

Introduction TO DevOps
(414445B) (2019 Pattern) (Semester-VII) (Elective - IV)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right side indicate marks.*
- 4) Assume suitable data, if necessary.*

- Q1)** a) What is Test Driven Development? Explain in brief. [5]
- b) What are benefits of Continuous Integration (CI) and Continuous Delivery (CD)? [5]
- c) Explain the stages for building Continuous Integration and Continuous Delivery pipelines. [8]

OR

- Q2)** a) Explain Blue Green Deployment? [5]
- b) Explain Canary deployment? [5]
- c) How to create build reports? Explain the process of putting a build in shared location and releasing it. [8]
- Q3)** a) Write a short note on Automated Acceptance Test Best Practices. [5]
- b) What is continuous deployment? [4]
- c) Draw & explain basic deployment pipeline cycle. [8]

- Q4)** a) Explain Integration Testing in detail. [5]
b) Write a short note on commit stage of deployment pipeline. [4]
c) Explain different types of testing strategy [8]
- Q5)** a) What is Behaviour-Driven Monitoring? [4]
b) What is a Monitoring System? What are key requirements of monitoring system? [6]
c) Write a note on: White-Box and Black-Box Monitoring [8]
- OR**
- Q6)** a) What are common tools used by site reliability engineering (SRE)? [4]
b) What is site reliability engineering (SRE)? Explain its role and responsibilities. [6]
c) Explain the importance of monitoring system? List and explain factors involved in monitoring system. [8]
- Q7)** a) What are the benefits of using version control? [6]
b) What is Docker? What are main components of a Docker architecture? [6]
c) Write a note on Jenkins and its role in Continuous Integration. [5]
- OR**
- Q8)** a) Write a note on Selenium and its role in Continuous testing. [6]
b) What is version control system? Explain its types. [6]
c) What is serverless orchestration in Kubernetes? [5]