POWERFUL TIPS TO PASS THE CIA EXAM PARTS 3 AND 4
Exam Overview

It is important to note that the CIA Exam is really four exams not one. Accordingly, the knowledge required and preparation process will vary. Please note that my comments are my personal opinions and may or may not reflect the position of The IIA.

Part 1
- The internal audit activity’s role in governance, risk, and control.

Part 2
- Conducting the internal audit engagement.

Part 3
- Business analysis and information technology.

Part 4
- Business management skills.
# Exam Overview

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CIA Exam Changes

• Exam Preparation Resources and Planned Changes:
  – The IIA’s Global Website
    www.globaliia.org/certification
Comments

• Grade Distribution:
  – The grades are typically much more compressed on parts 1 and 2 than a normal distribution.
  – This is due to the fact that everyone is studying the same material and the more candidates study, the more similar the scores.
  – This does not hold for Part 3 since the volume of material is significant. Also, the degree and number of years since graduation will vary.
  – This also does not hold for part 4 since the educational backgrounds of the candidates may vary.
Comments

• Status
• Computer-Based Testing
• Model Exam
• Resource Materials
• Waiver
• Future Changes
  – Part 3
  – Part 4
Passing the Exam

• The exam is primarily a preparation process.
  – This is particularly true for Part 3.

• Three primary reasons that candidates do not pass the exam:
  – Knowledge of the exam coverage and content.
  – Insufficient preparation.
  – Preparation not focused.
Keys to Passing the Exam

• Model Exam
  – Candidates should purchase the Model Exam and read as the first step in the preparation process.
  – The Model Exam provides a quick overview of the content and difficulty level of each part.
  • Example: MIS
    – Model Exam questions are included in The IIA’s CIA Learning System.
Keys to Passing the Exam

• Question Recognition
  – The more questions that you review from all of the available sources, the more questions you will recognize on the exam.
    – Review as many questions as possible and make sure that you understand any questions you miss.
    – Many successful candidates indicate that their primary approach was to focus on learning by reviewing questions.
Keys to Passing the Exam

• Test-Taking Techniques
  – Parts 1 and 2 to some extent is a reading comprehension process. This is not the case with Parts 3 and 4.
  – You can not pass the Exam with just good test-taking techniques but it might improve your score by 3 to 5 questions.
  – Typically, there are about 5 questions on each exam that are critical to success. Test-taking techniques can impact your success on these questions. However, on Parts 3 and 4 test taking is not as critical.
Overview of Exam

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Typical Exam

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CIA Exam Review
Part 3
Part 3 Topics

Business Process
- Total Quality Management
- Budgeting
- Benchmarking
- ISO 9000
- ISO 14000
- Business Process Reengineering
- OECD
- Management Span of Control
- XBRL
- Six Sigma
- Process Mapping
- Forecasting
- Supply Chain Management
- Balanced Score Card
Part 3 Topics

Finance

- Payback Period
- Net Present Value
- Internal Rate of Return
- Accounting Rate of Return
- Annuities
- Present Value & Future Value
- Profitability Index
- Financial Ratios
- Financial and Operating Leverage
- Operating and Financial Leases
- Composition
- Optimal Capital Structure
- Financing
- Factoring and Pledging Receivables
- Uncollectibles
- Effective Interest Rate

- Mortgage Payable
- Capitalization
- Troubled Debt Restructuring
- Risk of Investments
- Secured ST Financing
- Goals of Financial Management
- Capital Asset Pricing Model
- Liquidation
- Cash Flow
- Bonds & Securities
- Certainty-Equivalent & Risk Adjusted Discount Rate Method
- Stocks
- Inventory
- Insolvency vs. Illiquidity
- EPS
- Finance Terms
Part 3 Topics

Financial Accounting
- Accounting Principles and Assumptions
- Inventory
- Investments and Stock
- Bonds
- Acquisition Costs
- Depreciation
- Business Combinations (Purchase Method)
- Consolidation
- Leases
- Accounting Errors
- Pensions
- Recording and Validation of Assets
- Working Capital
- Revenue Recognition
- Broad Accounting Principles
- Governmental Accounting
- Notes to the Financial Statements
- Treasury Stock
- Warranties
- Tax
- Financial Reporting and Disclosure

- Percentage of Completion Method
- Research & Development Costs
- Cash Discounts
- Unearned Income
- Interest
- Accruals
- Expense Recognition
- Matching Principle
- Operating vs. Non-operating Activities
- Partnerships
- Partnership Income Distribution
- Patents
- Selling Accounts Receivable
- Troubled Debt Restructuring
- Accounting for Improvements
- Consignment Sales
- Earnings Per Share
- Ratios
- Extraordinary Items
- Accrual Accounting
- Financial Reporting
- Statement of Cash Flows
- Dividends
- Goodwill
Part 3 Topics

Managerial Accounting

• Fixed, Variable, and Mixed Costs
• Cost-Volume-Profit
• Absorption (Full) Costing vs. Direct (Variable) Costing
• Service Department Cost Allocation
• Standard Costing
• Manufacturing Cost Flows
• Cost Classifications
• Differential costing
• Joint Cost
• Budgeting
• Variance Analysis
• Inventory Planning
• Equivalent Units of Production
• Spoilage
• Defective Units

• Just-In-Time
• Decision Making About Production & Sales
• Estimating Cost
• Differential Profits and Costs
• Profit and Investment Centers
• Perfect Information
• Responsibility Accounting
• Transfer Prices
• Measurement of Performance
• Gross Margin
• Cash Balance
• Determining Work-In-Process
Part 3 Topics

Operations Management

- Gantt Chart
- Game Theory
- Pert
- Networking/Critical Path Analysis
- Learning Curve
- Queuing Theory
- Simulation Analysis
- Monte Carlo Technique
- Inventory models
- Inventory Systems
- MRP
- Just-In-Time Inventory
- Regression Analysis
- Linear Programming
- Probability Theory
- Decision Tree Analysis
- Dynamic Programming
- Payoff Table Analysis
- Expected Values
- Decision Theory
- Exponential Smoothing

- Zero-Based Budgeting
- Time Series Analysis
- Delphi Technique
- Operations Research Theory
- Markov Analysis
- Dupont Systems ROI
- Moving Average Method of Forecasting
- Finance
- Econometrics
- Control Charts
- Statistics
- CVP Analysis
- Sampling
- Differential Calculus
- Matrix Algebra
- Sensitivity Analysis
- Market Analysis
- Analytical Review procedures
- Trend Analysis
- Ratio Analysis
Part 3 Topics

Regulatory, Legal, and Economics
- Contracts
- Taxation Schemes
- Economics

Information Technology
- Data and Network Communications
- Electronic Funds Transfer (EFT)
- E-commerce
- Electronic Data Interchange (EDI)
- Functional Areas of IT Operations
- Encryption
- Viruses
- Evaluate Investment in IT
- Enterprise Resource Planning (ERP) Software
- Operating Systems
- Systems Components
- Application Development
- End-User & Departmental Computing
- Contingency Planning
- Telecommunication
- Systems Security
- Databases
- Software Licensing
- MIS Controls
- Internal Control Structure for Computer Systems
- IT Control Classifications
Study Plan

- Order Model Exam
- Read Model Exam
- Business Processes
- Operations Management
- Economics
- Finance
- Managerial
- MIS
- Financial
- Work Model Exam
Exam Content: Exam Part 3

Business Analysis and Information Technology

A. Business Process 15-25%
B. Financial Accounting and Finance 15-25%
C. Managerial Accounting 10-20%
D. Regulatory, Legal, and Economics 5-15%
E. Information Technology (IT) 30-40%
THE IIA’S CIA LEARNING SYSTEM

Reading
- Business Processes
- Operations Management
- Economics
- MIS

Part 1 & 2
- Experience
- TTT
- Standards
- Figure It Out

Understanding
- Finance
- Managerial
- Financial

Part 3
- Walk in with knowledge
Part 3: Business Analysis and Information Technology

A. Business Processes
1. Quality management (e.g., TQM) – Level A
2. The International Organization for Standardization (ISO) framework – Level A
3. Forecasting – Level A
4. Project management techniques – Level P
5. Business process analysis (e.g., workflow analysis and bottleneck management, theory of constraints) – Level P
6. Inventory management techniques and concepts – Level P
7. Marketing – pricing objectives and policies – Level A
8. Marketing – supply chain management – Level A
9. Human Resources (Individual performance management and measurement; supervision; environmental factors that affect performance; facilitation techniques; personnel sourcing/staffing; training and development; safety) – Level P
10. Balanced scorecard – Level A

B. Financial Accounting and Finance
1. Basic concepts and underlying principles of financial accounting (e.g., statements, terminology, relationships) – Level P
2. Intermediate concepts of financial accounting (e.g., bonds, leases, pensions, intangible assets, R&D) – Level A
3. Advanced concepts of financial accounting (e.g., consolidation, partnerships, foreign currency transactions) – Level A
4. Financial statement analysis – Level P
5. Cost of capital evaluation – Level A
6. Types of debt and equity – Level A
7. Financial instruments (e.g., derivatives) – Level A
8. Cash management (treasury functions) – Level A
9. Valuation models – Level A
   a. Inventory valuation
   b. Business valuation
10. Business development life cycles – Level A
Part 3: Business Analysis and Information Technology

C. Managerial Accounting
1. Cost concepts (e.g., absorption, variable, fixed) – Level P
2. Capital budgeting – Level A
3. Operating budget – Level P
4. Transfer pricing – Level A
5. Cost-volume-profit analysis – Level A
6. Relevant cost – Level A
7. Costing systems (e.g., activity-based, standard) – Level A
8. Responsibility accounting – Level A

D. Regulatory, Legal, and Economics – Level A
1. Impact of government legislation and regulation on business
2. Trade legislation and regulations
3. Taxation schemes
4. Contracts
5. Nature and rule of legal evidence
6. Key economic indicators

E. Information Technology – Level A
1. Control frameworks (e.g., eSAC, COBIT)
2. Data and network communications/connections (e.g., LAN, VAN, and WAN)
3. Electronic funds transfer (EFT)
4. e-Commerce
5. Electronic data interchange (EDI)
6. Functional areas of IT operations (e.g., data center operations)
7. Encryption
8. Information protection (e.g., viruses, privacy)
9. Evaluate investment in IT (cost of ownership)
10. Enterprise-wide resource planning (ERP) software (e.g., SAP R/3)
11. Operating systems
12. Application development
13. Voice communications
14. Contingency planning
15. Systems security (e.g., firewalls, access control)
16. Databases
17. Software licensing
18. Web infrastructure
Part 3: Business Analysis and Information Technology

Level P – Candidates must exhibit proficiency (thorough understanding and ability to apply concepts) in these areas.

Level A – Candidates must exhibit awareness (knowledge of terminology and fundamentals) in these areas.
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<th>Topic</th>
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<td>26 Stock Exchange</td>
<td>51 Costs</td>
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<td>2 TQM</td>
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<td>3 ISO 9000</td>
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<td>6 Networks</td>
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<td>34 Dividend Payout Ratio</td>
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<td>10 Time Series Analysis</td>
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# Part 3 Model Exam

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**Note:**
1. 90 Questions
   - 70 Topics
   - Use this sheet as a checklist.
2. Walk in knowledge
## Finance: Future Value Tables

### Table 1 – Future Value of $1.00

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### Table 2 – Future Value of Series of $1.00 Cash Flows

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## Finance: Present Value Tables

### Table 3 – Present Value of $1.00

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<td>0.681</td>
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<td>0.567</td>
<td>0.519</td>
<td>0.476</td>
<td>0.437</td>
</tr>
<tr>
<td>6</td>
<td>0.705</td>
<td>0.630</td>
<td>0.564</td>
<td>0.507</td>
<td>0.456</td>
<td>0.410</td>
<td>0.370</td>
</tr>
<tr>
<td>7</td>
<td>0.665</td>
<td>0.583</td>
<td>0.513</td>
<td>0.452</td>
<td>0.400</td>
<td>0.354</td>
<td>0.314</td>
</tr>
<tr>
<td>8</td>
<td>0.627</td>
<td>0.540</td>
<td>0.467</td>
<td>0.404</td>
<td>0.351</td>
<td>0.305</td>
<td>0.266</td>
</tr>
<tr>
<td>9</td>
<td>0.592</td>
<td>0.500</td>
<td>0.424</td>
<td>0.361</td>
<td>0.308</td>
<td>0.263</td>
<td>0.225</td>
</tr>
<tr>
<td>10</td>
<td>0.558</td>
<td>0.463</td>
<td>0.386</td>
<td>0.322</td>
<td>0.270</td>
<td>0.227</td>
<td>0.191</td>
</tr>
</tbody>
</table>

### Table 4 – Present Value of Series of $1.00 Cash Flows

<table>
<thead>
<tr>
<th>Periods</th>
<th>6%</th>
<th>8%</th>
<th>10%</th>
<th>12%</th>
<th>14%</th>
<th>16%</th>
<th>18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.943</td>
<td>0.926</td>
<td>0.909</td>
<td>0.893</td>
<td>0.877</td>
<td>0.862</td>
<td>0.847</td>
</tr>
<tr>
<td>2</td>
<td>1.833</td>
<td>1.783</td>
<td>1.736</td>
<td>1.690</td>
<td>1.647</td>
<td>1.605</td>
<td>1.566</td>
</tr>
<tr>
<td>3</td>
<td>2.673</td>
<td>2.577</td>
<td>2.487</td>
<td>2.402</td>
<td>2.322</td>
<td>2.246</td>
<td>2.174</td>
</tr>
<tr>
<td>4</td>
<td>3.465</td>
<td>3.312</td>
<td>3.170</td>
<td>3.037</td>
<td>2.914</td>
<td>2.798</td>
<td>2.690</td>
</tr>
<tr>
<td>7</td>
<td>5.582</td>
<td>5.206</td>
<td>4.868</td>
<td>4.564</td>
<td>4.288</td>
<td>4.039</td>
<td>3.812</td>
</tr>
<tr>
<td>8</td>
<td>6.210</td>
<td>5.747</td>
<td>5.335</td>
<td>4.968</td>
<td>4.639</td>
<td>4.344</td>
<td>4.078</td>
</tr>
</tbody>
</table>
Capital Budgeting Techniques: Problem

Robert Weaver has approached management with promotional material introducing a PC with innovative work-saving devices. The cost is $50,000 with an estimated life of 6 years. The salvage value is expected to be $2,000. The company uses a straight-line depreciation method and has forecasted a $14,000 after-tax cash inflow. Use 8% interest rate.

Required:

1. Payback (payout) period
2. Unadjusted Rate of Return on initial investment (accounting rate of return or book rate of return)
3. Unadjusted Rate of Return on average investment
4. Net Present Value at 8%
5. Present Value Payback Period
6. Time Adjusted Rate of Return (Internal Rate of Return)
Capital Budgeting Techniques: Solution

(1) Payback

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Cash Inflow</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$14,000</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>14,000</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>14,000</td>
<td>1.00</td>
</tr>
<tr>
<td>4 (need)</td>
<td>8,000</td>
<td>(8,000)</td>
</tr>
<tr>
<td></td>
<td>$50,000 cost</td>
<td></td>
</tr>
</tbody>
</table>

$50,000 cost = 3.57 yr. payback

(2) Unadjusted Rate of Return (on initial investment)

Total after-tax inflow $14,000 * 6 years = $84,000
Depreciable Cost $50,000 - $2,000 sv = $48,000

Inflow Depr. Cost Annual flow
84,000 - 48,000 = 6,000 6,000 = 12%
6 yrs 50,000
Capital Budgeting Techniques: Solution

(3) Unadjusted Rate of Return (average investment)

\[
\frac{6,000}{25,000} = 24\%
\]
(Always twice rate on initial investment)

(4) Net Present Value

\[
\begin{align*}
($50,000) & \times 1.00 = (50,000) \quad \text{Cost} \\
14,000 & \times 4.623 = 64,722 \quad \text{Cash inflow} \\
2,000 & \times .630 = 1,260 \quad \text{s.v.}
\end{align*}
\]

\[\text{Cost} - \text{Cash inflow} = 15,982\]

(5) Present Value Payback

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>PV 8%</th>
<th>PV</th>
<th>Needed</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14,000</td>
<td>.926</td>
<td>12,964</td>
<td>12,964</td>
<td>1.0</td>
</tr>
<tr>
<td>2</td>
<td>14,000</td>
<td>.857</td>
<td>11,998</td>
<td>11,998</td>
<td>1.0</td>
</tr>
<tr>
<td>3</td>
<td>14,000</td>
<td>.794</td>
<td>11,116</td>
<td>11,116</td>
<td>1.0</td>
</tr>
<tr>
<td>4</td>
<td>14,000</td>
<td>.735</td>
<td>10,290</td>
<td>10,290</td>
<td>1.0</td>
</tr>
<tr>
<td>5</td>
<td>14,000</td>
<td>.681</td>
<td>9,534</td>
<td>3,632</td>
<td>.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50,000</td>
<td>[3632]</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Capital Budgeting Techniques: Solution

(6) Time Adjusted Rate of Return

<table>
<thead>
<tr>
<th>Cash Flows</th>
<th>16%</th>
<th>18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>($50,000)</td>
<td>(50,000)</td>
<td>(50,000)</td>
</tr>
<tr>
<td>$14,000 for 6 yrs</td>
<td>51,590 (14,000 * 3.685)</td>
<td>48,972 (14,000 * 3.498)</td>
</tr>
<tr>
<td>$2,000 at yr 6</td>
<td>820 (2,000 * .41)</td>
<td>740 (2,000 * .37)</td>
</tr>
<tr>
<td>Net P.V.</td>
<td>2,410</td>
<td>-288</td>
</tr>
</tbody>
</table>

\[16\% + 2\%(\frac{2,410}{2,698}) = 17.786\%\]

\[2410 + 288 = 2698\]
Accounting Principles and Assumptions

**Period Assumption:**
The economic life of a business can be divided into artificial time periods to measure results.

**Matching Concept:**
The revenues of a time period are matched with the related expenses to measure results.

**Entity Assumption:**
The economic events of an organization are separated from the activities of the owners.

**Monetary Unit Assumption:**
Accounting does not consider changes in the value of the monetary unit. Only monetary transactions are recorded.

**Going Concern Principle:**
Organizations will continue in operation long enough to carry out existing operations.

**Cost Principle:**
Assets should be recorded at all the costs necessary to bring them into being.

**Full Disclosure:**
All events material to users should be presented in the financial statements.

**Materiality:**
Accounting rules do not apply to immaterial transactions.

**Conservatism:**
Accounting leans towards the more conservative of the two options.

**Realization and Recognition:**
Accounting recognized losses without transaction but not gains.
Gross Profit Method of Estimating Inventory

EXAMPLE 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Inventory (Cost)</td>
<td>$60,000</td>
</tr>
<tr>
<td>Purchases (Cost)</td>
<td>200,000</td>
</tr>
<tr>
<td>Goods Available (Cost)</td>
<td>260,000</td>
</tr>
<tr>
<td>Sales (Selling Price)</td>
<td>$280,000</td>
</tr>
<tr>
<td>Less Gross Margin (30%)</td>
<td>84,000</td>
</tr>
<tr>
<td>Sales (Cost) (CGS)</td>
<td>196,000</td>
</tr>
<tr>
<td>Approximate Inventory (Cost)</td>
<td>$64,000</td>
</tr>
</tbody>
</table>

NOTE: The gross margin percent is determined by reviewing prior period records.
USES:
1. To estimate the inventory
2. Used by auditors when only an estimate is needed

This method is not acceptable for financial statement purposes.
EXAMPLE 2

A Shamal destroyed all of the inventory of Opinar Sales Company. As the internal auditor you want to determine the amount of the loss. From the records, you reconstruct the following information:

- $400,000 1/1/92 Inventory
- 1,700,000 Sales to date of loss
- 1,140,000 Purchases to date of loss
- 60,000 Freight-in
- 40% Historical Gross Profit

\[
\begin{array}{ccc}
\text{Beginning Inventory} & \text{Purchase} & \text{Freight-in} \\
1,140,000 & 60,000 & 1,200,000 \\
\end{array}
\\]

\[
\begin{array}{ccc}
\text{Available} & \text{Sales} & - \text{Gross Profit} \\
1,600,000 & 1,700,000 & 680,000 \\
\end{array}
\]

\[
\begin{array}{ccc}
\text{Sales at Cost} & \approx \text{Inventory Loss} \\
1,020,000 & 580,000 \\
\end{array}
\]
Manufacturing Costs Flows

1. Process Costing

Objective:
Finding the total cost; transferring unfinished product between departments necessitates the use of equivalent units.

Examples:
Oil, Gas, Chemicals (Fungible Goods)

Computation:
Costs ÷ Units = Unit Cost
Manufacturing Costs Flows

1. Process Costing

Objective:
• Finding the total cost; transferring unfinished product between departments necessitates the use of equivalent units.

Examples:
• Oil, Gas, Chemicals (Fungible Goods)

Computation:
• Costs ÷ Units = Unit Cost
Objective:
- Accumulation of costs for each job.

Examples:
- Car Repairs, Trophy Shop, Newspaper Ads (Differential Products)

Computation:
- Costs are accumulated for each job.

**Job Order Cost Sheet**

<table>
<thead>
<tr>
<th>Direct Material</th>
<th>$XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Labor</td>
<td>$XXX</td>
</tr>
<tr>
<td>Overhead</td>
<td>$XXX</td>
</tr>
</tbody>
</table>
Comments:

Networks assist managers in visualizing the required operations resource requirement, time requirements, and the sequence of events in large complex projects. Networks provide diagrammatic representations of the presence of events and the critical steps in the project. Networks analysis assists management in understanding how the project must proceed and in identifying possible ways to revise or shorten the sequence of activities to expedite the project and/or lower the costs. Chief Audit Executives often use network analysis in planning and scheduling the audit process.

The best-known network decision aids are PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method). These two methods are similar but were developed independently. PERT can best be explained through the use of an example, which also shows how it differs from CPM:
Viruses

A virus is a program or piece of code that is loaded or run onto a computer without the user’s consent and knowledge. Viruses can also replicate themselves. A simple virus that can make a copy of itself over and over again is relatively easy to produce. Even such a simple virus is dangerous because it will quickly use all available memory and slow down or even crash the system. An even more dangerous type of virus is one capable of transmitting itself across networks and bypassing security systems. All computer viruses are manmade.

Viruses and worms are different. A worm is a special type of virus that can replicate itself and use memory, but cannot attach itself to other programs.

Controls to mitigate the occurrence and the spreading of viruses include:

- Formal security policy
- Restrict access and capabilities
- Strict passwords
- Formal backup recovery plan
- Periodic scanning and testing
- Anti virus software
Viruses (continued)

• Virus:

A computer virus is a computer program that can copy itself using a reproductive ability, and infect a computer causing malfunctions in the computer’s operations. Viruses can only spread from one computer to another and can increase their chances of spreading when the virus infects a network system that many computers access. A computer virus may corrupt or delete data on a computer, use an e-mail program to spread the virus to other computers, or delete everything on the hard disk. In order to replicate itself, a virus must be permitted to execute code and write to memory. For this reason, many viruses attach themselves to executable files that may be part of legitimate programs. If a user attempts to launch an infected program, the virus’ code may be executed simultaneously. Viruses can be divided into two types based on their behavior when they are executed; resident and nonresident. Nonresident viruses immediately search for other hosts that can be infected, infect those targets, and finally transfer control to the application program they infected. Resident viruses do not search for hosts when they are started. Instead, a resident virus loads itself into memory on execution and transfers control to the host program. The virus stays active in the background and infects new hosts when those files are accessed by other programs or the operating system itself. Viruses are sometimes confused with computer worms and Trojan horses, which are technically different. A worm can exploit security vulnerabilities to spread itself automatically to other computers through networks, while a Trojan is a program that appears harmless but hides malicious functions. Worms and Trojans, like viruses, may harm a computer system’s data or performance.
Viruses (continued)

- **Trojan Horse:**
  
  A Trojan, sometimes referred to as a Trojan horse, is non-self-replicating malware that appears to perform a desirable function for the user but instead facilitates unauthorized access to the user's computer system. Malware, short for malicious software, is software designed to infiltrate a computer system without the owner's informed consent. Trojan horses are designed to allow a hacker remote access to a target computer system. Once a Trojan horse has been installed on a target computer system, it is possible for a hacker to access it remotely and perform various operations. The operations that a hacker can perform are limited by user privileges on the target computer system and the design of the Trojan horse. Trojan horses require interaction with a hacker to fulfill their purpose, though the hacker need not be the individual responsible for distributing the Trojan horse. In fact, it is possible for hackers to scan computers on a network using a port scanner in the hope of finding a computer with a Trojan horse installed, which the hacker can then use to control the target computer. Trojan horses can be installed through the following methods: software downloads, websites containing executable content, email attachments, and application exploits (messaging, web browsers, media player, etc).
Viruses (continued)

- **Worm:**

  A computer worm is a self-replicating Malware computer program. It uses a computer network to send copies of itself to other computers on the network and it may do so without any user intervention. This is due to security shortcomings on the target computer. Unlike a virus, it does not need to attach itself to an existing program. A virus is dependent upon the host file or boot sector, and the transfer of files between computers to spread, whereas a computer worm can execute completely independently and spread on its own accord through network connections. Worms almost always cause at least some harm to the network, if only by consuming bandwidth, whereas viruses almost always corrupt or modify files on a targeted computer. Worms spread by exploiting vulnerabilities in operating systems. Computer worms are able to cause and entire series of damage such as destroying crucial files in your system, slowing it down to a large degree, or even causing some critical programs to stop working. Worms can replicate in great volume. All vendors supply regular security updates and if these are installed to a machine then the majority of worms are unable to spread to it.
Viruses (continued)

- Logic Bombs:
  A logic bomb is a piece of code intentionally inserted into a software system that will set off a malicious function. Software that is inherently malicious, such as viruses and worms, often contain logic bombs that execute a certain payload at a pre-defined time or when some other condition is met. A payload is the malicious code carried by the exploit to the target computer and then executed there. A logic bomb will lay dormant until a specific piece of program logic is activated. Because a logic bomb does not replicate itself, it is very easy to write a logic bomb program. This also means that a logic bomb will not spread to unintended victims. In some ways, a logic bomb is the most civilized programmed threat, because a logic bomb must be targeted against a specific victim. The classic use for a logic bomb is to ensure payment for software. If payment is not made by a certain date, the logic bomb activates and the software automatically deletes itself.
CIA Exam Review
Part 4
Part 4 Topics

Administration
- Course Evaluation
- Topics Outline
- Model Exam Outline
- Resources
- Test Taking Techniques

Strategic Management
- Industry Environment Analysis
- Competitive Strategies
- Types of Cooperative Strategies
- Competitive Analysis
- Market Signals
- Competition in Global Industries
- Strategic Decisions
- Product Life Cycles
- Value Chain Analysis
Part 4 Topics

Global Business Environment
- Political and Legal Environment in International Business
- Developing a Global Mindset
- International Cultural Environments
- Cultural Differences
- Value System
- Global Business
- International Finance
- International Management and Leadership
- Leading Global Teams
- Global Market Entry
- Organizational Behavior
- Motivation
- Communication
- Performance
- Organizational Structure
- Management Skills
Part 4 Topics

Organizational Behavior
- Motivation
- Communication
- Performance
- Organizational Structure

Management Skills
- Group Dynamics
- Team Building
- Leadership Skills
- Basic Leadership Models
- Mentoring
- Time Management
- Project Planning

Negotiation
- Conflict Resolution
- Added-Value Negotiation
Exam Content: Part 4

Business Management Skills

A. Strategic management  20-30%
B. Global business environments  15-25%
C. Organizational behavior  20-30%
D. Management skills  20-30%
E. Negotiating  5-15%
Resources: Part 4 CIA Exam Bibliography
(Effective May 2004)


3,461 Total

Notes:
- The material is relatively easy, however the questions are specific.
- MBA’s are typically well prepared for Part 4.
- This part can typically be prepared for in a short period of time. Suggest 30 hours of preparation.
- Suggested order: Part 1, Part 2, Part 4, Part 3
Organizational Behavior: Motivation

Motivation

Motivation represents the force acting on or within a person that causes the person to behave in a specific, goal-directed manner. A key motivational principle states that performance is based on a person’s level of ability and motivation. This principle is often expressed by the formula:
Performance = f (ability X motivation)

According to this principle, no task can be performed successfully unless the person who is to carry it out has the ability to do so. Ability is a person’s talent for performing goal-related tasks. However, regardless of a person’s competence, ability alone is not enough to ensure performance at a high level. The person must also want to achieve a high level of performance. Motivation theories are generally concerned with:
• What drives behavior
• What direction behavior takes
• How to maintain that behavior

The motivational process begins with identifying a person’s needs. Needs are deficiencies that a person experiences at a particular time. These deficiencies may be psychological (e.g., the need for recognition), physiological (e.g., the need for water, air, or food), or social (e.g., the need for friendship). Needs often act as energizers; they might create tensions within an individual, who finds them uncomfortable, and therefore, is likely to make an effort (phase 2) to reduce or eliminate them.
Motivation is goal directed (phase 3). A goal is a specific result that an individual wants to achieve. An employee's goals often are driving forces, and accomplishing those goals can significantly reduce needs. For example, some employees have strong drives for advancement and expectations that working long hours on highly visible projects will lead to promotions, raises, and greater influence. Such needs and expectations often create uncomfortable tension within these individuals.

Believing that certain specific behaviors can overcome this tension, these employees act to reduce it. Employees striving to advance may seek to work on major problems facing the organization in order to gain visibility and influence with senior managers (phase 4). Promotions and raises are two of the ways that organizations attempt to maintain desirable behaviors. They are signals (feedback) to employees that their needs for advancement and recognition and their behaviors are appropriate (phase 5). Once the employees have received either rewards or punishments, they reassess their needs (phase 6).
Organizational Behavior: Motivation

Motivation Theory

- **PRESSURE**
  - INTERNAL
  - EXTERNAL

PRECEIVED NEEDS DEFICIENCIES:
- PSYCHOLOGICAL
- PHYSIOLOGICAL
- SOCIAL

NEEDS

GOALS

ENERGIZER TENSION

ABILITY MOTIVATION

GOAL

ORGANIZATION CLOSURE:
- PROMOTION
- RAISES
- RECOGNITION

NEW NEEDS EMERGE
Organizational Behavior: Motivation

Motivational Theory

Motivational theory focuses on the specific factors that energize, direct, and inhibit a person’s behavior. An attractive salary, good working conditions, and friendly coworkers are important to most people. Hunger (the need for food) and a desire for a steady job (the need for job security) are also factors that arouse people, and may cause them to set specific goals (earning money to buy food or working in a financially stable industry).

Some of the most recognized models of motivation are:

- Maslow’s Needs Hierarchy Theory
- Alderfer’s ERG Model
- McClelland’s Achievement Motivation Model
- Fredrik Taylor’s Strategic Management Approach
- Adam’s Equity Theory
- Herzberg’s Two-Factor Model, which is also known as the Motivator-Hygiene Model
Organizational Behavior: Motivation

Maslow’s Needs Hierarchy

The most widely recognized model of motivation is the need hierarchy model. Abraham H. Maslow suggested that people have a complex set of exceptionally strong needs, which can be arranged in a hierarchy. Underlying this hierarchy are the following basic assumptions:

- Once a need has been satisfied, its motivational role declines in importance. However, as one need is satisfied, another need gradually emerges to take its place, so people are always striving to satisfy some need.
- The hierarchy is dependent on a person’s socio-cultural and psychological background.
- The majority of the needs (not all) at a level needs to be satisfied before a person is motivated at a higher level.
- The needs network for most people is very complex, with several needs affecting behavior at any one time. When someone faces an emergency, such as desperate thirst, that need dominates until it is gratified.
- Lower level needs must be satisfied, in general, before higher level needs are activated sufficiently to drive behavior.
- There are more ways of satisfying higher level than lower level needs.
- A fulfilled need does not create motivation; unsatisfied needs motivate behavior.
- Maslow’s model is closely associated with the Herzberg’s concept of job enrichment.
- The levels do not necessarily come in a predictable order. This is a complex process and moving through the levels is based on time and circumstances.
- This model is not research based not supported by research.
Organizational Behavior: Motivation

Maslow’s Needs Hierarchy (continued)

This model states that a person has five types of needs: physiological, security, affiliation, esteem, and self-actualization.

Physiological Needs
The needs for food, water, air, and shelter are all physiological needs and are the lowest level in Maslow’s hierarchy. People concentrate on satisfying these needs before turning to higher order needs.

Security Needs
The needs for safety, stability, and absence of pain, threat, or illness are all security needs. Like physiological needs, unsatisfied security needs cause people to be preoccupied with satisfying them. People who are motivated primarily by security needs value their jobs mainly as defenses against the loss of basic needs satisfaction.

Affiliation Needs (Love)
The needs for friendship, love, and a feeling of belonging are all affiliation needs. When physiological and security needs have been satisfied, affiliation needs emerge. When affiliation needs are the primary source of motivation, people value their work as an opportunity for finding and establishing warm and friendly interpersonal relationships.
Organizational Behavior: Motivation

Maslow’s Needs Hierarchy (continued)

Esteem Needs
Personal feelings of achievement and self-worth and recognition or respect from others meet esteem needs. People with esteem needs want others to accept them for what they are, to perceive them as competent and able, and to be told in private that they are performing well.

Self-Actualization Needs
Self-fulfillment comes from meeting self-actualization needs. People who strive for self-actualization seek to increase their problem solving abilities. These needs are intrinsic.

Maslow’s needs hierarchy model also suggests the types of behaviors that will help fulfill various needs. The three lowest needs - physiological, safety, and social - are also known as deficiency needs. According to Maslow, unless these needs are satisfied, an individual will fail to develop into a healthy person, both physically and psychologically. In contrast, esteem and self-actualization needs are known as growth needs. Satisfaction of these needs helps a person grow and develop as a human being.

This model provides incomplete information about the origin of needs. However, it implies that higher level needs are present in most people, even if they do not recognize or act to meet those needs. These higher level needs will motivate most people if nothing occurs to block their emergence.
Organizational Behavior: Motivation

Maslow’s Needs Hierarchy (continued)

- **Physiological needs:**
  - Food and thirst
  - Sleep

- **Safety needs:**
  - Security and safety
  - Comfort and peace

- **Social needs:**
  - Acceptance
  - Feeling of belonging

- **Esteem (or ego) needs:**
  - Recognition and prestige
  - Confidence and leadership

- **Self-actualization needs:**
  - Self-fulfillment of potential
  - Doing things for the challenge of accomplishment

- **Self-actualization needs:**
  - Intellectual curiosity
  - Creativity and aesthetic appreciation
  - Acceptance of reality

- **Safety needs:**
  - Orderly and neat surroundings
  - Assurance of long-term economic well-being

- **Social needs:**
  - Love and affection
  - Group participation

- **Esteem (or ego) needs:**
  - Competence and success
  - Strength and intelligence

- **Self-actualization needs:**
  - Intellectual curiosity
  - Creativity and aesthetic appreciation
  - Acceptance of reality
Organizational Behavior: Motivation

ERG Motivation Model

Clay Alderfer agrees with Maslow that individuals have a hierarchy of needs. However, instead of the five categories of needs suggested by Maslow, Alderfer’s ERG model holds that the individual has three sets of basic needs: Existence, Relatedness; and Growth.

Existence (material) needs are satisfied by food, air, water, pay, fringe benefits, and working conditions.
Relatedness needs are met by establishing and maintaining interpersonal relationships with coworkers, superiors, subordinates, friends, and family.

Growth needs are expressed by an individual’s attempt to find opportunities for unique personal development by making creative or productive contributions at work.

Alderfer’s arrangement of these categories of needs is similar to Maslow’s. Existence needs generally correspond to Maslow’s physiological and safety needs; relatedness needs generally correspond to Maslow’s affiliation needs; and growth needs generally correspond to Maslow’s esteem and self-actualization needs.

However, the two models differ in their views of how people attempt to satisfy different sets of needs. Maslow states that unfilled needs are motivators, and the next higher level need is not activated until the preceding lower level need is satisfied. Thus, a person progresses up the needs hierarchy as each set of lower level needs is satisfied.

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Organizational Behavior: Motivation

ERG Motivation Model (continued)

In contrast, the ERG model suggests that, in addition to this fulfillment-progression process, a frustration-regression process is at work. That is, if a person is continually frustrated in attempts to satisfy growth needs, relatedness needs will reemerge as a motivating force. The individual will return to satisfying this lower level need instead of attempting to satisfy growth needs, and frustration will lead to regression.

The same behavior (performing routine tasks) that led to the frustration of growth needs now becomes the means for the person to satisfy relatedness needs. Often, when attempts to satisfy relatedness needs have been frustrated, people seek refuge in food and alcohol or drugs to satisfy their existence needs. The frustration-regression idea is based on the assumption that existence, relatedness, and growth needs vary along a continuum of concreteness, with existence being the most concrete and growth being the least concrete. Alderfer further proposes that when lesser concrete needs are not met, more concrete needs fulfillment is sought.
Organizational Behavior: Motivation

Achievement-Motivation Model

David McClelland proposed a learned needs model of motivation that he believed to be rooted in culture and these motivations are learned and acquired over time. He argued that everyone has three particularly important needs: Achievement, affiliation, and power. Individuals have some degree of each characteristic.

Individuals, who possess a strong power motive, take actions that affect the behavior of others and have a strong emotional appeal. They want to be in-charge and influence and control. These individuals are concerned with providing status rewards to their followers. Individuals who have a strong affiliation motive tend to establish, maintain, and restore close personal relationships with others. Individuals who have a strong achievement motive compete against some standard of excellence or unique contribution against which they judge their behaviors and achievements.

Achievement motivation model states that people are motivated according to the strength of their desire either to perform in terms of a standard of excellence or to succeed in competitive situations. The amount of achievement motivation that people have depends on their childhood, their personal and occupational experiences, and the type of organization for which they work.

According to McClelland, motives are “stored” below the level of full awareness. They lie between the conscious and the unconscious below the level of full awareness, in the area of daydreams, where people talk to themselves without being aware of it. A basic premise of the model is that the pattern of these daydreams can be tested, and that people can be taught to change their motivation by changing these daydreams.
Scientific management Theory

The scientific management approach ideas were based on Frederick Taylor’s belief that existing reward systems were not designed to reward individuals for high production. He believed that when highly productive people discover they are being compensated in basically the same way less productive people are, their output will decrease.

The scientific management approach to motivation is based on the assumption that money is the primary motivator. Financial rewards are directly related to performance in the sense that if the reward is great enough, employees will produce more. Money is the primary connection between management and employees.
Equity Theory

The equity theory is based on the idea that people want to be treated fairly in relationships with others. Inequity exists when a person perceives as his or her job inputs and outcomes to be less than the job inputs and outcomes of another person. A person's perception of inputs and outcomes is not necessarily the actual inputs and outcomes. Furthermore, the other person in the comparison can be an employee in the person's work group or in another part of the organization.

Inputs are what a person perceives his or her contributions to the organization (e.g., education, intelligence, experience, training, skills, and the effort to do the job). Outcomes are the rewards the employee receives (e.g., pay, rewards intrinsic to the job, seniority benefits, and status).

Equity theory also assumes that an individual's perception of inequity creates tension in that person that is proportional to the magnitude of the inequity. Furthermore, the tension will motivate the person to achieve equity or reduce inequity. The strength of the motivation varies directly with the amount of inequity. If the perceived equity is in balance, employees tend to be content and maintain motivation.
The motivator-hygiene model is one of the most controversial models of motivation, probably because of two unique features. First, it stresses that some job factors lead to satisfaction, whereas others can prevent dissatisfaction but cannot be sources of satisfaction. Second, it states that job satisfaction and dissatisfaction do not exist on a single continuum. This theory assumes that people have two types of needs; survival and personal growth.

Frederick Herzberg and his associates examined the relationship between job satisfaction and productivity in a group of accountants and engineers. Through the use of semi-structured interviews, they accumulated data on various factors that these professionals said had an effect on their feelings about their jobs. Two different sets of factors emerged: motivators and hygiene.

- **Motivator Factors.** This first set of factors, motivator factors, includes the work itself, recognition, advancement, and responsibility. These factors are related to an individual’s positive feelings about the job and to the content of the job itself. These positive feelings, in turn, are associated with the individual’s experiences of achievement, recognition, and responsibility. They reflect lasting, rather than temporary, achievement in the work setting. The absence of these factors does not create dissatisfaction.

  In other words, motivators are an intrinsic factor, which are directly related to the job and are largely internal to the individual. The organization’s policies may have only an indirect impact on them, but by defining exceptional performance, for example, an organization may enable individuals to feel that they have performed their tasks exceptionally well.
Motivator-Hygiene model

- **Hygiene Factors.** The second set of factors, hygiene factors, includes company policy and administration, technical supervision, salary, fringe benefits, working condition, and interpersonal relations. These factors are associated with an individual's negative feelings about the job and are related to the environment in which the job is performed. Hygiene factors are extrinsic factors, or factors external to the job. They serve as rewards for high performance only if the organization recognizes high performance. These factors prevent dissatisfaction.

<table>
<thead>
<tr>
<th>Hygiene Factors (Environmental)</th>
<th>Motivator Factors (Job Itself)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies and administration</td>
<td>Achievement</td>
</tr>
<tr>
<td>Supervision</td>
<td>Recognition</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>Challenging work</td>
</tr>
<tr>
<td>Interpersonal relations</td>
<td>Increased responsibility</td>
</tr>
<tr>
<td>Personal Life</td>
<td>Opportunities for advancement</td>
</tr>
<tr>
<td>Money, status, security</td>
<td>Opportunities for personal growth</td>
</tr>
</tbody>
</table>
Organizational Behavior: Motivation

Job Design

Job design refers to the goals and tasks to be accomplished by managers and employees, including expected interpersonal and task relationships. Job design occurs each time individuals are assigned work, given instructions, or empowered to perform tasks and pursue goals.

Formally or informally, customers, managers, or individual employees may change the tasks to be undertaken and how they are to be done. Because both the tasks and the means for performing them can change, managers need to know how to design and redesign jobs to make them as motivating, meaningful, and productive as possible. Thus, the needs and goals of both the employee and the organization should be considered in the design of jobs.

The five most common approaches to job design are: Job rotation, job engineering, job enlargement, job enrichment, and sociotechnical systems.

1. **Job rotation** refers to moving employees from job to job to add variety and reduce boredom by allowing them to perform a variety of tasks. As traditionally used, job rotation is low in both impact and complexity because it typically moves employees from one routine job to another. However, if the tasks are similar and routine, job rotation may not have the desired effect of improving employee effectiveness and job satisfaction. Job rotation is typically not relevant to professional jobs.
Organizational Behavior: Motivation

Job Design (continued)

2. Job engineering focuses on the tasks to be performed, methods to be used, workflows among employees, layout of the workplace, performance standards, and interdependencies between people and machines. Analysts often examine these job design factors by means of time-and-motion studies, determining the time required to do each task and the movements needed to perform it effectively. Consulting engineer firms provide time and motion studies.

3. Job enlargement is expansion of the number of different tasks performed by an employee in a single job. Job enlargement attempts to add somewhat similar tasks to the job so that it will have more variety and be more interesting. Job enlargement may consist of combining two jobs into one.

4. Job enrichment refers to the empowerment of employees to assume more responsibility and accountability for planning, organizing, performing, controlling, and evaluating their own work. Vertical Loading: The process of reassigning supervisory responsibilities to employees. Job enrichment also increases the scope of the job, from beginning to the end. Job enrichment adds depth while job enlargement adds width. Job enrichment adds the higher level brain functions.

5. Sociotechnical systems model focuses on organizations as made up of people with various competencies (the social system) who use tools, machines, and techniques (the technical system) to create goods or services valued by customers and other stakeholders. The goal of sociotechnical systems analysis is to find the best possible match between the technology available, the people involved, and the organization’s needs.
Organizational Behavior: Motivation

Questions:

1. Maslow's needs hierarchy theory states that a person has five types of needs. Which of the following is not one of those needs?
   a. Physiological
   b. Security
   c. Affiliation or Social
   d. Knowledge

2. Which theory is based on the idea that people want to be treated fairly in comparison to others in almost every possible situation?
   a. Motivator-Hygiene theory
   b. Equity theory
   c. Scientific management theory
   d. Achievement-Motivation theory
Organizational Behavior: Motivation

Questions:

3. The motivator-hygiene model has of two unique features: motivator or intrinsic factors and hygiene factors, which are factors that are associated with an individual’s negative feelings about the job and are related to the environment. Which of the following is not included as part of hygiene factors?
   a. Policies and administration
   b. Working Conditions
   c. Achievement
   d. Supervision

4. There are five common approaches to job design. Which of the following refers to the empowerment of employees to assume more responsibility and accountability for planning, organizing, performing, controlling, and evaluating their own work?
   a. Job rotation
   b. Job enlargement
   c. Job engineering
   d. Job enrichment
Organizational Behavior: Motivation

Questions:

5. According to Maslow’s Hierarchy of Needs, the needs of achievement, adequacy, and independence are categorized as:
   a. Safety needs.
   b. Self-actualization needs.
   c. Esteem needs.
   d. Social needs.

6. A company has recently opened a plant in a very poor area of a largely underdeveloped nation. None of the workers have previously held a nonagricultural job. Management is developing a motivation system for the workers. According to Maslow’s Hierarchy of Needs, the motivational impact of extrinsic rewards for this company will most likely emphasize:
   a. Physiological needs.
   b. Affiliation needs.
   c. Esteem or status needs.
   d. Self-actualization needs.
Organizational Behavior: Motivation

Questions:

Use the following information for questions 7 through 14.

An insurance claims processing department consists of 20 employees. The department manager is considering several possible actions in order to increase employee motivation. Before acting, however, the manager wants to identify the motivational effect according to current theories. Maslow’s Hierarchy of Needs includes five levels:

a. Physiological  
b. Safety  
c. Love  
d. Esteem  
e. Self-actualization

For each of the possible actions listed in questions 7 through 14, use “a.” through “e.” above to identify the need level addressed:

7. Pay for continuing education courses.
8. Provide a beneficial suggestion system.
9. Provide ergonomically designed chairs.
10. Improve lighting in the work area.
11. Establish an “employee of the month” award.
12. Hold a department Christmas party.
13. Provide transportation services for after hour workers.
14. Publicly praise employees for good work.
Organizational Behavior: Motivation

Questions:

15. Many organizations make concerted efforts to ensure that job titles have no negative connotations. Attainment of a job title that is perceived to be prestigious addresses which of the following needs:
   a. Physiological.
   b. Esteem.
   c. Love.
   d. Safety.

16. Maslow’s hierarchy of needs is as follows:
   a. Physiological, safety, hygiene, growth and self-actualization.
   b. Physiological, safety, love (social), esteem and self-actualization.
   c. Psychological, safety, love (social), esteem and self-actualization.
   d. Psychological, safety, hygiene, growth and self-actualization.

17. Maslow’s hierarchy of needs relates to motivation in that:
   a. Esteem needs are more important than love needs.
   b. Motivation is the responsibility of the manager.
   c. Unsatisfied needs motivate behavior.
   d. Individuals are aware of their needs and act accordingly.
Organizational Behavior: Motivation

Questions:

18. Which of Maslow’s hierarchy of needs is most closely associated with Herzberg’s concept of job enrichment?
   a. Physiological needs.
   b. Safety needs.
   c. Love needs.
   d. Esteem needs.

19. Which of Maslow’s need levels is being used when a manager attempts to motivate an employee by providing challenging work assignments, performance feedback, and encouragement?
   a. Social.
   b. Mental.
   c. Esteem.
   d. Physiological.

20. According to Maslow’s hierarchy of needs, a manager who builds challenges into a job, permits creativity, and provides advancement opportunities is helping to satisfy an employee’s need for
   a. Esteem.
   b. Power.
   c. Self-actualization.
   d. Achievement.
Organizational Behavior: Motivation

Questions:

21. You are the manager of an art department. The performance level of one of your artists has decreased since the recent death of his wife. In an effort to increase his level of performance, you assign him to a challenging project involving the type of art which you know he likes. In terms of Maslow’s hierarchy, which level are your appealing to?
   a. Esteem.
   b. Safety.
   c. Social.
   d. Self—actualization.
   e. Physiological.

22. In progressing from lower to higher level needs in Maslow’s hierarchy, “self—actualization“ follows immediately after which of the needs listed below:
   a. Basic physiological needs.
   b. Safety needs.
   c. Esteem of others.
   d. Love and a feeling of belonging.
   e. Material needs.

Answers:

2. B 10. A  18. D  
7. E 15. B  
8. E 16. B
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