Exam 1 Review

Table of Contents

[**Notes from Instructor** 2](#_Toc517080710)

[**Exam Questions** 2](#_Toc517080711)

[**Midterm Topics** 2](#_Toc517080712)

[Estimating 2](#_Toc517080713)

[Developing a project plan (activity networks) 2](#_Toc517080714)

[Risk management 2](#_Toc517080715)

[Monitoring progress 2](#_Toc517080716)

[Managing project teams 2](#_Toc517080717)

[Software process improvement 2](#_Toc517080718)

[PowerPoint Review 3](#_Toc517080719)

[01-Admin 3](#_Toc517080720)

[02-Modern 4](#_Toc517080721)

[03-PMBOK 5](#_Toc517080722)

[Organization Types 5](#_Toc517080723)

[Definitions 5](#_Toc517080724)

[Knowledge Areas 5](#_Toc517080725)

[04-Agile 7](#_Toc517080726)

[Manifesto 7](#_Toc517080727)

[Methods 7](#_Toc517080728)

[Barriers 8](#_Toc517080729)

[06-WBS 9](#_Toc517080730)

[Project Scope 9](#_Toc517080731)

[Project Charter 9](#_Toc517080732)

[Project Communication Plan 9](#_Toc517080733)

[Who, what and how of information channels 9](#_Toc517080734)

[Talking 9](#_Toc517080735)

[Project Stakeholder Management 9](#_Toc517080736)

[07-Estimating 9](#_Toc517080737)

[Top down 9](#_Toc517080738)

[Bottom up 9](#_Toc517080739)

[7 guidelines 9](#_Toc517080740)

[Types of Costs 10](#_Toc517080741)

[08-Activity Plans 11](#_Toc517080742)

[09-Risk 12](#_Toc517080743)

# **Notes from Instructor**

## **Exam Questions**

Primarily true/false, multiple choice, fill-in-the blank, matching questions

- may include a few discussion questions

- discussion questions require concise answers that are related to the question asked

- “extraneous” material may result in points off

Will include problems like assignments

# **Midterm Topics**

## Estimating

## Developing a project plan (activity networks)

## Risk management

## Monitoring progress

## Managing project teams

## Software process improvement

# PowerPoint Review

## 01-Admin

## 02-Modern

### **Statistics**

-Software requirements volatility is 1.6% per month – Jones

-Rate of software canceled or unsuccessful 26-34% - El Emam and Koru

### **Definitions**

-Best practice

Improves bottom line, demonstrated a high return on investment (ROI)

### **Main Points**

### -Standish Group Research on Project Improvements

### better pm, emerging web infrastructure, iterative development

### -CHAOS factors of success

### User involvement, Executive support, Clear business objectives, Emotional maturity, Optimizing scope, Agile process, Project management expertise, Skilled resources, Execution, Tools & infrastructure

### -IRON triangle

### Scope, schedule, cost, staff, quality

### -Basic PM questions

### Should this project be initiated? Should it continue or be terminated? Who is on the team? Do we have effective (high performing) teams? What life cycle model will we use? What is our decision making process? How is our team/project structured? How are we managing risks? Do we have good communications with the customer? Do we have good communications with our staff?

### -Business Drivers

### Operational excellence? reliable products at competitive prices delivered with minimal inconvenience.Product leadership? leading edge products that enhance the customer's utility. Customer intimacy?segmenting and targeting niche markets

### -6 traits of good PM’s

### Enthusiasm for project, ability to manage change, tolerant attitude toward ambiguity, team building and negotiation skills, customer-first, adherence to priorities of business

-dimensions of success

project efficiency, impact on the customer, business and direct success, preparing for the future

-Fayol’s Basic Management Functions

Planning, organizing, staffing/motivation, directing, controlling

## 03-PMBOK

### **Organization Types**

#### Functional – each employee 1 superior

#### Projectized- project based. Managers have independence and superiority

#### Matrix – blend or funct and proj, weak -> funct, strong -> proj, balanced -> middle

### **Definitions**

Project- temporary endeavor, definite start and end, established objective

Project Portfolio- a collection of projects, programs,

sub portfolios, and operations managed as a

group to achieve strategic objectives

Program- a group of related projects, subprograms, and

program activities managed in a coordinated

way to obtain benefits not available

### **Knowledge Areas**

#### • project integration management

1. develop project charter
2. develop project management plan
3. direct and manage project work
4. monitor and control project work
5. perform integrated change control
6. close project or phase

#### • project scope management

plan scope management, collect requirements, define scope, create WBS, validate scope, control scope

#### • project time management

#### plan schedule management, define activities, sequence activities, estimate activity resources, estimate activity durations, develop schedule. control schedule

#### • project cost management

plan cost management, estimate costs, determine budget, control costs

#### • project quality management

plan quality management, perform quality assurance, control quality

#### • project human resource management

plan human resource management, acquire project team, develop project team, manage project team

#### • project communications management

plan communications management, manage communications, control communications

#### • project risk management

plan risk management, identify risks, perform qualitative risk analysis, perform quantitative risk analysis, plan risk responses, control risks

#### • project procurement management

plan procurement management, conduct procurements, control procurements, close procurements

#### • project stakeholder management

identify stakeholders, plan stakeholder management, manage stakeholder engagement, control stakeholder engagement

## 04-Agile

### Manifesto

1. Values
   1. Individuals and interactions > processes and tools
   2. Working Software > comprehensive documentation
   3. Customer collaboration > contract negotiation
   4. Responding to change > following a plan
2. Principles
   1. Satisfy customer through:
      1. Early delivery
      2. Continuous delivery
   2. Welcome changing requirements
   3. Business people and developers working together
   4. Face to face conversation
   5. Working software measures progress
   6. Sustainable development
      1. Constant pace indefinitely
   7. Technical excellence and good design
   8. Simplicity
      1. Maximize the amount of work not done
   9. Self organizing teams
      1. Promotes best results
   10. Team reflects on how to be more effective
       1. Tunes and adjusts accordingly

### Methods

1. SCRUM
   1. Meeting players
      1. Product Owner
      2. ScrumMaster
      3. Scrum Development Team
   2. Pieces
      1. Product Backlog
      2. Sprint Backload
      3. Daily SCRUM
         1. 3 Questions
            1. What did you do since last SCRUM
            2. What got in your way?
            3. What are you going to do before the next SCRUM
      4. Potentially Shippable Product Increment

### Barriers

1. Customer
   1. Insists on big specification
2. Culture
   1. Requires long hours to prove commitment
3. Projects
   1. Require more than 10 programmers
4. Environment
   1. Long time for feedback
   2. Team members on different floors
5. Implementation
   1. We do “agile”, just not most/any of the practices

## 05-WBS

### **Definitions**

-Project Scope Management, plan scope management, collect requirements, define scope, create WBS, validate scope, control scope

-Project Scope, mission statement, objectives, deliverables, milestones, tech req, limitations, reviews

-Project Charter, statement of work, authorizes pm to start the project

-Priority Matrix, constraints, enhancement priorities, sacrifices

- WBS, work breakdown structure, enumerations of all work to be done, work packages, 8-80 hours

- Rolling Horizon, plan in detail for 2-3 months, less details further out

-OBS, organization breakdown structure, assigns lowest unit the responsibility for the packages

-Responsibility Matrix, summarizes tasks to be performed

-Project Communications Management, ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

-Project Communication Plan, information transmission, Who, what and how of information channels

-Project Stakeholder Management, identify stakeholders, plan stakeholder management, manage stakeholder engagement, control stakeholder engagement

**Main Points**

## 06-Estimating

### Top down

Based on experience

### Bottom up

Task oriented

### 7 guidelines

#### Responsibility

- estimates should be made by the people most

familiar with the task – team leaders or workers

#### Use several people to estimate

- Delphi method to aggregate judgments

#### Normal conditions

- reflect “normal” efficient use of resources

- defer considering conflicts for resourcing or

concurrency to scheduling

#### Time units

#### Independence

- consider each task time estimate independently of

other activities

Contingencies

- work package estimates should not include

allowances for contingencies

- contingencies (management reserves, buffers)

should be addressed at a higher level than

estimating tasks

#### Adding risk assessment to the estimate helps

#### avoid surprises to stakeholders

### Types of Costs

#### Direct costs

• labor

• materials

• equipment

• other

#### Direct project overhead costs

General and administrative (G&A) overhead

costs

- organization

COCOMO – constructive cost model

SLIM

## 07-Activity Plans

## 08-Risk