

Basavarajeswari Group of Institutions

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
 (Autonomous Institute under Visvesvaraya Technological University, Belagavi)

2022 SCHEME

USN

Course Code

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Fourth Semester MCA Degree Examinations, September 2025

INTRODUCTION TO DEVOPS

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<u>MODULE – 1</u>			
1.	a. Explain the waterfall model of software development and describe how each phase contributes to the overall process?	10	(2:1:1.2.1)
	b. How would you describe cloud computing in your own words? Can you explain the different types of cloud services and their functions?	10	(2:1:1.1.1)
(OR)			
2.	a. Explain the Devops lifecycle and describe how each phase contributes to the overall process development?	10	(2:1:1.2.2)
	b. Explain the various steps involved in creating an organization and describe the purpose of each step.	10	(2:1:2.1.2)
<u>MODULE – 2</u>			
3.	a. Can you explain in detail about Azure boards and also the steps to create a work item in Azure boards?	10	(2:2:1.2.1)
	b. Explain the work items of scrum process with its work flow diagram.	10	(2:2:1.2.1)
(OR)			
4.	a. Explain the process for creating CMMI process and work item in Azure boards using CMMI process.	10	(2:2:2.3.1)
	b. Explain how to customize basic project using inherited process.	10	(2:2:1.2.2)
<u>MODULE – 3</u>			
5.	a. Explain in detail version control system and its types.	10	(2:3:1.2.1)
	b. Explain in your own words about GIT and summarize the steps required to install and set up Git on your computer.	10	(2:3:1.2.2)
(OR)			
6.	a. What are branches? Explain the steps to create branches and master branches.	10	(2:3:2.2.1)
	b. Explain the steps for handling Git Hub repository using visual studio code.	10	(2:3:1.2.1)
<u>MODULE – 4</u>			
7.	a. Explain the concept of Azure pipeline and steps to create pipeline.	10	(2:4:1.2.2)
	b. Explain in detail the key components of Azure pipeline.	10	(2:4:1.2.2)

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI - Performance Indicator)

(OR)

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|-----------|-----------|--|-----------|--------------------|
| 8. | a. | What is sonar cloud integration and summarize the main steps involved in integrating it into a CI/CD pipeline. | 10 | (2:4:2.2.1) |
| | b. | Write short note on: (i) Triggers (ii) YAML template | 10 | (2:4:1.2.1) |

MODULE – 5

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| 9. | a. | Can you explain about Maven and describe its main features? | 10 | (2:5:1.2.1) |
| | b. | Explain the architecture of Maven and describe how its repository system works. | 10 | (2:5:1.2.2) |

(OR)

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| 10. | a. | Explain in detail the integration of Jacoco plugin for code coverage. | 10 | (2:5:1.2.3) |
| | b. | Write Short note on: (i) Maven plugin (ii) Maven commands | 10 | (2:5:2.2.1) |

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