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Your IT Audit and Information Security Partner

CISA Exam Preparation June 2015
Session 6 : 14 April 2015
Starting around 4:45pm …..

Agenda

- Introductions
  - Facilitator
  - Participants

- Recap on prep expected and provisional schedule

- Overview of Chapter 3

- Challenges, Questions and answers

- Next Week

- Questions And contacts

Note : Resources : Additional slide on Frequently Avoided Questions!

Introductions

- Facilitator
- Justin Williams B.Com, B.Compt (Hons), CA(SA), MBA, CISSP, CGEIT, CRISC, CISA
- 1st in the World, CISA Dec 2014
- Director at ITSec
- Previously Head of Risk, Security, Governance and Compliance for Transnet Group

- Participants
- Name
- How was the Chapter
- What was your most challenging activity of the week?

Recap:Prep for Wk 1 of Ch3 (14/4/2015)

- What you need to do
- Read first half (or more) of Chapter 3 **(78 pages)**
- Make notes of things you don't quite understand
- Do the sample questions (at least 20)
- Flag those you get wrong, even if you know why you got them wrong
- Arrive on time (4:45pm Tuesday 14/4/2015)
- At ITSec offices, Forest Office 6, 15 Summit Drive, Sherwood, Durban
- Broadcast live on Google Hangout on Air (check j-j.co.za for link)

- Re-assess
- See how things are going
- See how all doing with the time commitment
- Decide if continue with two weeks per chapter or cover some chapters in one week

Provisional Schedule

10-Mar-15	Introduction (Complete)
17-Mar-15	Chapter 1 The Process of Auditing Information Systems
24-Mar-15	Chapter 1
31-Mar-15	Chapter 2 Governance and Management of IT
07-Apr-15	Chapter 2
14-Apr-15	Chapter 3 Information Systems Acquisition, Development and Implementation
21-Apr-15	Chapter 3
28-Apr-15	Chapter 4 Information Systems Operations, Maintenance and Support (Raniel Misra)
05-May-15	Chapter 4 (Raniel Misra)
12-May-15	Chapter 5 Protection of Information Assets (Raniel Misra)
19-May-15	Chapter 5 (Raniel Misra)
26-May-15	Revision
02-Jun-15	Sample Exam
09-Jun-15	Final Exam Techniques
13-Jun-15	Exam Date

Request to move this earlier

Raniel Misra : Senior Manager : Information Systems Auditing,
Auditor General of South Africa

Weekend sessions have not been added yet. Consider dates

Chapter 3:
Acquisition, Development & Implem.

| Dom	Description	%	Start	End	Pages	Marks/Page
1	The Process of Auditing Information Systems	14%	29	62	33	0,42
2	Governance and Management of IT	14%	78	124	46	0,30
3	Information Systems Acquisition, Development and Implementation	19%	141	219	78	0,24
4	Information Systems Operations, Maintenance and Support	23%	234	290	56	0,41
5	Protection of Information Assets	30%	306	375	69	0,43

Chapter 3 Overview
Acquisition, Development & Implem.

- 6 Task Statements

  3.1 Evaluate the business case for the proposed investments in information systems acquisition, development, maintenance and subsequent retirement to determine whether it meets business objectives.

  3.2 Evaluate the project management practices and controls to determine whether business requirements are achieved in a cost effective manner while managing risks to the organization.

  3.3 Conduct reviews to determine whether a project is progressing in accordance with project plans, is adequately supported by documentation and status reporting is accurate.

  3.4 Evaluate controls for information systems during the requirements, acquisition, development and testing phases for compliance with the organization's policies, standards, procedures and applicable external requirements.

  3.5 Evaluate the readiness of information systems for implementation and migration into production to determine whether project deliverables, controls and organization's requirements are met.

  3.6 Conduct post implementation reviews of systems to determine whether project deliverables, controls and organization's requirements are met.
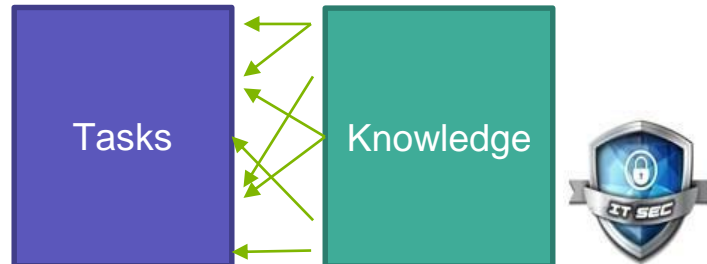
- Group Discussion on these
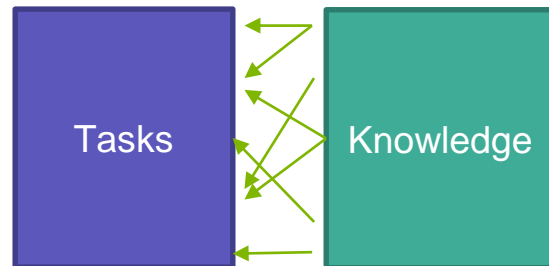
Chapter 3 Overview
Acquisition, Development & Implem.

- 14 Knowledge Statements : Knowledge of …

    3.1 benefits realization practices, (e.g., feasibility studies, business cases, total cost of ownership [TCO], ROI)
    3.2 project governance mechanisms (e.g., steering committee, project oversight board, project management office)
    3.3 project management control frameworks, practices and tools
    3.4 risk management practices applied to projects
    3.5 IT architecture related to data, applications and technology (e.g. distributed applications, web-based applications, web services, ntier applications)
    3.6 acquisition practices (e.g., evaluation of vendors, vendor management, escrow)
    3.7 requirements analysis and management practices (e.g., requirements verification, traceability, gap analysis, vulnerability management, security requirements)
    3.8 project success criteria and risks
    3.9 control objectives and techniques that ensure the completeness, accuracy, validity and authorization of transactions and data

Tasks   Knowledge

Chapter 3 Overview
Acquisition, Development & Implem.

- 14 Knowledge Statements : Knowledge of …

  3.10 system development methodologies and tools including their strengths and weaknesses (e.g., agile development practices, prototyping, rapid application development [RAD], object-oriented design techniques)

  3.11 testing methodologies and practices related to information systems development

  3.12 configuration and release management relating to the development of information systems

  3.13 system migration and infrastructure deployment practices and data conversion tools, techniques and procedures.

  3.14 post implementation review objectives and practices (e.g., project closure, control implementation, benefits realization, performance measurement)

- Group Discussion on these
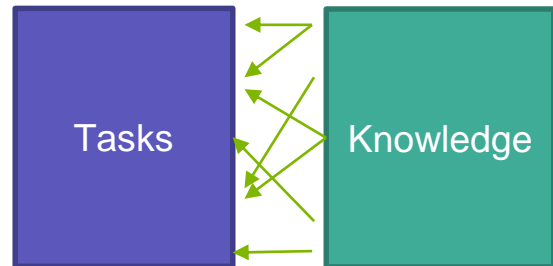
Chapter 3 Overview
Acquisition, Development & Implem.

- 3.2 Benefits Realisation (2 pg)
  - Portfolio/Program management
  - Business case development and approval
  - Benefits Realisation techniques

- 3.3 Project management structure (4 pg)
  - General aspects
  - Project context and environment
  - Project organisational forms
  - Project communication and culture
  - Project objectives
  - Roles and responsibilities of groups and individuals

- 3.4 Project management practices (6 pg)
  - Initiation
  - Project Planning: Software Size Estimation, Function Point Analysis, FPA feature points, Cost Budgets, Software Cost Estimation, Scheduling and Establishing the time frame, Critical Path methodology, Gantt charts, Program Evaluation Review Technique, Timebox Management
  - Project Controlling: Scope Change, Resource Usage, Risk
  - Closing a project

Chapter 3 Overview
Acquisition, Development & Implem.

- 3.5 Business Application Development (17 pg)
  - Traditional SDLC Approach
  - Description of SDLC Phases : 1. Feasibility, 2. Requirements def, 3A. Software selection and acquisition, 3B. Design, 4A. Development, 4B. Configuration, 5. Final testing and implementation, 6. Post implementation review
  - Integrated resource management systems
  - Risk associated with software development

- 3.6 Business Application Systems (18 pg)
  - E-Commerce : Models, Architecture, Risk, Requirements, Audit and Control (Best Practices)
  - Electronic Data Interchange (EDI): General requirements, Traditional EDI, Web-based EDI
  - EDI Risks and Controls
  - Controls in EDI environment : Receipt of inbound Transactions, Outbound transactions, Auditing EDI
  - Electronic Mail: Security issues of email, Standards for email security
  - Point of sale (POS) systems
  - Electronic Banking : Risk management challenges and controls in E-banking
  - Electronic Finance
  - Payment systems : Electronic Money, Checks and Transfer models
  - Integrated Manufacturing systems
  - Electronic Funds Transfer : Controls in EFT environments
  - Automated Teller Machine : Audit of ATM
  - Interactive Voice Response

- 3.6 Business Application Systems (18 pg)
  - Purchase Accounting System
  - Image Processing
  - Artificial intelligence and Expert systems
  - Business Intelligence : Governance
  - Decision Support Systems : Efficiency vs Effectiveness, Decision Focus, DSS Frameworks, Design and Development, Implementation and use, Risk Factors, Implementation Strategies, Assessment and evaluation, DSS common characteristics, DSS Trends
  - Customer Relationship Management
  - Supply Chain management

- 3.7 Development Methods (5 pg)
  - Use of structured analysis design and dev techniques
  - Agile Development
  - Prototyping-Evolutionary Development
  - Rapid Application Development
  - Object-orientated Development
  - Component based Development
  - Web-based Application Development
  - Software reengineering,
  - Reverse Engineering

Chapter 3 Overview
Acquisition, Development & Implem.

- 3.8 Infrastructure development/acquisition practices (6 pg)
  - Project Phases of Physical Architecture Analysis : Review of existing architecture, Analysis and Design, Draft functional requirements, Vendor and product selection, Writing functional requirements, Proof of concept
  - Planning Implementation of Infrastructure : procurement phase, Delivery time, Installation plan, Installation Test Plan
  - Critical success factors
  - Hardware acquisition : Acquisition steps
  - System software acquisition
  - System software implementation

- 3.9 Information Systems Maintenance practices (3 pg)
  - Change management process overview : Deploying changes, Documentation, Testing Changed programs, Auditing program changes, Emergency changes, Deploying changes back into production, Change exposures (unauthorised changes)
  - Configuration management

- 3.10 System development tools and productivity aids (2 pg)
  - Code generators
  - Computer-aided software engineering
  - Fourth-generation languages

Chapter 3 Overview
Acquisition, Development & Implem.

- 3.11 Process Improvement Practices (3 pg)
  - Business process reengineering and process change projects : BPR methods and techniques, BPR audit and evaluation
  - ISO 9126
  - Capability Maturity Model Integration
  - ISO / IEC 15504

- 3.12 Application Controls (3 pg)
  - Input / Origination controls : Input Authorisation, Batch controls and balancing, Error Reporting and Handling
  - Processing procedures and controls : Data Validation and Editing Procedures, Processing Controls, Data File Control Procedures
  - Output Controls
  - Business Process Control Assurance

- 3.13 Auditing Application Controls (3 pg)
  - Flow of Transactions through the system
  - Risk Assessment model to Analyse application controls
  - Observing and Testing user performing procedures
  - Data Integrity Testing
  - Data Integrity in Online Transaction Processing Systems
  - Test Application Systems
  - Continuous Online Auditing
  - Online Auditing Techniques

Chapter 3 Overview
Acquisition, Development & Implem.

- 3.14 Auditing Systems Development, Acquisition & Maintenance (4 pg)
  - Project Management
  - Feasibility Study
  - Requirements Definition
  - Software Acquisition Process
  - Detailed Design and Development
  - Testing
  - Implementation Phase
  - Post implementation Review
  - System Change Procedures and the Program Migration Process

- 3.15 Case Studies (2 pg)

Chapter 3 Challenges

- Specific issues raised by participants on Chapter 3

Questions and Answers

- Which questions did the participants cover in the week?
- Which ones did you get wrong, lets discuss

Prep for Week 2 of Chap 3 (21/4/2015)

- What you need to do
- Read the balance of Chapter 3 **(78 pages)**
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Questions and Contacts

Questions ?

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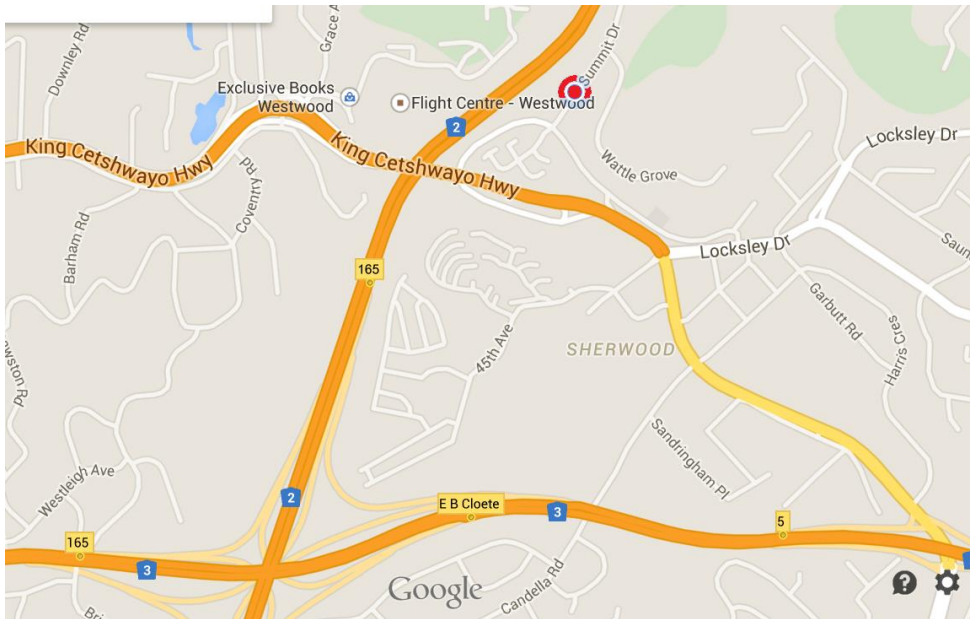+27 82 772 9881 or +27 83 279 0998
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Copies of slides :
www.j-j.co.za
www.itsec.org.za

Location of ITSec

Forest Office 6
15 Summit Drive
Sherwood
Durban

Extra material

Study Materials
ISACA has prepared a variety of study resources in various languages to fully prepare for your CISA Exam. These include primary references, publications, articles, the ISACA Journal and other links.

Online Learning
ISACA eLearning Campus offers a variety of online learning courses for certification exam preparation and continuing professional education.

Review Courses
ISACA chapters in numerous countries offer CISA Review courses. View the Review Course list to determine if there is a course in your area, or contact your local chapter for additional courses. There will be courses in Durban, CapeTown & Jhb if demand exists.

Exam Preparation Community
ISACA created the CISA exam preparation community as a place for current CISA exam registrants to collaborate and study with other registrants within the ISACA environment.

Free online CISA Course
Cybrary has just launched a CISA online course, its free http://www.cybrary.it/

Extra material : FAQ IT Audit

A comprehensive, honest, fresh and rather amusing overview of IT Audit

Worth a read

http://www.isect.com/html/ca_faq.html

CISA Practice Tests (free)

One of the free resources that we make available at AuditScripts.com is a database of free ISACA CISA exam questions. Many auditors use the CISA as a way to validate their information systems audit skills. Many consider the CISA certification an entry point or requirement for anyone in the IS audit field. Because so many people in the AuditScripts community value this certification we created a database of 900 exam questions to help students prepare for the exam. We hope that these questions will help students properly prepare for the exam.

CISA Exam Prep Questions – Chapter #1 (100 Questions Available)
CISA Exam Prep Questions – Chapter #2 (150 Questions Available)
CISA Exam Prep Questions – Chapter #3 (250 Questions Available)
CISA Exam Prep Questions – Chapter #4 (150 Questions Available)
CISA Exam Prep Questions – Chapter #5 (250 Questions Available)

CISA Exam Prep Questions – Complete Exam (900 Questions Available)

http://www.auditscripts.com/free-resources/cisa-practice-tests/

Caution : These are not official ISACA practice questions, use them for additional practice when you have exhausted all of the official ISACA questions you have access to