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**GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING (AUTONOMOUS)**

Madhurawada, Visakhapatnam

Affiliated to JNT University – K, Kakinada

B.Tech VII Semester Regular Examinations, November 2023**Devops****(Professional Elective- IV)****(Common to CSE, CSE (AI & ML) & CSE (Data Science))****Date:16-11-2023****Time: 3 Hours****Max. Marks: 70**

1. Answer ONE Question from each UNIT
2. All parts of a Question must be answered at one place to get valued.
3. All questions carry equal marks.

UNIT-I

1. a) Differentiate between Agile model and DevOps. 7 Marks
- b) Explain how the maintenance activity is carried out in the application development in the absence of DevOps with the help of a neat diagram. 7 Marks
2. a) What is DevOps? Explain the benefits of DevOps. 7 Marks
- b) What are the key features of JIRA? 7 Marks

UNIT-II

3. a) Demonstrate the vagrant commands to create virtual machine, restart a service and execute a playbook. 7 Marks
- b) Explain any seven GIT commands. 7 Marks
4. a) Explain the key concepts of Ansible. 7 Marks
- b) Discuss about the anatomy of a Vagrant file. 7 Marks

UNIT-III

5. a) How can you use Ansible to configure SSH? 7 Marks
- b) Explain the procedure to create a task in Ansible to enforce strong password by having one upper case letter, one lower case letter, one digit, one non alpha numeric character, min. length is 10 and max length 20 and no. of attempts 4. Also describe the type of yml file, parameters and commands used in the task. 7 Marks
6. a) Discuss about provisioning the VM. 7 Marks
- b) What is Sudo? How can you control user commands with Sudo? 7 Marks

UNIT-IV

7. a) Discuss about Docker commands. 7 Marks
- b) What are the advantages with Docker? 7 Marks
8. a) Explain OS-level virtualization and Docker framework. 7 Marks
- b) Explain the key features of Kubernetes. 7 Marks

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UNIT-V

9. a) What is Observability? Explain the procedure to monitor an application. 7 Marks
- b) Explain Troubleshooting. What are the key aspects to remember in troubleshooting? 7 Marks
10. a) How to handle High Load Average and High Memory Usage scenarios? 7 Marks
- b) What is the need for SRE? Describe the best practices related to SRE. 7 Marks