## Final Review

#### Exercises

1. **Practice Earned Value Management**
2. **Practice Cost Estimates**
3. **Practice Cause and Effect / Fishbone Diagrams**
4. **Practice RACI Charts**
5. **Practice Communication Network Calculations**
6. **Practice Risk Registers**
7. **Practice Probability / Impact Matrixes**

#### Project Cost Management

##### Topic Breakdown

1. **List the Project Cost Management Processes**
2. **List the Principles of Cost Management**
3. **List the Types of Costs and Benefits**
4. **List the Types of Reserves**
5. **List the Types of Unknowns**
6. **How the Reserves Relate to the Unknowns**
7. **List the Types of Cost Estimates**
8. **List the Cost Estimation Tools and Techniques**
9. **List the Three Values Calculated in Earned Value Management**
10. **List the Important Concepts in Earned Value Management**

##### Definitions

1. **Cost:**
2. **Profits:**
3. **Profit Margin:**
4. **Life Cycle Costing: The total cost of ownership plus support costs for a project.**
5. **Cash Flow Analysis: An analysis method which determines the annual costs and benefits for a project and the resulting annual cash flow.**
6. **Management Reserves**
7. **Contingency Reserves:**
8. **Known Unknowns:**
9. **Unknown Unknowns:**
10. **Tangible Costs:**
11. **Intangible Costs:**
12. **Direct Costs:**
13. **Indirect Costs:**
14. **Sunk Costs:**
15. **Rough Order of Magnitude Estimates:**
16. **Budgetary Estimates:**
17. **Definitive Estimates:**

##### Details

1. **The Cost Management Process Groups include:** 
   1. **Planning Cost Management**
   2. **Estimating Costs**
   3. **Determining the Budget**
   4. **Controlling Costs**
2. **Some principles of Cost Management include:** 
   1. **Profit**
   2. **Profit Margin**
   3. **Life Cycle Cashflow**
   4. **Cash Flow Analysis**
3. **The types of costs and benefits include:** 
   1. **Tangible Costs**
   2. **Intangible Costs**
   3. **Direct Costs**
   4. **Indirect Costs**
   5. **Sunk Costs**
4. **The types of Reserves include:** 
   1. **Contingency Reserves**
   2. **Management Reserves**
5. **The types of Unknowns include:** 
   1. **Known Unknowns**
   2. **Unknown Unknowns**
6. **The way Reserves are related are:** 
   1. **Contingency Reserves are set aside for Known Unknowns**
   2. **Management Reserves are set aside for Unknown Unknowns**
7. **The types of Cost Measurements include:** 
   1. **Rough Order of Magnitude (3-5 years)**
   2. **Budgetary (1-2 years)**
   3. **Definitive (1 year)**
8. **Some Cost Estimation Tools and Techniques include:** 
   1. **Analogous or Top-Down Estimate**
   2. **Bottom-Up Estimate**
   3. **Three Point Estimate**
   4. **Parametric Estimate**
9. **The Values Calculated in Earned Value Management include:** 
   1. **Planed Value**
   2. **Actual Cost**
   3. **Earned Value**
10. **Some important concepts in Earned Value Management include:** 
    1. **Cost Variance**
    2. **Schedule Variance**
    3. **Cost Performance Index**
    4. **Schedule Performance Index**
    5. **Estimate At Completion**
    6. **Estimate To Complete or To Complete Performance Index**

#### Project Quality Management

##### Topics

1. **List the Project Quality Management processes**
2. **List the Scope Aspects of Quality**
3. **List the Activities related to Satisfying Quality Standards**
4. **List the Main Outputs of Quality Control**
5. **List the Tools used to perform Quality Control**
6. **List the Components of DMAIC**
7. **List the Types of Tests**
8. **List the Cost Categories related to Quality**
9. **Define Capability Maturity Model Integration**
10. **List the Capability Maturity Model Integration Levels**

##### Notes

1. **Testing is performed throughout every phase of the systems development life cycle, not only at the end.**
2. **Six Sigma aims for no more than 3.4 defects per six million items.**

##### Definitions

1. **Quality:**
2. **Conformance to Requirements:**
3. **Fitness for Use:**
4. **Functionality:**
5. **Features:**
6. **System Outputs:**
7. **Performance Addresses:**
8. **Reliability:**
9. **Maintainability:**
10. **Quality Audit:**
11. **Control Chart:**
12. **Pareto Chart:**
13. **Cause and Effect Diagram:**
14. **Run Chart:**
15. **Six Sigma:**
16. **Standard Deviation**
17. **Six Nines of Quality:**
18. **ISO 9000:**
19. **Cost of Conformance: The cost of delivery of products that meet requirements and fitness for use.**
20. **Cost of Nonconformance: The cost of taking responsibility for failures or not meeting quality expectations.**
21. **C M M I:**

##### Details

1. **The Project Quality Management processes include:** 
   1. **Project Quality Management**
   2. **Managing Quality**
   3. **Controlling Quality**
2. **The Scope Aspects of Quality include:** 
   1. **Functionality**
   2. **Features**
   3. **System Outputs**
   4. **Performance Addresses**
   5. **Reliability**
   6. **Maintainability**
3. **The Activities related to Satisfying Quality Standards include:** 
   1. **K**
   2. **Lea**
   3. **Ben**
   4. **Qu Au**
4. **The Main Outputs of Quality Control include:** 
   1. **Acceptance Decisions**
   2. **Rework**
   3. **Process Adjustments**
5. **The Main Tools used to perform Quality Control include:** 
   1. **Cause and Effect Diagrams**
   2. **Control Charts**
   3. **Check Sheets**
   4. **Scatter Diagrams**
   5. **Histograms**
   6. **Pareto Charts**
   7. **Flow Chart or Run Chart**
6. **The components of DMAIC include:** 
   1. **Define**
   2. **Measure**
   3. **Analyze**
   4. **Improve**
   5. **Control**
7. **The Types of Tests include:** 
   1. **Unit Tests**
   2. **Integration Tests**
   3. **System Tests**
   4. **User Acceptance Tests**
8. **The Cost Categories related to Quality include:** 
   1. **Prevention Costs**
   2. **Appraisal Costs**
   3. **Internal Failure Costs**
   4. **External Failure Costs**
   5. **Maintenance and Test Equipment Costs**
9. **The levels of CMMI include:** 
   1. **Incomplete**
   2. **Performed**
   3. **Managed**
   4. **Defined**
   5. **Quantitatively Managed**
   6. **Optimized**

#### Project Resource Management

##### Topics

1. **List the Project Resource Management Processes**
2. **List the Keys to Managing and Leading People**
3. **List the Two Types of Motivations in Motivation Theory**
4. **List the Levels of Maslow’s Hierarchy of Needs**
5. **List the Two Types of Factors in Motivational-Hygiene Theory**
6. **List the Three Motivators identified by Pink**
7. **List the Types of Achievers in Acquired-needs Theory**
8. **List McGregor’s Three Management Theories**
9. **List the Ways to Have Influence on Projects**
10. **List the Types of Power**
11. **List the Contents of a Resource Management Plan**
12. **List the Fields of a RACI Chart**
13. **List the Five Stages of Team Development in the Tuckman Model**
14. **List the Four Personality Types in the Meyers-Briggs Model**
15. **List the Four Social Styles in the Social Styles Profile**
16. **List the Six Conflict Handling Modes**

##### Notes

1. **Managers who use work challenges and expertise to influence workers are more likely to succeed.**
2. **Managers who use authority, money, or penalty to influence workers are more likely to fail.**
3. **Task conflict increases team performance.**
4. **Emotional conflict decreases team performance.**

##### Definitions

1. **Intrinsic Motivations:**
2. **Extrinsic Motivations:**
3. **Motivational Factors:**
4. **Hygiene Factors:**
5. **Achievement Achievers (nAch):**
6. **Affiliation Achievers (nAff):**
7. **Power Achievers (nPow):**
8. **Theory X:**
9. **Theory Y:**
10. **Theory Z:**
11. **Influence:**
12. **Power:**
13. **Responsibility Assignment Matrix:**
14. **RACI Chart:**
15. **Resource Loading:**
16. **Resource Leveling:**
17. **Overallocation:**
18. **Groupthink:**

##### Details

1. **The Project Resource Management Process Groups include:** 
   1. **Plan Resource Management**
   2. **Estimate Activity Resources**
   3. **Acquire Resources**
   4. **Develop the Project Team**
   5. **Manage the Project Team**
   6. **Control Resources**
2. **The keys to managing and leading people include:** 
   1. **Motivation Theory**
   2. **Influence and Power**
   3. **Effectiveness**
   4. **Emotional Intelligence**
   5. **Leadership**
3. **The Two Types of Motivations in Motivation Theory are:** 
   1. **Intrinsic Motivation**
   2. **Extrinsic Motivation**
4. **The Levels of Maslow’s Hierarchy of Needs include:** 
   1. **Physiological**
   2. **Safety**
   3. **Social**
   4. **Esteem**
   5. **Self-Actualization**
5. **The Factors in Motivation Hygiene Theory are:** 
   1. **Motivational Factors**
   2. **Hygiene Factors**
6. **The Three Motivators identified by Pink are:** 
   1. **Autonomy**
   2. **Master**
   3. **Purpose**
7. **The three types of achievers identified by Pink are:** 
   1. **Achievement Achievers**
   2. **Affiliation Achievers**
   3. **Power Achievers**
8. **McGregor’s Three Management theories include:** 
   1. **X**
   2. **Y**
   3. **Z**
9. **The Ways to have influence on projects include:** 
   1. **Assignment**
   2. **Authority**
   3. **Budgetary**
   4. **Promotion**
   5. **Money**
   6. **Work Challenge**
   7. **Expertise**
   8. **Friendship**
10. **The Three Types of Power are:** 
    1. **Coercive**
    2. **Legitimate**
    3. **Expertise**
    4. **Reward**
    5. **Referent**
11. **The contents of a Resource Management Plan include:** 
    1. **Project Organization Charts**
    2. **Responsibility Assignment Matrix**
    3. **Staff Management Plan and Resource Histogram**
    4. **Team Charters**
12. **The fields of a RACI Chart are:** 
    1. **Responsible**
    2. **Accountable**
    3. **Consulted**
    4. **Informed**
13. **The Five Stages of Team Development in the Tuckman Model are:** 
    1. **Forming**
    2. **Norming**
    3. **Storming**
    4. **Adjourning**
    5. **Performing**
14. **The Four Personality Types in the Meyers-Briggs Models are:** 
    1. **Extroverted / Introverted**
    2. **Sensing / Intuiting**
    3. **Thinking / Feeling**
    4. **Judging / Perceiving**
15. **The Four Social Styles in a Social Styles Profile are:** 
    1. **Drivers**
    2. **Expressives**
    3. **Amiables**
    4. **Analytics**
16. **The Four Conflict Handling Modes are:** 
    1. **Collaborating**
    2. **Confronting**
    3. **Smoothing**
    4. **Forcing**
    5. **Withdrawal**
    6. **Compromise**

#### Project Communications Management

##### Topics

1. **List the Main Processes in Communications Management**
2. **Calculate the Number of Communication Channels Required for n People**
3. **List the Classification for Communication Methods**
4. **List the Three Types of Reports**

##### Notes

1. **The number of communications channels required in a project is equal to n \* (n - 1) / 2, where n is the number of people communicating.**
2. **In small projects the Communications Management plan can be a part of the Team Charter.**
3. **In large projects the Communications Management Plan should be a separate document.**

##### Definitions

1. **Managing Up:**
2. **Interactive Communication:**
3. **Push Communication:**
4. **Pull Communication:**
5. **Progress Reports: Reports which describe what the project team has accomplished during a period of time.**
6. **Status Reports: Reports which describe where the Project Sands at a point in time.**
7. **Forecasts: A report used to predict future project status.**

##### Details

1. **The Main Processes in Communications Management are:** 
   1. **Planning Communications Management**
   2. **Managing Communications**
   3. **Monitoring Communications**
2. **The Classifications for Communication Methods are:** 
   1. **Interactive Communication**
   2. **Push Communication**
   3. **Pull Communication**
3. **The Types of Communications Reports include:** 
   1. **Progress Reports**
   2. **Status Reports**
   3. **Forecasts**

#### Project Risk Management

##### Topics

1. **List the Project Risk Management Process Groups**
2. **List the Attitudes Related to Risk**
3. **List the Additional Plans Related to Risk**
4. **List the Additional Categories of Risk**
5. **List the Tools and Techniques for Identifying Risk**
6. **List the Contents of a Risk Register**
7. **List the Contents of a Risk Report**
8. **List the Techniques for Quantitative Risk Analysis**
9. **List the Techniques for Qualitative Risk Analysis**
10. **List the Response Strategies for Negative Risks**
11. **List the Response Strategies for Positive Risks**

##### Notes

1. **Individuals often develop fewer ideas in brainstorming sessions than they do when alone.**

##### Definitions

1. **Risk:**
2. **Risk Management:**
3. **Project Risk:**
4. **Positive Risk Management:**
5. **Negative Risk Management:**
6. **Risk Utility:**
7. **Contingency Plans: Predefined actions that the project team will take if an identified risk occurs.**
8. **Fallback Plans: Plans developed for risks that have a high impact on meeting project objectives. Put into effect if attempts to reduce the risk are not successful.**
9. **Contingency Reserves / Allowances:**
10. **Management Reserves:**
11. **Risk Breakdown Structure:**
12. **The Delphi Technique:**
13. **Risk Register:**
14. **Risk Report:**
15. **Qualitative Risk Analysis:**
16. **Quantitative Risk Analysis:**
17. **Probability / Impact Matrixes:**
18. **Decision Tree Analysis:**
19. **Monte Carlo Analysis:**
20. **Residual Risks: Risks that remain after a response strategy has been implemented.**
21. **Secondary Risks: Risks that are a result of implementing a risk response (risk responses themselves have risk).**

##### Details

1. **The Project Risk Management Process Groups include:** 
   1. **Planning Risk Management**
   2. **Identifying Risk**
   3. **Perform Quantitative Risk Management**
   4. **Perform Qualitative Risk Management**
   5. **Plan Risk Responses**
   6. **Implement Risk Responses**
   7. **Manage Risks**
2. **The Attitudes Related to Risk include:** 
   1. **Risk Average**
   2. **Risk Neutral**
   3. **Risk Seeking**
3. **The Additional Plans Related to Risk include:** 
   1. **Contingency Plans**
   2. **Fallback Plans**
   3. **Contingency Reserves or Allowances**
   4. **Management Reserves**
4. **Some additional categories of Risk include:** 
   1. **Market Risk**
   2. **Financial Risk**
   3. **Technology Risks**
   4. **People Risks**
   5. **Structure and Process Risks**
5. **The Tools and Techniques for Identifying Risk include:** 
   1. **Brainstorming**
   2. **The Delphi Technique**
   3. **Interviews**
   4. **Sensitivity Analysis**
6. **The Contents of a Risk Register include:** 
   1. **Identification Number**
   2. **Risk Rank**
   3. **Risk Number**
   4. **Risk Description**
   5. **Risk Category**
   6. **Risk Trigger**
   7. **Risk Response**
   8. **Risk Owner**
   9. **Risk Probability**
   10. **Risk Impact**
   11. **Risk Status**
7. **The Risk Quantification Tools and Techniques include:** 
   1. **Probability / Impact Matrix**
   2. **Top Ten Risk Item Tracking**
   3. **Expert Judgement**
8. **The Risk Qualification Tools and Techniques include:** 
   1. **Decision Tree Analysis**
   2. **Simulation**
   3. **Sensitivity Analysis**
9. **The Response Strategies for Negative Risk include:** 
   1. **Risk Avoidance**
   2. **Risk Acceptance**
   3. **Risk Transference**
   4. **Risk Mitigation**
   5. **Risk Escalation**
10. **The Response Strategies for Positive Risk include:** 
    1. **Risk Acceptance**
    2. **Risk Escalation**
    3. **Risk Enhancement**
    4. **Risk Sharing**
    5. **Risk Exploitation**

#### Project Procurement Management

##### Topics

1. **List the Project Procurement Management Process groups**
2. **List the Different Types of Contracts**
3. **List the Tools and Techniques to Plan Procurement Management**
4. **List the Types of Procurement or Bid Documents**

##### Notes

1. **As a Buyer’s Risk goes up, the Seller’s Risk goes down**
2. **As a Seller’s Risk goes up, the Buyer’s Risk goes down**

##### Definitions

1. **Procurement:**
2. **Offshoring:**
3. **Onshoring:**
4. **Fixed Price / Lump Sum Contracts:**
5. **Point of Total Assumption (PTA):**
6. **Cost-reimbursement Contracts:**
7. **Time and Material Contracts:**
8. **Unit Price Contracts:**
9. **Make or Buy Analysis:**
10. **Statement of Work (SOW):**
11. **Request for Proposal:**
12. **Request for Quotes:**

##### Details

1. **The Project Procurement Management Process groups include:** 
   1. **Plan Procurement Management**
   2. **Conduct Procurements**
   3. **Control Procurements**
2. **The Different Types of Contracts include:** 
   1. **Fixed Price / Lump Sum Contracts**
   2. **Cost Reimbursement Contracts**
   3. **Time and Material Contracts**
   4. **Unit Price Contrasts**
3. **The Tools and Techniques to Plan Procurement Management include:** 
   1. **Make or Buy Analysis**
   2. **Expert Judgement**
   3. **Market Research**
4. **The Types of Procurement or Bid Documents are:** 
   1. **Requests for Proposals**
   2. **Requests for Quotes**

#### Project Stakeholder Management

##### Topics

1. **List the Project Stakeholder Management processes**
2. **List the Two Types of Project Stakeholders**
3. **List the Contents of a Stakeholder Register**
4. **List the Recommendations for Stakeholder Interests and Powers**
5. **List the Stakeholder Engagement Levels**

##### Notes

1. **A Stakeholder with Low Interest and High Power should be Kept Satisfied.**
2. **A Stakeholder with Low Interest and Low Power should be Monitored**
3. **A Stakeholder with High Interest and Low Power should be Kept Informed**
4. **A Stakeholder with High Interest and High Power should be Managed Closely**
5. **It is not possible to control stakeholders, but you can control their level of engagement with the project.**

##### Definitions

1. **Internal Stakeholders:**
2. **External Stakeholders:**
3. **Identification Information:**
4. **Assessment Information:**
5. **Stakeholder Classification:**
6. **Power / Interest Grid:**
7. **Expectations Management Matrix:**
8. **Issue Log:**

##### Details

1. **The Project Stakeholder Management processes include:** 
   1. **Identify Stakeholders**
   2. **Plan Stakeholder Management**
   3. **Manage Stakeholder Engagement**
   4. **Monitor Stakeholder Engagement**
2. **The Two Types of Project Stakeholders include:** 
   1. **Internal Stakeholders**
   2. **External Stakeholders**
3. **The Contents of a Stakeholder Register should include:** 
   1. **Identification Information**
   2. **Assessment Information**
   3. **Stakeholder Classification**
4. **The Recommendations for Stakeholder Interest and Power levels are:** 
   1. **Low Interest Low Power: Monitor**
   2. **Low Interest High Power: Keep satisfied**
   3. **High Interest Low Power: Keep informed**
   4. **High Interest High Power: Manage Closely**
5. **The Levels of Stakeholder Engagement include:** 
   1. **Unaware**
   2. **Resistant**
   3. **Neutral**
   4. **Supportive**
   5. **Leading**