

Institute of Certified
Records Managers

Examination Preparation
Part Five
*Technology, Equipment and
Supplies*



Part Five

**Equipment, Supplies &
Technology**



Eight Subject Areas

- Micrographics
- Reprographics
- Imaging Systems
- Systems
- Records Creation
- Data Management
- Data/Systems Disposition
- Preservation, Recovery and Destruction Techniques



Micrographics

- Miniaturized photographic reproductions
- Different types of cameras, film available
- Film has different life expectancies depending on base, emulsion and proper storage
- Different format factors available including microfilm, microfiche, aperture cards, etc.
- Reduction Ratio



Micrographics

- Understand the capabilities of microfilm readers, reader/printers and microfilm scanners
- Quality Control
 - Resolution
 - Density
 - Methylene Blue Test
- Advantages/Disadvantages of Micrographics



Micrographic Systems

- Technology for indexing, storing and retrieving images
- Indexing systems
- Source document microfilming
- Steps in the micrographic process



Standards

- Numerous standards available through AIIM, ANSI, NISO and ISO
 - Filming
 - Cameras and readers
 - Jackets and aperture cards
 - Quality control and inspection for deterioration
 - Exhaustive list at http://www.microfilm.net.au/?microfilm_standards
- Film-based Imaging Association: <http://www.aiim.org/fbia>



Sample Question 1

1. A _____ is a photographic information carrier containing highly miniaturized document images.
 - A. Negative
 - B. Microform
 - C. Slide
 - D. Disk
 - E. File



Sample Question 2

2. The most common microfilm width used for business documents is _____ mm.
 - A. 48
 - B. 105
 - C. 35
 - D. 42
 - E. 16



Sample Question 3

3. In micrographics, _____ equates to image sharpness.
- A. Reduction
 - B. Density
 - C. Resolution
 - D. Enhancement
 - E. Duplication



Reprographics



Reprographics

- Reproduction of materials typically to paper
- Management of reproductions
- True copies and convenience copies
- Related cost



Selection Criteria

- Copying requirements
- Cost justification analysis
- Vendor selection criteria
 - In-house vs. outsource
 - Reliability vs. price vs. quality



Printers and Duplicators

- Ink-jet
- Laser
- Solid-ink
- Dye-sublimation
- Special-purpose
 - Impact/dot-matrix
 - Thermal printers
 - Daisy-wheel



Copiers

- Personal, convenience, production
- Copy center
- Specialty copiers
 - Blueline
 - Diazo
 - Oversize



Sample Question 4

4. When evaluating copier vendors, which of the following should you expect when purchasing a customer maintenance agreement?
- A. Training
 - B. Lease fees
 - C. Downtime
 - D. Warranties
 - E. Free upgrades



Imaging Systems



Imaging Systems

- Conversion of paper and/or film to digital
- User requirements
- Media comparisons
- Recording and processing
- COLD



Imaging Systems

- Consists of hardware (scanner, storage device(s) and software (images, indexes, database)
- Conversion steps
 - preparation, capture, quality control, and indexing
- Imaging resolution
- Imaging advantages
- Legal status of imaging systems



Standards

- Numerous standards for image formats
 - TIFF, PDF, JPEG, GIF, PNG
- Some standards for media
- Technology changes rapidly
- Digital preservation a major issue



Sample Question 5

5. Electronic document imaging systems offer all of the following benefits, **except**:
- A. Improved productivity
 - B. Improved file integrity
 - C. Convenient remote access
 - D. Version control
 - E. Permanent preservation



Sample Question 6

6. A laser burns digital information into a/an:
- A. WORM disc
 - B. Floppy disc
 - C. Ultrafiche
 - D. Hard disk
 - E. RAM



Sample Question 7

7. Images produced from letter-size pages scanned at 200 dpi, and stored as Group 3 TIF, require approximately _____ bytes of storage.
- A. 10,000
 - B. 20,000
 - C. 50,000
 - D. 75,000
 - E. 100,000



Systems



Systems

- RIM is a business discipline – more than just hardware and software
- Systems and process analysis
- Requirements definition
- Roles and responsibilities
- Project management
- Implementation and follow-up



Basic Concepts

- Planning
- Standards
- Business rules and workflow
- Evaluation of vendors
- Implementation
- Administration



Organizing

- Collaboration with IT, business and legal
- Address customer needs through analysis and requirements definition
- Identify roles and responsibilities
- Make the business case for funding



Directing

- Train users
 - Different training required by role, experience
 - Different mechanisms available
- Documentation
 - Initial documentation – content and format
 - Updates to system, processes, roles



Controlling

- Evaluate system performance and human input
- Evaluate compliance to policies, procedures, standards
- Quality control and audits
- Mechanisms for gathering feedback



Sample Question 8

8. _____ is a structured step-by-step approach for developing and managing information systems :
- A. Procedure
 - B. Architecture
 - C. Life cycle
 - D. Switch
 - E. Server



Sample Question 9

9. In planning an Enterprise Content Management (ECM) system, charting the _____ shows whether tasks to be performed are sequential or parallel.
- A. Retrieval
 - B. Business plan
 - C. Filing manual
 - D. Workflow
 - E. Record type



Records Creation



System Architecture

- Assess choices for system components and architecture
- Identify basic computer components
 - CPU, desktop peripherals, servers and network
- Identify hardware and software integration issues
 - Updates and technology obsolescence
 - Interoperability



Devices

- Input devices
 - Keyboard, mouse and handwriting recognition
 - Scanner, barcode reader and RFID reader
 - Scientific and medical devices
 - Video and audio recorders
 - Metadata requirements and capture techniques



Applications

- Data sources
 - Data entry
 - Capture and extraction
 - Direct computer-to-computer transfer
- Common file formats
 - Standard vs. proprietary
 - Textual vs. image vs. rich media
- Considerations for care and processing of data



Capture

- Structured vs. unstructured data
- Data capture
- Legacy data



Organizing Data

- Categorization and classification
 - Classification structures
 - Records series/file plan
- Taxonomies
- Data validation



Sample Question 10

10. Wireless communications devices transmit information through the:
- A. Telephone lines
 - B. Network
 - C. Grapevine
 - D. Air
 - E. Web



Sample Question 11

11. By nature, _____ data is often difficult to search because it is not easily or systematically organized into tables.
- A. Structured
 - B. Unstructured
 - C. Related
 - D. Line item
 - E. Report




Data Management




Data Management

- System architecture
- Devices
- Programs, software and applications
- Security/accessibility
- Data use
- Data storage



System Architecture

- Definitions
 - Telecommunications
 - Networking and the Internet
 - Common electronic file formats and applications
- Key architectural considerations
 - Scope and scale of system
 - Centralized vs. decentralized
 - Deployment models



Personal Devices

- Desktop computer
- Laptop
- Local peripherals
- Smart phones
- PDAs



Enterprise Devices

- **Mainframes and minicomputers**
- Servers
- Networks
- **Enterprise and shared peripherals**
- Printers
- Storage libraries



Programs, Software and Applications

- Operating systems
- Network operating systems
- Databases
- Data mining
- Data warehousing



Programs, Software, and Applications

- ECM
- WCM
- EDMS
- ERMS
- BPM
- Email and Instant messaging
- Collaborative tools
- Record keeping considerations



Security and Accessibility

- Access rights
- Balancing access rights vs. user needs
- Computer system threats
- Computer system defenses
- Physical security
- Digital security and integrity



Data Use

- Distribution
 - Shared drives
 - Electronic document rooms
 - Hard copy
- Manipulation and processing
- Search and retrieval
 - Recall vs. precision
 - Search techniques and considerations
- Output



Data Storage

- Methods of storage
 - Classes of storage
 - Primary vs. secondary storage
- Backup
- Hot sites
- Proprietary vs. standard formats
- Storage vs. working copies



Sample Question 12

12. _____ is a technique of converting images of text, especially handwriting into machine-readable data.
- A. ICR
 - B. COM
 - C. OCR
 - D. CAR
 - E. COTS



Sample Question 13

13. A _____ contains information collected from a variety of sources that is analyzed to discover trends and correlations.
- A. Disk drive
 - B. Optical disc
 - C. Data warehouse
 - D. Database management system
 - E. Workflow application



Sample Question 14

14. A _____ is hardware and/or software that protects computers from intruders.
- A. Biometric
 - B. Cookie
 - C. Firewall
 - D. Hacker
 - E. Backup



Sample Question 15

15. _____ is a technique to transform a string of characters into a unique fixed-length code.
- A. Hard-coding
 - B. Programming
 - C. Editing
 - D. Versioning
 - E. Hashing



Data and System Disposition

- Applying the retention schedule
- Preservation issues
- Data repositories



Applying the Retention Schedule

- Apply the retention schedule to all records regardless of format or media
 - Preservation
 - Disposition
 - Vital records
- Record keeping software
 - Physical records
 - Electronic records



Preservation Issues

- Digital preservation issues
 - Media
 - Hardware
 - Software
- Software maintenance and upgrades
- Data repositories
- System migration
- Destruction requirements



Sample Question 16

16. Data _____ is the process of periodically converting electronic records to new file formats and/or new storage media.
- A. Mining
 - B. Warehousing
 - C. Implementation
 - D. Stabilizing
 - E. Migration



Sample Question 17

17. _____ technology is a method of delivering information or software updates through a network broadcast, based on pre-specified interests or privileges.
- A. Internet
 - B. Push
 - C. Spooling
 - D. Portal
 - E. Utilities



Preservation, Recovery and Destruction Techniques



Preservation

- Preservation methods
- Electronic and digital considerations
- Conditions which can damage records
- Metadata and preservation



Recovery

- Immediate
- Short term
- Long term
- Disaster recovery planning
- Recovery procedures
 - Water
 - Fire
 - Smoke and chemicals



Destruction

- Physical destruction methods
 - Shredding, recycling, maceration, pulverization and pulping
- Electronic destruction methods
 - Media: shredding, recycling and pulverization
 - Digital: Erasing, overwriting and digital shredding
- Considerations: cost, environmental and security
- Electronic records and stub metadata



Sample Question 18

18. When storing microfilm, reels should be shelved:
- A. Vertically on metal shelving
 - B. Horizontally on metal shelving
 - C. Vertically on wood shelving
 - D. Horizontally on wood shelving
 - E. In a light-restricted environment



Sample Question 19

19. A _____ is a separate and fully equipped facility where a company can move immediately after a disaster and resume business.
- A. Repository
 - B. Portal
 - C. Holograph
 - D. Vault
 - E. Hot site



Sample Question 20

20. In hard disk storage, the set of clusters available to store information, is _____ space.
- A. Vacancy
 - B. Encrypted
 - C. Unallocated
 - D. Hidden
 - E. Protected



[Questions?](#)

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