Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal School of Information Sciences (MSIS), Manipal
Second Semester Master of Engineering - ME (Cloud Computing) Degree Examination - May 2023

DevOps for Cloud [CDC 5001]

Marks: 100   **Duration: 180 mins.**

Friday, May 26, 2023

Answer all the questions.

1)	Briefly explain classical software development life cycle stages in product development and highlight suitable models based on the same. (10 MARKS)CO(1) PO(1,3) BT(L2)	(10)
2)	Briefly explain with suitable diagram Life cycle stages of DevOps and also comment on suitable tools used in each stages (8 + 2=10 MARKS) CO(1) PO(5) BT(L2)	(10)
3)	Briefly explain need of software version control management tools and its features (10 MARKS) CO(3) PO(1) BT(L4)	(10)
4)	Briefly explain the role of Continuous integration server in Devops life cycle with suitable example (10 MARKS) CO(2) PO(1) BT(L3)	(10)
5)	Briefly explain how to setup CI/CD Pipeline using Jenkins to deploy Java maven applications (10 MARKS) CO(2) PO(2) BT(L3)	(10)
6)	Briefly explain what problems does Docker address in software life cycle and also comment on how it is different in comparison to Virtual machines (10 Marks) CO(2) PO(5) BT(L3)	(10)
7)	Briefly explain how to containerize 3 tier web application using multiple containers and start these containers with the help of Docker compose. (10MARKS) CO(3) PO(2) BT(L4)	(10)
8)	Briefly explain the Architecture of Kubernetes and also comment on its objectives and needs of Container Orchestration Services (7 + 3 = 10 MARKS) CO(2) PO(2) BT(L3)	(10)
9)	Briefly explain the need of Configuration Management tools and also mention its features (10 MARKS) CO(2) PO(5) BT(L3)	(10)
10)	Explain the need of Continuous Monitoring Tools in IT Infrastructure and its Features (10 MARKS) CO(3) PO(5) BT(L4)	(10)

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