%
7	ITSMS-6.7 Resolution processes	20.0%
8	ITSMS-6.8 Control processes	10.0%
9	ITSMS-6.9 Management system auditing	2.5%
	Total	100%

5. Recommended Reading

- (i) ISO/IEC copy of the standard for this certification/examination
ISO/IEC 20000-1:2005(E) Part 1: Specification. Switzerland, ISO, 2005.
ISO/IEC 20000-2:2005(E) Part 2: Code of Practice. Switzerland, ISO, 2005
ISO/IEC 20000-1:2011(E) Part 1: Specification. Switzerland, ISO, 2011
ISO/IEC 20000-2:2011(E) Part 2: Code of Practice. Switzerland, ISO, 2011
- (ii) Leo van Selm (2008). ISO/IEC 20000 An Introduction. The Netherlands, Van Haren Publishing. (ISBN: 9 789 08753 0815).
- (iii) Jan van Bon and Marianne Nugteren, editors (2006). ISO20000: A Pocket Guide. The Netherlands, Van Haren Publishing.
- (iv) Kunas, Michael (2011). Implementing Service Quality based on ISO/IEC 20000. IT Governance Publishing. (ISBN: 9781849281928).
- (v) Jenny Dugmore and Shirley Lacy (2011). Introduction to the ISO/IEC 20000 Series: IT Service Management. BSI (ISBN: 9780580728464).
- (vi) Ivanka Menken and Gerard Blokdijk (2008). ISO/IEC 20000 Foundation Complete Certification Kit. The Art of Service (ISBN: 978-1921523700).
- (vii) David Clifford (2001). ISO/IEC 20000. An introduction to the global standard for service management. Second edition. UK: IT Governance Publishing.

6. Glossary

Accreditation Body	Assessment organizations that provide certification, testing, and inspection and calibration services. Accreditation by an accreditation body demonstrated competence, impartiality and performance capability of an organization that does audits. Ensures a consistent approach.
Accredited Certification Body	Organization that performs certification audits, commonly referred to as 'professional audit companies' and which has been accredited by an accreditation body.
Availability	Ability of a component or service to perform its required function at a stated instant or over a stated period of time.
Baseline	Snapshot of the state of a service or individual configuration items at a point in time.
Change record	Record containing details of which configuration items are affected and how they are affected by an authorized change.
Code of Practice	A standard that recommends 'good, accepted practice as followed by competent practitioners'.
Compliance	Meeting the requirements in ISO/IEC 20000 (or another national or international standard), as assessed by an internal audit or an organization that is not an accredited certification body or qualified to carry out ISO/IEC 20000 certification audits. Compliance includes 'Self-assessment Audits'.
Configuration item (CI)	Component of an infrastructure or an item which is, or will be, under the control of configuration management.
Configuration management database (CMDB)	Database containing all the relevant details of each configuration item and details of the important relationships between them.
Document	Information and its supporting medium.
Incident	Any event which is not part of the standard operation of a service and which causes or may cause an interruption to, or a reduction in, the quality of that service.
Operational Level Agreement (OLA)	Internal agreement which supports the IT organization in the delivery of services.
Problem	Unknown underlying cause of one or more incidents.
Record	Document stating results achieved or providing evidence of activities performed.
Release	Collection of new and/or changed configuration items which are tested and introduced into the live environment together.
Request for change	Form or screen used to record details of a request for a change to any configuration item within a service or infrastructure.
Service desk	Customer facing support group who do a high proportion of the total support work.
Service level agreement (SLA)	Written agreement between a service provider and a customer that documents services and agreed service levels.
Service management	Management of services to meet the business requirements.
Service provider	The organization aiming to achieve ISO/IEC 20000.
Specification	A standard that sets out 'detailed requirements', using the prescriptive 'shall', to be satisfied by a product, material process or system.