

Code No: **R194205C**

**R19**

**Set No. 1**

**IV B.Tech II Semester Regular Examinations, April– 2023**

**DEVOPS**

**(Common to Computer Science & Engineering and Information Technology)**

**Time: 3 hours**

**Max. Marks: 75**

*Answer any FIVE Questions  
ONE Question from Each unit  
All Questions Carry Equal Marks*

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**UNIT I**

- 1 a) What is Software Development Life Cycle? Explain with a neat sketch. [7]  
b) What are the advantages and Disadvantages of SDLC? [8]  
(OR)
- 2 a) Write a short note on V Software Development Life Cycle model [7]  
b) What are the four values of the Agile Manifesto? Explain. [8]

**UNIT II**

- 3 What are the benefits of Devops? Explain the DevOps ecosystem with a neat diagram. [15]  
(OR)
- 4 Describe the DevOps use cases and need in real time applications [15]

**UNIT III**

- 5 Describe the aspects considered by Infosys for DevOps adoption [15]  
(OR)
- 6 a) Write a short note on Monit tool for DevOps [7]  
b) What are the useful plugins in Jenkin? Explain. [8]

**UNIT IV**

- 7 a) What are the reasons to use CI and CD? Briefly explain about Continuous Integration [10]  
b) What are the benefits of Continuous Integration? [5]  
(OR)
- 8 a) Illustrate UI Testing with some use cases. [7]  
b) What are the metrics for optimizing the DevOps CI/CD pipeline? [8]

**UNIT V**

- 9 a) How is version control handled? Illustrate. [7]  
b) What are the parameters to be measured at every stage of DevOps Maturity Model? Explain. [8]  
(OR)
- 10 a) Explain about DevOps Maturity Assessment Factors [7]  
b) What are the merits of DevOps Maturity Model? Explain. [8]



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**Set No. 2**

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**DEVOPS**  
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**Time: 3 hours**

**Max. Marks: 75**

*Answer any FIVE Questions*  
*ONE Question from Each unit*  
*All Questions Carry Equal Marks*  
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**UNIT I**

- 1 Briefly Describe the Phases of Software Development Life Cycle. How is it different from software development life cycle? [15]  
(OR)
- 2 a) Briefly explain about the Spiral Software Development Life Cycle [7]  
b) What are the Pros and Cons of Spiral Software Development Life Cycle? [8]

**UNIT II**

- 3 Explain the DevOps delivery pipeline and work with a neat diagram [15]  
(OR)
- 4 What are the different DevOps solution architectures? Compare them. [15]

**UNIT III**

- 5 Describe the business drivers for adoption of DevOps [15]  
(OR)
- 6 a) Write a short note on Jenkin tool for DevOps [7]  
b) What are the important goals to DevOps to focus when developing projects? [8]

**UNIT IV**

- 7 a) Briefly explain about Continuous Delivery. Give some popular tools for Continuous Delivery. [10]  
b) What are the benefits of Continuous Delivery? [5]  
(OR)
- 8 a) Write a short note on System Testing and integration testing [7]  
b) How do you implement Continuous Integration in DevOps? Explain. [8]

**UNIT V**

- 9 A complete DevOps maturity model operates on three levels. Illustrate each with an example [15]  
(OR)
- 10 a) Write a short note on Measured Stage of DevOps Maturity [7]  
b) Explain the merits and demerits of DevOps Maturity Model [8]



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**Time: 3 hours**

**Max. Marks: 75**

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ONE Question from Each unit  
All Questions Carry Equal Marks*

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**UNIT I**

- 1 a) Briefly explain about the Waterfall model. What are the advantages and disadvantages of Waterfall model? [7]  
b) Describe various stages in Unified process model [8]  
(OR)
- 2 a) What are the principles of Agile development? Explain. [7]  
b) Write a short note on Agile SDLC workflow [8]

**UNIT II**

- 3 Explain DevOps Orchestration and what are the reasons to invest in DevOps? [15]  
(OR)
- 4 Does DevOps include architecture? Describe DevOps role in architecture with suitable example. [15]

**UNIT III**

- 5 a) Write a short note on Nagios tool for DevOps [7]  
b) Describe the role of people factor in DevOps implementation. [8]  
(OR)
- 6 How will you approach a project that needs to implement DevOps? Illustrate. [15]

**UNIT IV**

- 7 a) Briefly explain about Continuous Deployment. List some popular DevOps tools for Continuous Deployment [10]  
b) What are the benefits of Continuous Deployment? [5]  
(OR)
- 8 a) Write a short note on Integration Testing. Compare it with system testing [7]  
b) Elaborate on the metrics used for optimizing DevOps CI/CD pipeline. [8]

**UNIT V**

- 9 Briefly Describe about the DevOps Maturity Model. How will you assess it? [15]  
(OR)
- 10 a) Write a short note on Nascent Stage of DevOps Maturity [7]  
b) What are the Key factors of DevOps Maturity Model? Explain them. [8]



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**Max. Marks: 75**

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ONE Question from Each unit  
All Questions Carry Equal Marks*

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**UNIT I**

- 1 a) Briefly explain about the Lean Software Development Life Cycle [7]  
b) What are the Pros and Cons of Lean Software Development Life Cycle [8]  
(OR)  
2 Define agility. Why is it required? What are the phases of Agile Software development Life Cycle? Explain. [15]

**UNIT II**

- 3 What challenges exist when creating DevOps pipelines? How to handle them? [15]  
(OR)  
4 What are the benefits of orchestration in DevOps? How is DevOps practices orchestration? [15]

**UNIT III**

- 5 Compare the features of following tools for DevOps  
a) Monit b) Jenkins c) Nagios [15]  
(OR)  
6 a) What are the key components of DevOps implementation? Give some challenges in it. [7]  
b) What are the primary stakeholders of DevOps? Explain. [8]

**UNIT IV**

- 7 a) What is CI/CD Pipeline? Explain in detail. [7]  
b) What are the benefits of Continuous Integration and Continuous Delivery? [8]  
(OR)  
8 What is the difference between continuous delivery and deployment in DevOps? How is continuous delivery achieved? [15]

**UNIT V**

- 9 Describe the five transformation stages of DevOps Maturity Model with a neat diagram [15]  
(OR)  
10 a) What are the business benefits of DevOps Maturity? Explain them [7]  
b) Write a short note on Managed Stage of DevOps Maturity [8]

