📘 Project Management Unit–3

Important Questions With Easy and Detailed Explanation

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1. Agile Project Management

Introduction

Agile Project Management ek modern project management approach hai. Isme project ko small-small parts me complete kiya jata hai.

Definition

Agile Project Management is an iterative and flexible method of managing projects where work is completed in small cycles with continuous customer feedback.

Why It Is Needed

Traditional method me change karna difficult hota hai. Agile change ko easily accept karta hai.

Easy Explanation

Agile ka simple meaning:
Plan little → Work little → Test → Feedback lo → Improve karo

Step-by-Step Working

1. Requirement collect karo
2. Small tasks me divide karo
3. Sprint plan karo
4. Development karo

5. Testing karo
6. Customer feedback lo
7. Improvement karo

Flow of Process

```
Requirement
     ↓
Planning
     ↓
Sprint
     ↓
Development
     ↓
Testing
     ↓
Feedback
     ↓
Improvement
```

Diagram

```
Plan → Build → Test → Review → Improve
  ↑                              ↓
  └──────────────── Repeat Cycle ──────────────┘
```

Real-Life Analogy

Jaise mobile app banate time pehle login page banao, test karo, feedback lo, phir payment feature banao. Pura app ek baar me nahi banate.

Advantages

- Fast delivery
- Customer satisfaction
- Flexible changes
- Better teamwork
- Continuous improvement

Disadvantages

- Documentation kam hoti hai
- Skilled team chahiye
- Frequent changes se confusion ho sakta hai

Applications

- Software development
- Mobile apps
- Website projects
- Startups
- IT projects

Important Keywords

Iterative, Incremental, Sprint, Feedback, Flexibility, Customer Collaboration

Conclusion

Agile Project Management flexible and customer-focused approach hai. It is highly useful for changing and modern projects.

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2. Agile Principles

Introduction

Agile principles Agile method ke basic rules hain. Ye batate hain ki project ko kaise flexible aur customer-focused banana hai.

Definition

Agile principles are guidelines that help teams deliver valuable software quickly through collaboration, feedback and continuous improvement.

Main Agile Principles

Principle	Easy Meaning
Customer satisfaction	Customer ko useful product jaldi do
Welcome change	Changes ko accept karo
Frequent delivery	Product parts me deliver karo
Team collaboration	Team milkar kaam kare
Working product	Theory se zyada working output important
Continuous improvement	Har cycle me improve karo

Flow

```
Customer Need
      ↓
Small Delivery
      ↓
Feedback
      ↓
Improvement
      ↓
Better Product
```

Advantages

- Customer happy hota hai
- Product quality improve hoti hai
- Team communication strong hoti hai
- Risk reduce hota hai

Important Keywords

Customer Satisfaction, Change Acceptance, Collaboration, Working Software, Continuous Improvement

Conclusion

Agile principles project team ko fast, flexible aur customer-oriented banate hain.

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3. Scrum

Introduction

Scrum Agile ki sabse popular methodology hai. Isme work short time cycles me hota hai jise **Sprint** kehte hain.

Definition

Scrum is an Agile framework used to manage complex projects through short development cycles called sprints.

Why It Is Needed

Scrum project ko organized banata hai. Team ko daily progress check karne me help karta hai.

Easy Explanation

Scrum me team 1–4 weeks ke sprint me work karti hai. Har sprint ke baad working product ka part ready hota hai.

Scrum Roles

Role	Work
Product Owner	Requirement decide karta hai
Scrum Master	Team ko guide karta hai
Development Team	Actual work karti hai

Scrum Artifacts

Artifact	Meaning
Product Backlog	Complete task list
Sprint Backlog	Current sprint task list
Increment	Completed working output

Step-by-Step Working

1. Product backlog banta hai
2. Sprint planning hoti hai
3. Team sprint me kaam karti hai
4. Daily scrum meeting hoti hai
5. Sprint review hota hai
6. Sprint retrospective hota hai

Flow

```
Product Backlog
      ↓
```

```
Sprint Planning
      ↓
Sprint Execution
      ↓
Daily Scrum
      ↓
Sprint Review
      ↓
Retrospective
```

Diagram

```
Backlog → Sprint → Working Product
             ↑
      Daily Scrum Meeting
```

Real-Life Analogy

Jaise exam preparation me syllabus ko weekly target me divide karte ho. Har week ka result check karte ho. Ye Scrum jaisa hai.

Advantages

- Better teamwork
- Fast delivery
- Daily progress tracking
- Customer feedback easy
- Problem jaldi detect hoti hai

Disadvantages

- Experienced team chahiye

- Daily meeting time leti hai
- Poor planning se sprint fail ho sakta hai

Applications

- Software development
- App development
- Website development
- Product development

Important Keywords

Sprint, Product Backlog, Scrum Master, Product Owner, Daily Scrum, Increment

Conclusion

Scrum Agile ka practical framework hai jo project ko small sprints me complete karta hai.

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4. Risk Analysis

Introduction

Risk ka matlab uncertainty ya possible problem. Risk Analysis project ke possible problems ko pehle se identify karta hai.

Definition

Risk Analysis is the process of identifying, evaluating and controlling possible risks that may affect project success.

Why It Is Needed

- Project failure avoid karne ke liye

- Cost loss kam karne ke liye
- Delay prevent karne ke liye
- Backup plan banane ke liye

Types of Risk

Risk Type	Example
Technical Risk	Software failure
Financial Risk	Budget over
Schedule Risk	Project delay
Operational Risk	Team issue
Market Risk	Customer demand change

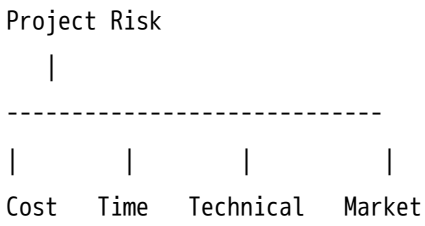
Step-by-Step Working

1. Risk identify karo
2. Risk probability check karo
3. Risk impact check karo
4. Risk priority decide karo
5. Risk mitigation plan banao
6. Risk monitor karo

Flow

```
Identify Risk
      ↓
Analyze Risk
      ↓
Prioritize Risk
      ↓
Mitigate Risk
      ↓
Monitor Risk
```

Diagram



Real-Life Analogy

Bike trip se pehle petrol, weather aur tyre check karna risk analysis hai.

Advantages

- Failure chances kam
- Better planning
- Cost saving
- Delay control
- Confidence increase

Disadvantages

- Time-consuming
- Future prediction difficult
- Expert knowledge required

Applications

- IT projects
- Construction

- Banking
- Startups
- Government projects

Important Keywords

Risk Identification, Risk Assessment, Risk Mitigation, Probability, Impact, Contingency Plan

Conclusion

Risk analysis project ko safe and successful banane ke liye important process hai.

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5. Project Control

Introduction

Project Control ka matlab project ko continuously monitor karna. Ye check karta hai ki project plan ke according chal raha hai ya nahi.

Definition

Project Control is the process of monitoring project performance and taking corrective actions to achieve project objectives.

Why It Is Needed

- Time control
- Cost control
- Quality control
- Performance improvement

Step-by-Step Working

1. Standard set karo
2. Actual performance measure karo
3. Planned vs actual compare karo
4. Difference identify karo
5. Corrective action lo

Flow

```
Plan
  ↓
Monitor
  ↓
Compare
  ↓
Correct
  ↓
Control
```

Diagram

```
Planned Work → Actual Work → Comparison → Correction
```

Advantages

- Project delay reduce hota hai
- Budget control hota hai
- Quality maintain hoti hai
- Management decision easy hota hai

Disadvantages

- Regular monitoring required
- Large projects me difficult
- Team pressure increase ho sakta hai

Important Keywords

Monitoring, Corrective Action, Planned vs Actual, Performance Control, Schedule Control

Conclusion

Project control ensures project time, cost and quality limits ke andar complete ho.

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6. Lean & DevOps

Introduction

Lean aur DevOps modern project management concepts hain. Lean waste reduce karta hai, DevOps development aur operations ko connect karta hai.

Lean Definition

Lean is a management approach focused on reducing waste and increasing value.

DevOps Definition

DevOps is a practice that combines development and operations teams to deliver software faster and more reliably.

Lean Easy Explanation

Lean ka simple meaning:

Unnecessary work hatao, useful work badhao.

DevOps Easy Explanation

DevOps ka simple meaning:

Developer aur operations team milkar fast delivery kare.

Lean Principles

Principle	Meaning
Value	Customer ke liye useful cheez
Waste removal	Extra work remove
Flow	Smooth process
Continuous improvement	Regular improvement

DevOps Practices

Practice	Meaning
CI/CD	Continuous integration and delivery
Automation	Manual work reduce
Monitoring	System performance check
Collaboration	Dev + Ops teamwork

Diagram

```
Lean:
Process → Remove Waste → Better Value

DevOps:
Development → Testing → Deployment → Monitoring
```

Difference Table

Basis	Lean	DevOps
Focus	Waste reduction	Fast software delivery
Area	Management/process	IT/software
Goal	Efficiency	Speed + reliability
Method	Remove unnecessary work	Automate delivery

Advantages

Lean

- Waste reduce
- Cost saving
- Efficiency increase

DevOps

- Faster deployment
- Better collaboration
- Less errors
- Continuous delivery

Disadvantages

Lean

- Hard to implement
- Requires process discipline

DevOps

- Tools knowledge required

- Cultural change needed

Important Keywords

Waste Reduction, Value, CI/CD, Automation, Collaboration, Continuous Delivery

Conclusion

Lean improves efficiency by removing waste, while DevOps improves software delivery through automation and teamwork.

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7. Project Audit

Introduction

Project Audit ek systematic checking process hai. Isme project ke performance, cost, quality aur progress ko examine kiya jata hai.

Definition

Project Audit is a systematic review of a project to evaluate its performance, progress, quality, cost and compliance.

Why It Is Needed

- Mistakes find karne ke liye
- Quality check karne ke liye
- Cost control ke liye
- Improvement suggest karne ke liye

Types of Project Audit

Type	Meaning
Financial Audit	Cost checking
Technical Audit	Technical quality checking
Performance Audit	Progress checking
Compliance Audit	Rules follow ho rahe ya nahi

Step-by-Step Working

1. Project data collect karo
2. Documents check karo
3. Cost and schedule review karo
4. Quality check karo
5. Problems identify karo
6. Audit report banao

Flow

```
Data Collection
      ↓
Review
      ↓
Problem Finding
      ↓
Report
      ↓
Improvement
```

Diagram

```
Project Audit
   |
```

```
----------------------------
|       |       |          |
Cost   Quality  Schedule   Rules
```

Advantages

- Errors detect hoti hain
- Accountability improve hoti hai
- Quality better hoti hai
- Future projects improve hote hain

Disadvantages

- Time-consuming
- Expert auditor required
- Team pressure feel kar sakti hai

Important Keywords

Review, Evaluation, Audit Report, Compliance, Quality Check, Accountability

Conclusion

Project audit project performance ko improve karne ke liye useful tool hai.

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8. ITIL

Introduction

ITIL ka full form hai **Information Technology Infrastructure Library**. Ye IT services ko manage karne ka framework hai.

Definition

ITIL is a framework of best practices used for managing IT services effectively and efficiently.

Why It Is Needed

- IT services improve karne ke liye
- Customer support better banane ke liye
- Service quality maintain karne ke liye
- IT problems manage karne ke liye

Easy Explanation

Agar company ka server down ho gaya, ITIL batata hai ki issue kaise report, manage, solve aur prevent karna hai.

ITIL Main Processes

Process	Meaning
Incident Management	Problem solve quickly
Problem Management	Root cause find
Change Management	Safe changes apply
Service Desk	User support
Service Level Management	Service quality maintain

Flow

```
User Problem
     ↓
Service Desk
     ↓
Incident Management
```

```
     ↓
Problem Solving
     ↓
Service Improvement
```

Diagram

```
ITIL
 |
--------------------------------
|        |        |             |
Incident Problem Change     Service Desk
```

Advantages

- Better IT service quality
- Faster issue resolution
- Customer satisfaction
- Standard process
- Reduced downtime

Disadvantages

- Implementation complex
- Documentation heavy
- Training required

Applications

- IT companies
- Banks

- Cloud services
- Government IT systems
- Support centers

Important Keywords

IT Service Management, Incident Management, Problem Management, Change Management, Service Desk, SLA

Conclusion

ITIL helps organizations manage IT services in a structured and professional way.

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9. Project Termination

Introduction

Project termination means project ko formally close karna. Ye project complete hone par ya fail hone par hota hai.

Definition

Project Termination is the formal process of closing a project after completion, cancellation or failure.

Why It Is Needed

- Project formally close karne ke liye
- Resources release karne ke liye
- Final report banane ke liye
- Lessons learn karne ke liye

Types of Project Termination

Type	Meaning
Termination by Extinction	Project completed or failed
Termination by Addition	Project becomes separate department
Termination by Integration	Project output organization me merge
Termination by Starvation	Funds/resources slowly remove

Step-by-Step Working

1. Final review karo
2. Client approval lo
3. Final documentation complete karo
4. Resources release karo
5. Final report submit karo
6. Lessons learned record karo

Flow

```
Project End
     ↓
Final Review
     ↓
Documentation
     ↓
Resource Release
     ↓
Final Report
     ↓
Closure
```

Diagram

```
Completion → Review → Report → Resource Release → Closure
```

Advantages

- Proper closure
- Resource reuse possible
- Final learning milti hai
- Accountability clear hoti hai

Disadvantages

- Team members uncertain feel kar sakte hain
- Documentation time leta hai
- Incomplete closure future problems create kar sakta hai

Important Keywords

Closure, Final Review, Resource Release, Documentation, Lessons Learned, Final Report

Conclusion

Project termination ensures project ka formal and systematic closure ho.

🔥 Comparison Table: Agile, Scrum, Lean, DevOps, ITIL

Basis	Agile	Scrum	Lean	DevOps	ITIL
Meaning	Flexible approach	Agile framework	Waste reduction	Dev + Ops teamwork	IT service framework

Basis	Agile	Scrum	Lean	DevOps	ITIL
Focus	Change handling	Sprint delivery	Efficiency	Fast delivery	Service quality
Used In	Projects	Software teams	Processes	IT delivery	IT services
Main Keyword	Flexibility	Sprint	Waste removal	CI/CD	Incident management
Output	Better product	Sprint increment	Efficient process	Faster deployment	Better service

Which is Better and Why?

No single method is always better.

- **Agile** is best for flexible projects.
- **Scrum** is best for team-based software development.
- **Lean** is best for removing waste.
- **DevOps** is best for fast deployment.
- **ITIL** is best for IT service management.

🔥 Most Important 7-Mark Questions

1. Explain Agile Project Management.
2. Explain Agile principles.
3. Explain Scrum framework.
4. Explain Risk Analysis.
5. Explain Project Control.
6. Explain Lean and DevOps.
7. Explain Project Audit.
8. Explain ITIL.
9. Explain Project Termination.

⭐ Most Important 14-Mark Questions

1. Explain Agile Project Management with principles, advantages and diagram.
2. Explain Scrum framework with roles, artifacts and process.
3. Explain Risk Analysis and Project Control in detail.
4. Explain relationship between Agile, Scrum, Lean, DevOps and ITIL.
5. Explain Project Audit and Project Termination.

🎯 PYQ-Based Expected Questions

Very High Probability

✅ Agile Project Management
✅ Agile Principles
✅ Scrum
✅ Risk Analysis

High Probability

✅ Project Control
✅ Lean & DevOps
✅ Project Audit

Medium Probability

✅ ITIL
✅ Project Termination

⚡ One-Night Revision Notes

Topic	याद रखने वाली बात
Agile	Flexible and iterative method
Scrum	Sprint-based Agile framework

Topic	याद रखने वाली बात
Sprint	Short work cycle
Lean	Waste removal
DevOps	Development + Operations
ITIL	IT service management
Risk Analysis	Identify and reduce risks
Project Control	Monitor and correct project
Audit	Systematic checking
Termination	Formal closure

📌 Smart Study Plan

2-Hour Strategy

Time	Topic
25 min	Agile + Principles
25 min	Scrum
20 min	Risk Analysis
15 min	Project Control
20 min	Lean + DevOps + ITIL
15 min	Audit + Termination

5-Hour Strategy

Time	Topic
1 hour	Agile + Principles
1 hour	Scrum
1 hour	Risk Analysis + Control
1 hour	Lean + DevOps + ITIL
1 hour	Audit + Termination + PYQ

One-Night Priority Order

1. Agile Project Management
2. Agile Principles
3. Scrum
4. Risk Analysis
5. Project Control
6. Lean & DevOps
7. ITIL
8. Project Audit
9. Project Termination

🧠 Memory Tricks

Agile Principles

“CCTFW”

- C = Customer satisfaction
- C = Change welcome
- T = Team collaboration
- F = Frequent delivery
- W = Working product

Scrum

“PSDR”

- P = Product Backlog
- S = Sprint Planning
- D = Daily Scrum
- R = Review

Risk Analysis

“IAPMM”

- I = Identify
- A = Analyze
- P = Prioritize
- M = Mitigate
- M = Monitor

Project Control

“PMCC”

- P = Plan
- M = Monitor
- C = Compare
- C = Correct

🚀 Topper Answer Writing Tips

For 7 marks, write:

```
Definition
↓
Explanation
↓
Diagram
↓
Advantages
↓
Conclusion
```

For 14 marks, write:

```
Introduction
↓
Definition
↓
Detailed Explanation
↓
Diagram / Flowchart
↓
Example
↓
Advantages
↓
Disadvantages
↓
Applications
↓
Conclusion
```

Keywords to Underline

Agile, Sprint, Scrum Master, Product Backlog, Risk Mitigation, Project Control, Lean, DevOps, ITIL, Audit, Termination

Final Tip

Agar time kam hai, sabse pehle **Agile + Scrum + Risk Analysis** prepare karo. Ye Unit-3 ke sabse scoring topics hain.