TASK 1: REVIEW COMPETENCIES & ORDER TEXT BOOKS

The starting point for the preparation for any course is to review the competencies in the domain area. There are two ways by which you can review the competencies. One is through the AAP on the portal. Click on the CIT1, and then the Competencies tab.

This tab will list all the competencies for the course.

You can also find them in Appendix 1 of this document.

Text books to Order:

1) Software Engineering: (Update) (8th Edition) (International Computer Science) (Hardcover) by Ian Sommerville (Author)
   - Hardcover: 864 pages
   - Publisher: Addison Wesley; 8 edition (May 25, 2006)
   - Language: English
   - ISBN-10: 0321313798

2) Database Concepts (2nd Edition) (Paperback) by David M. Kroenke
   - Paperback: 256 pages
   - Publisher: Prentice Hall; 2 edition (March 10, 2004)
   - Language: English
   - ISBN-10: 0131451413

   - Hardcover: 560 pages
   - Publisher: Sybex; 2 Har/Com edition (May 16, 2005)
   - Language: English
   - ISBN-10: 0782144160

- **Paperback**: 712 pages
- **Publisher**: Course Technology; 7 edition (February 27, 2007)
- **Language**: English
- **ISBN-10**: 1423912225
- **ISBN-13**: 978-1423912224


- **Paperback**: 720 pages
- **Publisher**: Course Technology; 3 edition (March 14, 2006)
- **Language**: English
- **ISBN-10**: 1418837199
- **ISBN-13**: 978-1418837198

**Time to Complete**: 1 hour.
TASK 2: REVIEW ASSESSMENT INFORMATION

IMPORTANT: You and your mentor will decide on the date by which you plan to have taken your assessment by during the AAV call. That information will be recorded on the Planned Completion Date on your AAP. Failure to take the assessment by the planned completion date will result in a NOT PASSED on your transcript and count as one attempt at the assessment.

The 12-competency unit assessment, CIT1, is a WGU Developed Objective Assessment.

Details

Number of Questions: 75 Multiple Choice
Time Allowed for the Exam: 2 hours
Passing Score: 57%
Name of the Pre-assessment Exam PACI

Database Administration 11 Questions (15%)
IT Project Management 20 Questions (27%)
Networking Fundamentals 6 Questions (8%)
Operating Environments 8 Questions (11%)
SDLC - Systems Development Life Cycle 14 Questions (19%)
Systems Analysis Fundamentals 16 Questions (21%)

Time to Complete: 1 hour
TASK 3: THE AAV CALL

This is the Academic Activity Verification call, or AAV. Its purpose is to identify the assessment(s) that you will be taking in the current term, the paths that you will follow in pursuing them, and also to schedule the dates for the assessments. Make sure that you are looking at your AAP (Academic Action Plan) during the call. For CIT1, request the following:

1. Information on the Learning Community and discussion forums
2. The pre-assessment for CIT1 – IT Management (PAC1) (appendix II).

Time to Complete: AAV calls vary. Your first one, the call to establish your first term, will probably take at least a half hour. A safe bet is to schedule an hour for the call.
TASK 4: THE LEARNING COMMUNITY

If you’re reading this, you are inside of the Learning Communities. Communities are the repositories of current information about assessments. Each has a Subject Matter Expert (SME) who ensures the presence and accuracy of content, and answers questions. At a minimum, you will find the following in each Learning Community

- Checklists
- Course of Study (you’re reading it)
- Other documents and links related to the assessment.
- A forum where students can interact with each other.
- Announcements
- Contact information for the Content Advisor.

It is important to log into this community frequently because you will be using the Checklists and Roadmap to pace yourself as you prepare for the assessment. The Content Advisor will also post schedules for live chats and discussions, web conferencing and conference calls.

Time to Complete: Introducing yourself in the forum should take about 30 minutes.
TASK 5: THE PRE-ASSESSMENT

Take the pre-assessment for CIT1 – Software Engineering (PASE) (appendix II).

Time to Complete: Approximately 2 hours, including site registration.
TASK 6: YOUR EXPERIENCE LEVEL

You and your Mentor should agree upon your entry level to the available Learning Resources. Here are some guidelines, but the primary indicator of your level is pre-assessment performance:

- **BEGINNER (NOVICE) – A pre-assessment score of less than 25%.** If you have never worked in IT, or have worked in the field for only a brief period (ask for your Mentor’s evaluation), you are a beginner, even if you have had an introductory course at a conventional institution. You may have spot knowledge but these spots represent a very small subset of what one needs to know to pass the assessment, or make informed choices about careers and advancement.

- **INTERMEDIATE - A pre-assessment score of 25-55%.** If you have a couple of years of IT experience or a formal introductory IT course that was not simply application-based (e.g., Introduction to MIS/CIS from a College of Business), then you are probably at this level. A conversation with your Mentor about your scores will greatly help.

- **ADVANCED – A pre-assessment score of over 55%.** You have several years of experience and a formal introductory course.

Based on the breakdown of the overall score, your Mentor may want to place you in one category despite the fact that your prior academic and work experience indicate another.

**Time to Complete:** Expect about 15 minutes for this discussion.

*You may only need to work on individual sections of this assessment. Your mentor/program manager will guide you accordingly:*

1. Database Administration
2. IT Project Management
3. Networking Fundamentals
4. Operating Environments
5. SDLC - Systems Development Life Cycle
6. Programming Fundamentals (testing)
7. Systems Analysis Fundamentals
TASK 7: GET A KNOWLEDGENET ACCOUNT

KnowledgeNet is a resource that will remain with you throughout your program of study, although you will have to periodically renew your enrollment. To get an account, go to the Learning Resources tab of your AAP for WJV1 and click the Enroll Now link for KnowledgeNet.

You will receive email instructions from KnowledgeNet.

**Time to Complete:** Once you have KnowledgeNet’s instruction email, it should take about a half hour to get set up and do some exploring.
TASK 8: CONSTRUCT AND PURSUE A TRAINING PLAN

You should see the following once you login to your account:

CIT1:

There may be additional courses recommended by your progress manager/mentor. Details for those are described in tasks 11 through 17 below.

Time to Complete: Time to complete will depend on which courses your mentor/progress manager recommends for you. See Tasks 11 through 17 below for more details on course durations.
Task 9 – GET A SKILLSOFT ACCOUNT

Skillsoft is one of the primary Learning Resource for beginning and intermediate students. To obtain a login account, go to the Learning Resources tab of your AAP for CIT1 and click on the enroll link for Skillsoft.

You will receive instructions via email. Once registered and logged in, here is what you will see:

This is the Skillsoft portal, called Skillport. Skillsoft offers three separate resources to help you prepare for the CIW Associate Exam:
1. Courses
2. On site mentors provided by Skillsoft (these are not WGU Mentors)
3. Prep Tests
Briefly, you will work on the courses and interact with Skillsoft mentors in their chat rooms and via email. When you have completed your studies, you will wrap up your time with Skillsoft using their Prep Tests.

**Time to Complete:** 30 minutes.
These Skillsoft courses should already be included in your Plan and listed as the “CIT1.” If you do not see these courses in your plan, you can add them.

From your Training Plan, you can view all of the courses that you added:

- An Introduction to Database Systems – 180 minutes
- Relational Databases – 195 minutes
- An Introduction to Project Management – 2.5 hours
- Project Life Cycles and Stakeholders – 2.0 hours
- Project Management Essentials Simulation - .5 hours
- Mentoring N10-003 Network+ 2005 – (depends on how frequently you use this resource)
- TestPrep N10-003 Network+ 2005 – (depends on how frequently you use this resource)

**Time to Complete:** approximately 12 hours, not including time spent with a Skillsoft mentor and time on TestPrep materials.
**TASK 11: Learning Path – CIS - Database Administration Fundamental Skills and Knowledge**

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the *Database Concepts* text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional practice. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

*Note:* Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

1) Go to David Kroenke’s Web site and familiarize yourself with the layout and content available. [http://wps.prenhall.com/bp_kroenke_dbc_2/0,9347,1453375-,00.html](http://wps.prenhall.com/bp_kroenke_dbc_2/0,9347,1453375-,00.html)

2) Download the glossary of terms: [http://wps.prenhall.com/bp_kroenke_dbc_2/0,9347,1453670-,00.html](http://wps.prenhall.com/bp_kroenke_dbc_2/0,9347,1453670-,00.html)

(* it is strongly recommended you learn every term in this glossary.)

<table>
<thead>
<tr>
<th>Computer Based Training Modules/ Est. Time to complete</th>
<th>Corresponding Chapter &amp; Activities in <em>Database Concepts Text book</em></th>
<th>Est. Time To complete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Database Administration Fundamental Skills and Knowledge (3.5 weeks)</strong></td>
<td></td>
<td>2 chapters per week = 3.5 weeks</td>
</tr>
<tr>
<td>Skillsoft Modules</td>
<td><em>Chapter 1: Getting Started</em></td>
<td></td>
</tr>
<tr>
<td>An Introduction to Database Systems – 180 minutes</td>
<td><em>Chapter 2: The Relational Model</em></td>
<td></td>
</tr>
<tr>
<td>Relational Databases – 195 minutes</td>
<td><em>Chapter 3: Structured Query Language</em></td>
<td></td>
</tr>
<tr>
<td>KnowledgeNet Modules</td>
<td><em>Chapter 4: Data Modeling and the Entity-Relationship Model</em></td>
<td></td>
</tr>
<tr>
<td>Database Technologies Part: Relational Database Fundamentals – 6 hours</td>
<td><em>Chapter 5: Database Design</em></td>
<td></td>
</tr>
<tr>
<td>Database Technologies Part 2: Introduction to SQL – 6 hours</td>
<td><em>Chapter 6: Database Administration</em></td>
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<td></td>
<td><em>Chapter 7: Advanced Topics</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1) Review the chapter objectives</td>
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<tr>
<td></td>
<td>2) Read the chapter</td>
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<tr>
<td></td>
<td>3) Review the power points</td>
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<tr>
<td></td>
<td>4) Take the quizzes located</td>
<td></td>
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</tbody>
</table>
under the “study guide” section
5) Review the exercises at the end of the chapter.
TASK 12: Learning Path – CIS - Information Technology Project Management Skills

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the Sommerville text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

2) Download the glossary of terms: [http://www.cs.st-andrews.ac.uk/~ifs/Books/SE7/SampleChapters/glossary.pdf](http://www.cs.st-andrews.ac.uk/~ifs/Books/SE7/SampleChapters/glossary.pdf) (*it is strongly recommended you learn every term in this glossary.*)
3) Have your mentor/progress manager provide you with practice materials for CompTIA’s Project+ exam. These will help you prepare for the project management portion of this exam. See Appendix V for more details.

<table>
<thead>
<tr>
<th>Computer Based Training Modules/ Est. Time to complete</th>
<th>Corresponding Chapter &amp; Activities in Software Engineering Text book</th>
<th>Est. Time To complete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information Technology Project Management Skills (2 weeks)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KnowledgeNet Modules</strong></td>
<td>(chapter 5) Project Management <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_soffeng_8/0,11903,3174416,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_soffeng_8/0,11903,3174416,-00.html</a></td>
<td>1 weeks</td>
</tr>
</tbody>
</table>
| Project Management Fundamentals (2.5 hours) | 1) Read the chapter  
2) Review the lecture notes  
3) Take the quiz  
4) Review the exercises at the end of the chapter.  
Solutions for selected exercises can be found in Appendix. | |
<p>| Transitioning into a Project Management Role (3 hours) | | |
| Initiating and Planning a Project (2 hours) | | |
| Managing a Project (2.5 hours) | | |</p>
<table>
<thead>
<tr>
<th>Trouble-shooting and Closing the Project (2 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skillsoft Modules:</strong></td>
</tr>
<tr>
<td>An Introduction to Project Management (2.5 hours)</td>
</tr>
<tr>
<td>Project Life Cycles and Stakeholders (2.0 hours)</td>
</tr>
<tr>
<td>Project Management Essentials Simulation (.5 hours)</td>
</tr>
<tr>
<td><strong>Measure-Up Practice Materials –</strong></td>
</tr>
<tr>
<td>Ask your mentor for Project+ materials (approximately 1 week)</td>
</tr>
</tbody>
</table>
TASK 13: Learning Path – CIS - Networking Fundamentals

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the Networking text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

1) It is suggested you purchase the Network+ Study Guide listed in task one.
2) Have your mentor/progress manager provide you with practice materials for CompTIA’s Network+ exam. These will help you prepare for the project management portion of this exam. See Appendix V for more details.

<table>
<thead>
<tr>
<th>Computer Based Training Modules &amp; estimated time to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing (2 weeks)</strong></td>
</tr>
</tbody>
</table>

**KnowledgeNet Modules**

Network+ Part 1: Media and Topologies with Mentor Now – 7 hours
Network+ Part 2: Protocols and Standards with Mentor Now – 7 hours
Network+ Part 3: Network Implementation with Mentor Now – 6 hours

**Skillsoft Modules**

Mentoring N10-003 Network+ 2005 (use as necessary)
TestPrep N10-003 Network+ 2005 (approximately 1 week)

**Measure-Up Practice Materials**
Ask your mentor for Project+ materials (approximately 1 week)
TASK 14: Learning Path – CIS - Operating Environments Fundamentals

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

<table>
<thead>
<tr>
<th>Computer Based Training Modules &amp; estimated time to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Environments (4 weeks)</td>
</tr>
<tr>
<td>Read &amp; Study Text book (Chapter 1 – 10)</td>
</tr>
<tr>
<td><em>Guide To Operating Systems, Enhanced Edition (9781418837198)</em></td>
</tr>
<tr>
<td>Download glossary of terms:</td>
</tr>
<tr>
<td>Take practice exam to ensure you have mastered these competencies. Exam is located in appendix.</td>
</tr>
</tbody>
</table>

KnowledgeNet Modules

Microsoft Windows XP Administration Part 1: Installation and Configuration with Mentor Now – 6 hours
Microsoft Windows XP Administration Part 2: Networks and Desktops with Mentor Now – 6 hours
Microsoft Windows XP Administration Part 3: TCP/IP and Remote Support with Mentor Now – 6 hours
Microsoft Windows XP Administration Part 4: Remote and Mobile Computing with Mentor Now – 6 hours
Microsoft Windows XP Administration Part 5: Disk and File Management with Mentor Now – 6 hours

Network+ Part 3: Network Implementation with Mentor Now – 6 hours**
** - specifically review these sections:
- Unix and Linux Clients
- Unix and Linux

Review Terms and concepts at the following websites:

*Windows VS Linux*
Unix VS NT
http://www.bitwizard.nl/unixnt.html

Intro to Netware
http://www.unm.edu/~network/presentations/course/appendix/appendix_f/sld001.htm
TASK 15: Learning Path – CIS - Process Improvement & Software Development Lifecycle

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the Sommerville text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

2) Download the glossary of terms: [http://www.cs.st-andrews.ac.uk/%7Eifs/Books/SE7/SampleChapters/glossary.pdf](http://www.cs.st-andrews.ac.uk/%7Eifs/Books/SE7/SampleChapters/glossary.pdf) (* it is strongly recommended you learn every term in this glossary.)

<table>
<thead>
<tr>
<th>Corresponding Chapter &amp; Activities in Sommerville Text book</th>
<th>Est. Time To complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>(chapter 3) Critical Systems <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174382,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174382,-00.html</a></td>
<td>1 week</td>
</tr>
<tr>
<td>(chapter 4) Software Processes <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174397,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174397,-00.html</a></td>
<td>1 week</td>
</tr>
<tr>
<td>(chapter 9) Critical Systems and Specifications <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174477,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174477,-00.html</a></td>
<td>1 week</td>
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<tr>
<td>(chapter 17) Iterative Software Development <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174596,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174596,-00.html</a></td>
<td>1 week</td>
</tr>
<tr>
<td>(chapter 28) Process Improvement <a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174752,-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174752,-00.html</a></td>
<td>1 week</td>
</tr>
</tbody>
</table>

1) Read the chapter
2) Review the lecture notes
3) Take the quiz
4) Review the exercises at the end of the chapter.

Solutions for selected exercises can be found in Appendix III.
<table>
<thead>
<tr>
<th>Review Terms and concepts at the following websites:</th>
<th>1 week</th>
</tr>
</thead>
<tbody>
<tr>
<td>QuickStudy: System Development Life Cycle</td>
<td>1 week</td>
</tr>
<tr>
<td><a href="http://www.computerworld.com/developmenttopics/development/story/0,10801,71151,00.html">http://www.computerworld.com/developmenttopics/development/story/0,10801,71151,00.html</a></td>
<td></td>
</tr>
<tr>
<td>The Software Development Life Cycle (SDLC) For Small To Medium Database Applications</td>
<td>1 week</td>
</tr>
<tr>
<td>Systems Development Life Cycle</td>
<td>1 week</td>
</tr>
<tr>
<td>Software Development Process</td>
<td>1 week</td>
</tr>
<tr>
<td>ISO 9000</td>
<td>1 week</td>
</tr>
<tr>
<td>Software Quality Assurance</td>
<td>1 week</td>
</tr>
<tr>
<td><a href="http://www.sqa.net/">http://www.sqa.net/</a></td>
<td></td>
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<tr>
<td>Capability Maturity Model</td>
<td>1 week</td>
</tr>
</tbody>
</table>
TASK 16: Learning Path – Programming Fundamentals (testing)

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the Sommerville text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.


4) Download the glossary of terms: [http://www.cs.st-andrews.ac.uk/%7Eifs/Books/SE7/SampleChapters/glossary.pdf](http://www.cs.st-andrews.ac.uk/%7Eifs/Books/SE7/SampleChapters/glossary.pdf) (* it is strongly recommended you learn every term in this glossary.)*

<table>
<thead>
<tr>
<th>Corresponding Chapter &amp; Activities in Sommerville Text book</th>
<th>Est. Time To complete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing (1 week)</strong></td>
<td></td>
</tr>
<tr>
<td><em>(chapter 23) Software Testing</em></td>
<td>1 week</td>
</tr>
<tr>
<td><a href="http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174681-00.html">http://wps.pearsoned.co.uk/ema_uk_he_sommervill_softeng_8/0,11903,3174681-00.html</a></td>
<td></td>
</tr>
<tr>
<td>1) Read the chapter</td>
<td></td>
</tr>
<tr>
<td>2) Review the lecture notes</td>
<td></td>
</tr>
<tr>
<td>3) Take the quiz</td>
<td></td>
</tr>
<tr>
<td>4) Review the exercises at the end of the chapter.</td>
<td></td>
</tr>
</tbody>
</table>

Solutions for selected exercises can be found in Appendix III.
TASK 17: Learning Path – CIS - Systems Analysis Fundamentals

The suggested learning path for this assessment will have you first complete any computer based training modules through Skillsoft and KnowledgeNet. Once the appropriate training modules are completed, we recommend you read the suggested chapters in the Sommerville text, review power points, and complete all forms of quizzes for each of those chapters. We recommend you complete the exercises from the chapters for additional. Finally, we recommend you review and commit to memory the glossary of terms at the end of this course of study.

Note: Novice and Intermediate should complete all computer based training modules in addition to reviewing the text book and related activities. More advanced learners should concentrate on reviewing the textbook activities and materials.

6) Download the glossary of terms: http://www.cs.st-andrews.ac.uk/%7Eifs/Books/SE7/SampleChapters/glossary.pdf (* it is strongly recommended you learn every term in this glossary.)

<table>
<thead>
<tr>
<th>Corresponding Chapter &amp; Activities in Text books</th>
<th>Est. Time To complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems Analysis Fundamentals (5 weeks)</td>
<td></td>
</tr>
<tr>
<td>1) Systems Analysis and Design Book</td>
<td>4 weeks (2.5 chapters per week)</td>
</tr>
<tr>
<td>Chapters 1 – 11</td>
<td></td>
</tr>
<tr>
<td>Supplemental resources for text book:</td>
<td></td>
</tr>
<tr>
<td><a href="http://oc.course.com/sc/sad7e/learn/default.cfm">http://oc.course.com/sc/sad7e/learn/default.cfm</a></td>
<td></td>
</tr>
<tr>
<td>Recommend doing this simulation:</td>
<td></td>
</tr>
<tr>
<td><a href="http://oc.course.com/sc/sad7e/scr/default.cfm">http://oc.course.com/sc/sad7e/scr/default.cfm</a></td>
<td></td>
</tr>
<tr>
<td>2) Software Engineering Text Book</td>
<td>1 week</td>
</tr>
<tr>
<td>(Chapter 11) Architectural Design</td>
<td></td>
</tr>
<tr>
<td><a href="http://wps.pearsoned.co.uk/ema_med_he_sommervill_softeng_8/0,11903,3174507,-00.html">http://wps.pearsoned.co.uk/ema_med_he_sommervill_softeng_8/0,11903,3174507,-00.html</a></td>
<td></td>
</tr>
<tr>
<td>1) Read the chapter</td>
<td></td>
</tr>
<tr>
<td>2) Review the lecture notes</td>
<td></td>
</tr>
<tr>
<td>3) Take the quiz</td>
<td></td>
</tr>
<tr>
<td>4) Review the exercises at the end of the chapter.</td>
<td></td>
</tr>
</tbody>
</table>
Solutions for selected exercises can be found in Appendix III.

**Review websites and learn terminology and concepts:**

*Gap Analysis*
http://www.9000resource.com/what_is_gap_analysis/what_is_an_iso_9001_gap_analys_1.php?gclid=CM7-qoeuu4sCFSViUAodIgVSyg
TASK 18: RE-TAKE THE PRE-ASSESSMENT

This repeats Task 5. The purpose of the re-take is to ensure you’ve obtained the necessary competencies to take the final assessment.

**Time to Complete:** 2 hours for the pre-assessment.
TASK 19: DISCUSS PRE-ASSESSMENT RESULTS WITH YOUR MENTOR

Are you prepared for the assessment? If you and your Mentor agree that you are, then proceed to the next Task. If not, your Mentor will help you decide what further preparations are necessary, including any additional study resources.

Time to Complete: This discussion could take 30 minutes.
TASK 20: REFER FOR THE CIT1 ASSESSMENT.

Go to the Assessment Referral tab of your AAP and complete the referral form. You must request the assessment date that was agreed to by you and your mentor when doing the AAV. This date is recorded as the Planned Completion Date on your AAP for the CIT1.

REMEMBER: The latest possible Required Completion Date (RCD) for proctored (objective) assessments is the last day of the fifth month of the term. The earliest possible RCD for proctored assessments is three weeks from the start of any term to allow for the scheduling process.

Beginning 5/1/2007, students will be charged a $60.00 retake fee for third and subsequent attempts at assessments. The system will post the $60.00 fee to the student’s account. Fees are due with the next term’s tuition. FINANCIAL AID DOES NOT COVER RE-TAKE FEES!

Taking an Assessment Sooner:

If you and your mentor believe that you are ready to take the assessment sooner than what was originally planned, you can make a referral and take an assessment earlier than your planned completion date for the CIT1.

Time to Complete: Completing a referral should take less than 15 minutes.
TASK 21: MARK YOUR CALENDAR, TAKE THE EXAM

An exam date is important, and represents a significant expense to WGU in time, effort, and money. WGU covers costs for two exam attempts with your tuition. You must pay for all attempts after the second attempt out of your own pocket. If you do not show up for an exam, you have used one attempt, and your recorded score is NOT PASSED. There are no exceptions to this policy. **If you cannot keep an exam date, it is treated as a NOT PASSED.** Assessment Scheduling is WGU’s most time-consuming process, and scheduling proctored assessments worldwide is an incredibly complex task.

Time to Complete: 1/2 day.
Appendices

Appendix I. CIT1 Competencies

The following competencies are covered on this exam.

Performance Descriptions

CIS - Database Administration Fundamental Skills and Knowledge

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001357</td>
<td>demonstrate the ability to normalize a complex database.</td>
</tr>
<tr>
<td>p001358</td>
<td>explain conceptual/logical data modeling.</td>
</tr>
<tr>
<td>p001359</td>
<td>design and implement a database.</td>
</tr>
<tr>
<td>p001360</td>
<td>demonstrate database monitoring and tuning.</td>
</tr>
<tr>
<td>p001361</td>
<td>plan and conduct database maintenance.</td>
</tr>
<tr>
<td>p001362</td>
<td>demonstrate database security administration.</td>
</tr>
<tr>
<td>p001363</td>
<td>explain SQL-query optimization.</td>
</tr>
<tr>
<td>p001364</td>
<td>describe and conduct database transaction management and currency control (how many can access at the same time).</td>
</tr>
</tbody>
</table>

CIS - Information Technology Project Management Skills

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001365</td>
<td>define the scope of an information technology project.</td>
</tr>
<tr>
<td>p001366</td>
<td>identify stakeholders and decision-makers for an information technology project.</td>
</tr>
<tr>
<td>p001367</td>
<td>develop a detailed task list for an information technology project (who is responsible for specific tasks).</td>
</tr>
<tr>
<td>p001368</td>
<td>estimate time requirements for an information technology project.</td>
</tr>
<tr>
<td>p001369</td>
<td>develop an initial information technology project management flow chart.</td>
</tr>
<tr>
<td>p001370</td>
<td>identify and secure required resources.</td>
</tr>
<tr>
<td>p001371</td>
<td>evaluate project requirements.</td>
</tr>
<tr>
<td>p001372</td>
<td>identify and evaluate information technology project management risks.</td>
</tr>
<tr>
<td>p001373</td>
<td>prepare an information technology project management contingency plan.</td>
</tr>
<tr>
<td>p001374</td>
<td>identify interdependencies and the impact they have on the information technology project and overall operations.</td>
</tr>
</tbody>
</table>
identify and track critical milestones.
participate in the information technology project phase review.
manage the implementation of new policies and procedures which result from an information technology project.
report information technology project status.
schedule the changes resulting from an information technology project according to risk.
discuss support procedures change implementation regarding information technology projects.
verify correct/accurate operation at the conclusion of an information technology project and initiate problem correction if necessary.
develop a feasibility analysis of a proposed system.
develop and present a requirements definition proposal for a new system in a well-structured proposal including system objective, a clear definition of the events the system will support, outputs to be delivered by the system, and cost/benefit of the system following the SDLC model.

CIS - Networking Fundamentals

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001384</td>
<td>compare and contrast various levels of network configurations, (local, metropolitan, wide area) and give examples of specific implementations of each.</td>
</tr>
<tr>
<td>p001385</td>
<td>evaluate network performance</td>
</tr>
</tbody>
</table>

CIS - Operating Environments Fundamentals

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001348</td>
<td>select the operating system that is appropriate for an organizational environment.</td>
</tr>
<tr>
<td>p001349</td>
<td>compare and contrast the features of various (UNIX, NT and Novell) server systems.</td>
</tr>
<tr>
<td>p001350</td>
<td>demonstrate advanced network administration skills (management of network systems e.g. UNIX, NT and Novell).</td>
</tr>
<tr>
<td>p001351</td>
<td>troubleshoot and solve operating system errors and failures.</td>
</tr>
</tbody>
</table>

CIS - Process Improvement & Software Development Lifecycle

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001386</td>
<td>explain the need for software development methodologies and improvement.</td>
</tr>
<tr>
<td>p001387</td>
<td>identify project pitfalls and ways to avoid them.</td>
</tr>
<tr>
<td>p001388</td>
<td>define and understand the five common phases of software development.</td>
</tr>
<tr>
<td>p001389</td>
<td>understand non-technical issues in software development methodologies.</td>
</tr>
<tr>
<td>p001390</td>
<td>identify various software development methodologies (e.g., spiral, waterfall, UML and RAD).</td>
</tr>
</tbody>
</table>
discuss the benefits, risks and appropriateness of particular software development methodologies.

describe the responsibilities of the software development practitioners.

explain the impact of automation on software development methodologies and process improvement.

differentiate between reliable, maintainable and efficient programs.

describe various metrics used in software development.

recognize software development technology terms.

describe process improvement strategies (e.g., ISO 9000, Configuration Management, SQA, and CMM).

### CIS - Programming Fundamentals

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001347</td>
<td>apply various testing methodologies to assure effectiveness of computer applications.</td>
</tr>
</tbody>
</table>

### CIS - Systems Analysis Fundamentals

<table>
<thead>
<tr>
<th>PD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p001352</td>
<td>collect and analyze customer systems requirements (database management, Web-based programming).</td>
</tr>
<tr>
<td>p001353</td>
<td>conduct internal gap analysis for a system.</td>
</tr>
<tr>
<td>p001354</td>
<td>analyze and suggest system design changes for customers.</td>
</tr>
<tr>
<td>p001355</td>
<td>implement design documentation methodologies for computer system analysis.</td>
</tr>
<tr>
<td>p001356</td>
<td>describe how to optimize application system performance.</td>
</tr>
</tbody>
</table>
Appendix II – PACI (Pre-assessment instructions)

WESTERN GOVERNORS UNIVERSITY
COMPUTER INFORMATION SYSTEMS
PRE-ASSESSMENT (PACI)
INSTRUCTIONS

You have been referred for the Computer Information Systems Pre-Assessment. This assessment is designed to be taken over the Internet from your home or office. The sole purpose of the assessment is to help you and your mentor design your studies toward your goal of graduation. When you complete this assessment, we will be able to pull your score from the assessment site. We will then notify your mentor to review the results.

This pre-assessment is a 25 item objective assessment. You will have one hour and 30 minutes to complete the assessment. The questions are similar in style and context to those on the domain assessments, which you will be taking in the future. There is no penalty for guessing, but you should consider the value of guessing when the data will be used to guide your academic planning.

It is recommended that you do not use outside resources (books, help from others, etc.) while you complete this assessment. This procedure will ensure that your evaluation is the best possible measure of your current abilities. Please finish the assessment in one sitting. If the online process is interrupted once you begin taking the assessment, your final score can be adversely affected. Additionally, the system will close down if there is a period of inactivity of 30 minutes or more, potentially causing a loss of the work you have completed.

Instructions for taking the Computer Information Systems Pre-Assessment are as follows:

1. In either Netscape or Internet Explorer type in the following URL (address): http://share0.prime.prometric.com
2. Click on the link for “First-Time Registration”.
3. At the screen titled “Step 1: Select a Test Provider or Program” click on the pull down menu and select “Western Governors University” (not “WGU Chauncey”).
4. Click on the “Submit” button.
5. Click on the link for “Secure Sign-In”.
6. At the screen titled “Sign-In Information” enter your username and password. This will be the same username and password you have utilized for previous Prometric system assessments.
7. Click on the “Sign In” button.
8. Note that the mandatory fields are indicated by the ”” symbol.
9. It is also required that you enter your WGU student number in the “Other Information” section at the bottom of the sign-in page. This is your WGU identification number assigned when you were admitted to the university (not your social security number). Your student number is required on all assessments or projects in order to correctly identify your work for grading and enter your scores into your student records.
10. Click on the “Submit” button.
11. The next screen will be a welcome page indicating your name. Click on the “Continue” button.
12. Click on the “Take Test” button.
13. At the screen titled “Step 1: Select a Test Sponsor (or submit keycode)” enter the keycode for this assessment in the box titled “Private Tests”. The keycode (case sensitive) is: cjk738qde.
14. You do not need to enter any information into the boxes titled “Public Tests” or “Eligibility Tests” before you proceed to the next step.
15. Click the “Submit” button.
16. At the screen titled “Step 3: Confirm Test Selection” the name of the assessment will appear. Make sure you are taking the correct assessment.
17. Click the “Take this Test!” button.
18. On this screen, you will view general information about the assessment. You can now follow the links to start the assessment.
19. Be advised that you should not use the browser buttons (Netscape or Internet Explorer) to advance from question to question. This can cause you to be closed out of the program. Use only the buttons within the Prometric application.
20. While you are taking the assessment, you have the option to view a recap of the questions you have answered by clicking the “Summarize” button on the top right side of the screen. You can also mark the questions you would like to review by clicking the “Mark Item for Review” button directly below the “Summarize” button.
21. When you have completed the assessment, you will see a screen titled “Confirm End of Test”. Click on the “Yes” or “No” button.
22. A screen will appear titled “Feedback”. Particularly helpful will be comments regarding the content or structure of the test questions. This step is optional.
23. A screen will appear titled “Test Results”. You will see a notice that your test has been submitted for scoring. Click where indicated.
24. Click “Sign Off”.
25. Click “Yes” to exit the Prometric Prime on-line test driver.

NOTE: If for any reason you get locked out of the system, simply log back on at the web address above and you will be given the option to click on “Resume A Test”. You will then be able to continue the assessment from the point where you stopped. You will not lose the work you have already completed.

PS011603
Appendix III – Answers to Software Engineering 8th edition selected questions

Ask mentor for details on obtaining this information. (special permission from Program Coordinator must be obtained.)
Appendix IV. Practice exam on Operating Environments

This exam is based on the following text book:

Michael Palmer, Michael Walters
ISBN 10: 0-619-12077-0
Publish date: April 5, 2002
608 pages
Softcover

Operating Environments

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Which of the following is a computing style frequently employed by large systems?
   Compact processing
   Central processing
   Batch processing
   Device processing

____ 2. Which of the following refers to a computer hardware and software design in which different portions of an application execute on different computers?
   Server/server systems
   Cooperative systems
   Client/server systems
   Central systems

____ 3. Which of the following refers to a computer hardware and software design in which the operating system temporarily hands-off control to an application and waits for the application to return control to the operating system?
   Cooperative multitasking
   BIOS multitasking
   Preemptive multitasking
   BASIC multitasking

____ 4. Which of the following refers to a single chip that supports devices that conduct the majority of the computer's calculations?
   UPC
   DPU
   PUC
   CPU

____ 5. Which of the following is an electronic device frequently used to display information in electric devices, such as watches, clocks, and stereos?
   DEL
   EDD

35
6. Which of the following refers to a solid-state electronic device that controls the major computer functions and operations?
   - Microprocessor
   - Macroprocessor
   - Multi-use processor
   - Preemptive processor

7. ______ is information sent out by a computer device after that information is handled or processed.
   - Output
   - Both A and B
   - Input
   - None of the above

8. Which of the following refers to internal computer hardware that manages the data going into and loaded from the computer's cache memory?
   - Cache controller
   - Client controller
   - Clustering controller
   - Dial-up controller

9. ______ is the ability to share the computing load and resources by linking two or more discrete computer systems to function as though they were one.
   - Component Object Modeling
   - Clustering
   - Complex instruction setting
   - None of the above

10. Which of the following is a utility built into Windows 95, 98, and NT to permit operation of a hardware modem to dial a telephone number for the purpose of logging into a remote computer system?
    - NUD
    - DUN
    - UND
    - DMB

11. Which of the following is a special disk storage location that keeps track of filenames, file systems, and storage locations on a computer storage device?
    - Domain
    - Infrared Data Association
    - Firewall
    - Directory

12. Which of the following is a logical grouping of computers and computer resources that helps manage these resources and user access to them?
    - Domain
    - Infrared Data Association
    - Explicitly Parallel Instruction
    - None of the above
13. Which of the following refers to the speed at which the processor communicates with the memory and other devices in the computer?
   - External clock speed
   - File transfer speed
   - Internal clock speed
   - None of the above

14. Which of the following is a group of peripheral manufacturers that developed a set of standards for transmitting data using infrared light?
   - DARI
   - IrDA
   - ADIr
   - All of the above

15. Which of the following is a system level facility that supports loading and saving files to remote disk drives across the network?
   - NFS
   - SFN
   - FSN
   - All of the above

16. Which of the following is a software utility that operates with the compatible hardware to facilitate automatic hardware configuration?
   - Symmetric processing
   - Plug and Play
   - Reduced instruction set
   - Transmission processing

17. In the Macintosh file system, _____ is a 7-bit file format used to transmit data across network links that do NOT support native Macintosh file formats.
   - catalog B
   - alias
   - BinHex
   - all of the above

18. _____ is a hard disk configuration scheme in which the disk is divided into logical blocks, which in turn are mapped to sectors, heads, and tracks.
   - Block allocation
   - Tree allocation
   - Alias allocation
   - Catalog allocation

19. Which of the following is that part of a filename that typically identifies the type of file associated with the name?
   - Allocation
   - Directory
   - Extension
   - None of the above

20. Which of the following is a file management system that defines the way data is stored on a hard drive?
   - Digital allocation table
   - Extended allocation table
   - File allocation table
   - Forked allocation table
21. Which of the following is a 16-bit character code that allows for definition of up to 65536 characters?
   - Volume code
   - Binary code
   - Unicode
   - None of the above

22. Which of the following is a logical grouping of computers and computer resources that helps manage these resources and user access to them?
   - Plug and Play controller
   - Domain
   - HAL controller
   - Solaris

23. _____ enables a group of computers to share a common security database.
   - network binding
   - HAL
   - Solaris
   - domain

24. Network bindings are used to coordinate software communication among which of the following?
   - NIC
   - Network services
   - Network protocol
   - All of the above

25. Which of the following refers to the standard for expansion cards used in laptops and desktop machines?
   - PCMCIA
   - MCIA
   - CMCIA
   - None of the above

26. Plug and Play was NOT included in which of the following operating systems?
   - Windows 95
   - Windows NT
   - Windows 98
   - Windows 2000

27. A(n) _____ can be used to start the system in the event that the hard drive or its operating system is damaged.
   - HAL disk
   - startup disk
   - Windows update disk
   - all of the above

28. Which of the following would be considered TRUE about the installation of a video card?
   - Most modern operating systems will NOT detect your video card and automatically includes required drivers.
   - Most operating systems will detect your video card and automatically include required drivers.
   - Both A and B
   - None of the above
29. Which of the following is ONLY available on the OSR-2 release of Windows 95?

- FAT16
- FAT32
- FAT64
- All of the above

30. The figure shown above depicts which of the following?

- The Windows 95 select components screen
- Windows 95 select installation options screen
- Both A and B
- None of the above
31. The figure shown above depicts which of the following?
   - Windows 98 character based screen
   - Windows NT 4.0 character based screen
   - Windows NT 4.0 graphical display screen
   - Windows 98 graphical display screen

32. When deciding to upgrade your operating system, which of the following would be a deciding factor?
   - Whether you need the upgrade
   - Whether the time is right to upgrade
   - Both A and B
   - None of the above

33. Which of the following is NOT a major point to consider when backing up your information?
   - Close all open windows.
   - Make sure that you have the software needed to restore the backups.
   - Make sure you are actually make a full backup.
   - Making a new partition size.
34. The figure shown above depicts which of the following?
   - The Windows 2000 Backup Tool
   - Windows NT 4.0 Backup Tool
   - Windows XP Backup Tool
   - All of the above

35. When performing an upgrade to Windows 95, which of the following statements would be considered TRUE?
   - It is best to let Windows install the files that it wants to install.
   - It is best to manually install a particular file.
   - It does NOT really matter.
   - None of the above

36. One reason that some Windows 3.x programs will NOT work in Windows 95 is that they rely on entries that are NO
    longer in which of the following files?
   - Win.ini
   - Both A and B
   - System.ini
   - None of the above

37. Which of the following would refer to the UNIX backup utility?
   - Dump
   - Both A and B
   - ufs dump
   - None of the above

38. In a(n) _____ install, a fresh new system folder is created.
   - dirty
   - both A and B
   - clean
   - none of the above
39. Which of the following is an early development version of software in which there are likely to be bugs and NOT all of the anticipated functionality is present?
   - Backup software
   - Alpha software
   - Production software
   - Beta software

40. Which of the following refers to a computer from which all unnecessary software and hardware have been removed?
   - Dirty computer
   - Clean computer
   - Domain computer
   - None of the above

41. Which of the following is a TCP/IP application protocol that resolves domain and computer names to IP addresses?
   - NSD
   - SSD
   - DNS
   - SND

42. Which of the following are high-capacity removable cartridge drives that provide reasonably high-speed, high-density add-on storage for desktop and laptop computers?
   - Centronics
   - DB-25
   - Bernoulli
   - All of the above

43. Which of the following is a non-volatile digital data storage medium used for operating system and other software distribution?
   - CD-ROM
   - BD-ROM
   - DB-ROM
   - All of the above

44. Which of the following is an error correction protocol that determines the validity of data written and read from a floppy disk, hard disk, or CD-ROM?
   - CD-RC
   - CRC
   - RCC
   - DRP

45. Which of the following is an alternative input device frequently used by graphic artists and others who need accurate control over drawings and other data input?
   - Digital pad
   - Both A and B
   - Digital tablet
   - None of the above

46. Which of the following is a printer technology that produces high-quality color output by creating color mists that penetrate paper to form characters or graphic output?
   - Cyclic sublimation
   - Dye sublimation
   - Compact sublimation
   - Extended sublimation
47. Which of the following would be considered a hand-held device, which because of their size are easily transported where ever you go, they include features that assist you in organizing your time?
   Parallel port
   Optical character recognition
   PDA
   ORB

48. Which of the following is an input device that allows for three-dimensional movement on a screen, cursor, or other object?
   Jaz
   Joystick
   Imagesetter
   None of the above

49. Which of the following is an Iomega removable disk design capable of storing 1 to 2 GB of data depending on the model?
   Daz
   Jaz
   Saz
   All of the above

50. Which of the following is a high-end printer frequently used for publishing?
   Imagesetter
   Ink jet
   Dot matrix
   Master

51. Which of the following is a hardware device used to vary the amount of resistance in an electronic circuit?
   Cyclometer
   SyQuest meter
   Plotter
   Potentiometer

52. Which of the following in an EIDE drive chain is the secondary storage device?
   StuffIt
   SCSI
   Slave
   SyQuest

53. Which of the following is an increasingly popular high-capacity floppy disk design?
   Subdisk
   SuperDisk
   Both A and B
   None of the above

54. Which of the following is a Macintosh archive compression utility?
   StuffIt
   PKZIP
   WINZip
   None of the above
55. Which of the following is a compressed or archived file that includes an executable component?
   - Pre-extracting file
   - Self-extracting file
   - Post-extracting file
   - All of the above

56. Which of the following is a UNIX file archive utility?
   - TRP
   - GNOME
   - TAR
   - All of the above

57. Which of the following is an archive and compression utility for Windows 95/98?
   - Fetch
   - WINZip
   - StuffIt
   - None of the above

58. Which of the following is a high-speed digital subscriber line technology that can use ordinary telephone lines for downstream data transmission of up to 6 Mbps and 576 to 640 KB of upstream transmission?
   - Asymmetric digital subscriber line
   - Symmetric digital subscriber line
   - Attention digital subscriber line
   - None of the above

59. Which of the following refers to a modem control command set designed by the Hayes Company?
   - TA commands
   - CM commands
   - AT commands
   - DM commands

60. Which of the following transfers data via digital lines rather than analog lines?
   - Analog modem
   - Both A and B
   - Digital modem
   - None of the above

61. Which of the following is a form of high-speed digital subscriber line technology that has upstream and downstream transmission rates of 1.544 Mbps?
   - FDSL
   - IDSL
   - HDSL
   - None of the above

62. Which of the following is a hardware device that permits a computer to exchange digital data with another computer via analog telephone lines or dedicated connection?
   - RADSL
   - PRI ISDN
   - POTS
   - Modem
63. Which of the following is a data communications process that ensures data integrity for a system of data bit comparisons between the sending and receiving computer?
   - Protocol checking
   - Parity checking
   - Public checking
   - Adaptive checking

64. Which of the following refers to regular voice-grade telephone service?
   - POTS
   - TOPS
   - STOP
   - OTS

65. Which of the following is an ISDN interface that consists of switched communication in multiples of 1,544 Mbps?
   - Asynchronous rate interface
   - Public rate interface ISDN
   - Primary rate interface ISDN
   - None of the above

66. Which of the following refers to an established guideline that specifies how network data including data sent over a telephone network is formatted into a transmission unit?
   - Hayes command
   - Protocol
   - Flow control
   - None of the above

67. Which of the following refers to regular voice-grade telephone service, the new terminology?
   - PSTN
   - Both A and B
   - POTS
   - None of the above

68. Which of the following is used for communication with Macintosh computers?
   - TCP/IP
   - IPX/SPX
   - AppleTalk
   - All of the above

69. is a scheme to identify and validate the client to the server.
   - Interdomain routing
   - Bridging
   - Celling
   - Authentication

70. Which of the following is a transmission control method used by Ethernet?
   - CSMA/CD
   - DC/CSAM
   - MASC/DC
   - None of the above

71. Which of the following is an operating system on a computer, such as a PC, that enables the computer to process information and run applications locally, as well as communicate with other computers on a network?
72. Which of the following is a network transport protocol that uses CSMA/CD communications to coordinate frame and packet transmissions on a network?
   - Intranet
   - Ethernet
   - None of the above
   - Firmware

73. Which of the following is a unique hexadecimal address, called a device or physical address, which identifies a NIC to the network?
   - DAC address
   - NAC address
   - FAC address
   - MAC address

74. Which of the following is a transmission method in which a server divides recipients of an application, such as multimedia applications, into groups?
   - Unicast
   - Multicast
   - Framecast
   - Routing

75. Which of the following is a protocol used on Microsoft networks that was developed from NetBIOS and was designed for small networks?
   - NetBEUI
   - IPX/SPX
   - IP
   - All of the above

76. Which of the following is a tool available in Windows NT Server 4.0 that enables clients to install any of the following operating systems: Windows 95, MS-DOS, or 3.x?
   - Netware Client Administrator
   - Frame Client Administrator
   - Internet Client Administrator
   - Network Client Administrator

77. Which of the following are special elements that programmers call "hooks" in the operating system kernel, which enable the operating system to interface with a network?
   - MDIS
   - NNISD
   - NDIS
   - All of the above

78. Which of the following refers to a computer running a network operating system that enables client's workstations to access shared network resources, such as printers, files, software applications or CD-ROM drives?
   - Bridge
   - Router
   - Server
   - Switch
79. Which of the following is a device that joins networks and can route packets to a specific network on the basis of a routing table that it creates for its own purposes?
   - Router
   - Mask
   - Server
   - None of the above

80. Which of the following refers to the physical design of a network and the way in which a data carrying signal travels from point-to-point along the network?
   - Ring
   - Topology
   - Token ring
   - Switch

81. The figure shown depicts which of the following?
   - Ring topology
   - Star topology
   - Bus topology
   - None of the above

82. Which of the following is an Active Directory container that holds one or more trees?
   - Forest
   - Share point
   - Leaf
   - All of the above

83. Which of the following is a unique number assigned to a UNIX group that distinguishes that group from all the other groups on the same system?
   - Group assisted number
   - Group mounted number
   - Group identification number (GID)
   - Group search number

84. Which of the following is a user work area in which the user stores data on the server and typically has control over whether to enable other server users to access his/her data?
   - Home directory
   - Shadow file
85. Which of the following is a comprehensive database of shared resources and information known to the NetWare operating system?
- DSN
- SDN
- NDS
- SSD

86. Which of the following is a mapped NetWare drive that enables the operating system to search a specified directory and its subdirectory for an executable file?
- Security group
- Search drive
- Point share
- None of the above

87. With access limited to the root user, a(n) _____ is a file in UNIX that contains critical information about user accounts, including the encrypted password for each account.
- Search file
- Home file
- Shadow file
- Leaf file

88. Which of the following is a domain that allows another domain security access to its resources, such as servers?
- Trusting domain
- Both A and B
- Shadow domain
- None of the above

89. Which of the following is a number that is assigned to a UNIX user account as a way to distinguish that account from all others on the same system?
- DIU
- Both A and B
- UID
- None of the above

90. Windows NT Server uses accounts, groups, and permissions similar to which of the following operating systems?
- UNIX
- Both A and B
- NetWare
- None of the above

91. The resources in a domain are NOT which of the following?
- Shared disks
- Directories
- Password protected disks
- None of the above
92. The figure shown above depicts which of the following?
   - Managing shared resources using local groups.
   - Managing shared resources using global groups.
   - Both A and B
   - None of the above

93. Which of the following is NOT a type of group or associated scope?
   - Global
   - Universal
   - International
   - Domain local

94. Which of the following groups and associated scopes is used to provide access to resources in any domain within a forest?
   - International
   - Domain local
   - Universal
   - Local

95. Which of the following is information that can be accessed by a cookie?
   - User name
   - Customization of Web page display
   - User password
   - All of the above
96. Developing more and more empty pockets of space between files on a disk due to frequent writing, deleting, or modifying of files is referred to as which of the following?
   Segregation
   Fragmentation
   Synchronization
   None of the above

97. Fragmentation occurs due to which of the following?
   Modifying files
   Deleting from disk
   Writing to disk
   All of the above

98. Which of the following can run WITHOUT altering data EXCEPT to move data from a damaged location to one that is NOT?
   Swap file
   Fragmentation
   Surface analysis
   None of the above

99. Which of the following directories is used for libraries?
   bin
   lib
   usr
   dev

100. The figure shown above illustrates which of the following?
   Windows 2000 Disk Cleanup tool
   UNIX Disk Cleanup tool
Completion
Complete each sentence or statement.

101. Software to facilitate individual computer access to graphical data presented over the Internet is done through a(n) ________________.

102. A(n) ________________ is a module optimized to perform complex math calculations.

103. ________________ is a CPU design that permits the processor to operate on one instruction at the same time it fetches one or more subsequent instructions.

104. ________________ is an internal programming standard that allows various software that runs under the Windows operating system to communicate with the operating system and other programs.

105. ________________ are hidden file characteristics in the Macintosh file system that indicate the program that created the file.

106. A(n) ________________ is used on UNIX systems and is the same as the partition table in MS-DOS or Windows-based systems.

107. A(n) ________________ is a file management system similar to FAT and directories used in MS-DOS and Windows.

108. A(n) ________________ is display technology in some laptops and other electronic equipment.

109. A(n) ________________ is a form of communication that allows for higher speed bi-directional communication between the computer and printer and the printer and computer.

110. In an EIDE drive chain, a(n) ________________ is the secondary storage device.

111. ________________ is a video graphics display system introduced by IBM in 1987.

112. ________________ is a UNIX file archive utility.

113. A(n) ________________ is a network device that connects two or more segments into one or extends existing segments.

114. A(n) ________________ is a designated portion of an IP address that is used to divide a network into smaller subnetworks, as a way to manage traffic patterns, enable security, and relieve congestion.

115. A(n) ________________ is a specialized frame that is transmitted without data around the network until it is captured by a station that wants to transmit.

116. ________________ facilitates reliable communication between two stations by establishing a window tailored to the characteristics of the connection.

117. A(n) ________________ is a group of Windows 2000 Server users that is used to assign access privileges, such as permissions to objects and services.

118. A(n) ________________ is a number that is assigned to a UNIX user account as a way to distinguish that account from all others on the same system.

119. A(n) ________________ backs up all files with an archive attribute, but does NOT remove the attribute after backup.

120. A(n) ________________ is a technique that backs up the entire contents of one or more disk drives in a binary or image format.

Matching
Identify the correct word with its corresponding definition.

Solaris
Network bindings
Per-server licensing  
Plug and Play system (PnP)  
Domain  
Backup domain controller (BDC)

HAL (hardware abstraction layer)  
Windows Update  
Per-seat licensing  
Primary domain controller (PDC)

121. Has a copy of the domain's directory database.
122. Allows you to download and install product updates for your Windows operating system.
123. Operating system based on UNIX.
124. A logical grouping of computers and computer resources.
125. Consisting of the code that talks directly to the computer's hardware.
126. Authenticates logons, and keeps track of all changes made to accounts in the domain.
127. Used to coordinate software communications among the NIC, network protocols, and network services.
128. A software licensing scheme that prices software according to the number of individual users who install and use the software.
129. A software licensing scheme that prices software according to a server configuration that permits multiple users to access the software from a central server.

Identify the correct word with its corresponding definition.

Imagesetter  
Accelerated Graphics Port (AGP)  
Serial port  
Master  
Disk geometry  
Storage Area Network (SAN)

Optical character recognition (OCR)  
Dot matrix printer  
StuffIt  
Removable disks  
Fibre Channel  
Universal Serial Bus (USB)

130. A bus standard that has enabled adapter manufacturers to supply one hardware product to a variety of hardware platforms.
131. Critical information about a hard drive's hardware configuration.
132. Can be impact, ink jet, or other technologies.
133. A means of transferring data between servers, mass storage devices, workstations, and peripherals at very high speeds.
134. A high-end printer frequently used for publishing.
135. In an EIDE drive chain, the main or first drive.
136. Scans each character on the page as a distinct image.
137. These devices are used for data backup.

138. A computer input/output port used for modem, printer, and other connections.

139. Technology that provides for interconnection between servers and storage systems without sending data over the corporate network.

140. It is used to interface digital sound cards, disk drives, and other external computer hardware.

Identify the correct word with its corresponding definition.

<table>
<thead>
<tr>
<th>Incremental backup</th>
<th>Surface analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential backup</td>
<td>Binary backup</td>
</tr>
<tr>
<td>Defragmentation</td>
<td>Full file-by-file backup</td>
</tr>
<tr>
<td>Internet Control Message Protocol</td>
<td>Service packs</td>
</tr>
<tr>
<td>Disk striping</td>
<td>Cookie</td>
</tr>
<tr>
<td>Virtual memory</td>
<td>Fragmentation</td>
</tr>
</tbody>
</table>

141. A technique that backs up the entire contents of one or more disk drives in this or image format.

142. A text-based file used by Web sites to obtain customized information about a user.

143. Backs up all files with an archive attribute, but does NOT remove that attribute after backup.

144. A disk storage technique that divides portions of each file over all volumes in a set as a way to minimize wear on individual disks.

145. A technique that backs up the entire contents of one or more disk drives on the basis of directories, subdirectories, and files so that it is possible to restore a combination of any of these.

146. Developing more and more empty pockets of space between files on the disk due to frequent writing, deleting, and modifying files and file contents.

147. A TCP/IP-based protocol used for network error reporting.

148. Software "fixes" issued by the vendor to repair software problems, address compatibility issues, and add enhancements.

149. A disk diagnostic technique that locates damaged disk areas and marks them as bad.

150. Disk storage that is used when there is NOT enough RAM for a particular operation, or for all processes currently in use.
Operating Environments
Answer Section

MULTIPLE CHOICE

1. B
2. B
3. A
4. D
5. D
6. A
7. A
8. A
9. C
10. C
11. D
12. A
13. A
14. C
15. A
16. C
17. B
18. A
19. B
20. B
21. B
22. C
23. D
24. D
25. A
26. C
27. C
28. B
29. C
30. A
31. B
32. C
33. D
34. C
35. A
36. C
37. C
38. B
39. C
40. C
41. B
42. B
43. A
44. C
45. C
46. C
47. C
48. B
49. C
50. A
51. D
52. C
53. B
54. A
55. C
56. B
57. C
58. A
59. B
60. B
61. B
62. D
63. C
64. A
65. B
66. C
67. A
68. B
69. D
70. A
71. A
72. B
73. D
74. B
75. A
76. D
77. C
78. C
79. A
80. C
81. B
82. A
83. B
84. A
85. B
86. C
87. B
88. A
89. B
90. C
91. B
92. C
93. B
94. B
95. D
96. C
97. D
98. B
99. C
100. A

**COMPLETION**

101. Web browser
102. math coprocessor
103. Pipelining
104. ActiveX
105. Creator codes
106. disk label
107. Master File Table
    MFT
108. LCD
    Liquid Crystal Display
109. Extended Capacity Port
    ECP
110. slave
111. VGA
    Video Graphics Array
112. Tar
113. bridge
114. subnet mask
115. token
116. TCP
   Transmission Control Protocol

117. security group

118. user identification number
   UID

119. differential backup

120. binary backup

MATCHING

121. E
122. H
123. A
124. D
125. G
126. J
127. F
128. I
129. B
130. B
131. E
132. H
133. K
134. A
135. D
136. G
137. J
138. C
139. F
140. L
141. H
142. K
143. B
Appendix V. MeasureUp Practice Materials for Networks+ and Project+

Practice tests from MeasureUp are an invaluable preparation tool, but they do not replace concentrated study effort. Read more about them here. You may choose to employ Practice Tests in one of three modes:

1. The **Study Mode** provides detailed explanations and reference material listings.
2. The **Custom Mode** allows you to review the material for missed questions.
3. The **Certification Mode** simulates the timed certification environment, but does not reproduce the live exam.

**PLEASE NOTE THAT THESE TESTS MAY NOT HAVE QUESTIONS FROM THE LIVE EXAM! THEY ARE NOT A SUBSTITUTE FOR STUDY.**

Feel free to experiment with the modes to suit your needs. Your Mentor may have suggestions.

**Time to Complete:** Plan on working with the Practice Tests for about 1 week.