📘 RGPV Project Management – Unit 05

🔥 Last 5 Years PYQ Analysis (DevOps & Agile Methodologies)

Topics Covered:

- DevOps Overview and Components
- Docker Containerization
- Source Code Management
- Build Automation
- Continuous Integration (CI)
- CI/CD Pipeline
- Automated Testing & TDD
- Continuous Deployment
- Configuration Management
- Automated Monitoring
- XP, FDD, DSDM, Crystal Methodologies

The following analysis is based on RGPV-style question trends, important question banks, notes portals, and repeated university patterns.

📅 RGPV MAY/JUNE 2025

⭐ Questions Asked / Highly Similar Trends

1. Explain DevOps lifecycle with diagram.
2. Explain Continuous Integration and Continuous Deployment.
3. Explain Docker containerization and its advantages.
4. Explain automated testing and TDD cycle.

5. Differentiate between CI and CD.
6. Explain Agile methodologies XP and FDD.

📅 RGPV MAY/JUNE 2024

⭐ Questions Asked / Repeated

1. Explain DevOps and its components.
2. Explain Source Code Management using Git.
3. Explain Build Automation with suitable tools.
4. Explain Configuration Management.
5. Explain CI/CD pipeline with flowchart.
6. Explain DSDM and Crystal methodologies.

📅 RGPV MAY/JUNE 2023

⭐ Questions Asked / Repeated

1. Explain Docker architecture and containerization.
2. Explain Continuous Integration process.
3. Explain automated monitoring in DevOps.
4. Explain XP methodology with practices.
5. Explain Build Automation tools and process.
6. Explain Agile methodologies comparison.

📅 RGPV MAY/JUNE 2022

⭐ Questions Asked / Repeated

1. Explain DevOps overview and lifecycle.
2. Explain TDD and automated testing.
3. Explain source code management process.
4. Explain CI/CD pipeline with diagram.
5. Explain Feature Driven Development (FDD).
6. Explain Configuration Management tools.

📅 RGPV MAY/JUNE 2021

⭐ Questions Asked / Repeated

1. Explain Continuous Deployment process.
2. Explain Docker and containerization.
3. Explain Extreme Programming methodology.
4. Explain Crystal methodology.
5. Explain DevOps monitoring process.
6. Explain build automation and its importance.

🔥 MOST REPEATED QUESTIONS (VERY IMPORTANT)

Topic	Repetition Level
DevOps Overview & Lifecycle	⭐⭐⭐⭐⭐
Continuous Integration	⭐⭐⭐⭐⭐
CI/CD Pipeline	⭐⭐⭐⭐⭐
Docker Containerization	⭐⭐⭐⭐⭐
Automated Testing & TDD	⭐⭐⭐⭐
XP Methodology	⭐⭐⭐⭐
Source Code Management	⭐⭐⭐⭐

Topic	Repetition Level
Configuration Management	⭐⭐⭐
FDD	⭐⭐⭐
DSDM	⭐⭐⭐
Automated Monitoring	⭐⭐⭐
Crystal Methodology	⭐⭐

🎯 VERY HIGH PROBABILITY QUESTIONS

⭐ MOST EXPECTED LONG QUESTIONS

1. Explain DevOps lifecycle with components and diagram.
2. Explain CI/CD pipeline with flowchart.
3. Explain Docker containerization and architecture.
4. Explain Continuous Integration and Continuous Deployment.
5. Explain Automated Testing and TDD cycle.

🎯 HIGH PROBABILITY QUESTIONS

1. Explain Source Code Management using Git.
2. Explain Build Automation and related tools.
3. Explain XP methodology and practices.
4. Explain Configuration Management.
5. Explain FDD and DSDM.

🎯 MEDIUM PROBABILITY QUESTIONS

1. Explain Automated Monitoring.
2. Explain Crystal methodology.
3. Explain DevOps tools.
4. Explain Agile methodologies comparison.

🔥 MOST IMPORTANT THEORY QUESTIONS

Highly Expected 7-Mark Questions

1. Explain DevOps overview and components.
2. Explain Docker containerization.
3. Explain Continuous Integration.
4. Explain CI/CD pipeline.
5. Explain Source Code Management.
6. Explain Automated Testing and TDD.
7. Explain Build Automation.
8. Explain Configuration Management.
9. Explain XP methodology.
10. Explain FDD methodology.

⭐ MOST IMPORTANT 14-MARK QUESTIONS

1. Explain DevOps lifecycle with detailed diagram.
2. Explain CI/CD pipeline with all stages.
3. Explain Docker containerization with architecture and advantages.
4. Explain automated testing, TDD and Continuous Integration.
5. Compare XP, FDD, DSDM and Crystal methodologies.

6. Explain source code management, build automation and configuration management in DevOps.

📌 PYQ TREND ANALYSIS

What RGPV Mostly Focuses On

RGPV mostly asks:

✅ DevOps lifecycle diagrams
✅ CI/CD process flow
✅ Docker architecture
✅ Agile methodologies comparison
✅ TDD cycle
✅ Build automation and Git
✅ Advantages/disadvantages based questions

Most questions are:

- diagram based
- flowchart based
- process oriented
- comparison oriented
- tool-based theory questions

⚡ ONE-NIGHT EXAM STRATEGY

If Only 2–3 Hours Left

First Priority

✅ DevOps Lifecycle

✅ Docker Containerization

✅ CI/CD Pipeline

✅ Continuous Integration

Second Priority

✅ Automated Testing & TDD

✅ XP Methodology

✅ Source Code Management

Third Priority

✅ FDD

✅ DSDM

✅ Crystal

✅ Monitoring

✅ Configuration Management

🧠 MEMORY TRICKS

DevOps Lifecycle

👉 “PCBT-RDOM”

- P = Plan
- C = Code
- B = Build
- T = Test
- R = Release
- D = Deploy
- O = Operate

- M = Monitor

TDD Cycle

👉 “RGR”

- R = Red (Test Fail)
- G = Green (Test Pass)
- R = Refactor

Agile Methods

👉 “XDFC”

- X = XP
- D = DSDM
- F = FDD
- C = Crystal

CI/CD Pipeline

👉 “CBTDM”

- C = Commit
- B = Build
- T = Test
- D = Deploy
- M = Monitor

🚀 TOPPER EXAM WRITING TIPS

To Score Maximum Marks

Always Include:

✅ Definition
✅ Flowchart
✅ Diagram
✅ Example
✅ Advantages
✅ Applications
✅ Conclusion

Draw These Diagrams जरूर

1. DevOps Lifecycle Diagram
2. CI/CD Pipeline Diagram
3. Docker Container Diagram
4. TDD Cycle Diagram
5. Build Automation Flow
6. Agile Methodology Comparison Table

Underline These Keywords

- DevOps
- CI/CD
- Docker
- Containerization
- Continuous Integration
- Continuous Deployment
- TDD
- Git
- Build Automation
- Configuration Management
- XP
- FDD

- DSDM
- Crystal

🎯 FINAL EXAM PREDICTION

MOST EXPECTED 14-MARK QUESTION

⭐ “Explain DevOps lifecycle with CI/CD pipeline and Docker containerization.”

MOST EXPECTED COMPARISON QUESTION

⭐ “Compare XP, FDD, DSDM and Crystal methodologies.”

MOST EXPECTED SHORT QUESTION

⭐ “Explain Continuous Integration and Continuous Deployment.”

📌 FINAL PRIORITY ORDER FOR EXAM

Study in this order:

1. DevOps Overview
2. CI/CD Pipeline
3. Docker Containerization
4. Continuous Integration
5. Automated Testing & TDD
6. Source Code Management
7. Build Automation
8. XP Methodology
9. FDD

10. DSDM
11. Configuration Management
12. Automated Monitoring
13. Crystal Methodology

These topics are most repeated and highly expected according to RGPV-style exam trends.