

1911000703030001
EXAMINATION NOVEMBER 2024
MASTER OF SCIENCE (INFORMATION AND
COMMUNICATION TECHNOLOGY) (THIRD SEMESTER)
CLOUD COMPUTING - LEVEL 3

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **MASTER OF SCIENCE (INFORMATION AND COMMUNICATION TECHNOLOGY) (THIRD SEMESTER)**
 - b. Name of the Subject : **CLOUD COMPUTING - LEVEL 3**
 - c. Subject Code No : **1911000703030001**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Do as Directed (Any Two)

14

- a) Explain various ways to deal with fault tolerance in microservices applications
- b) Explain the terms Bounded Context, Value Objects, Entities, Aggregational Roots and Domain Services with Suitable example
- c) Explain different ways to convert a monolith application into microservice applications

Q.2 Do as Directed (Any Two)

14

- a) Explain the ACID and BASE transaction in reference to enterprise and microservices architecture. Also explain how BASE deals with the consistency of database.
- b) Write all the steps to deploy and execute database on docker and finally putting it on kubernetes
- c) Write down all the steps to write a microservice application and its client supporting with a sample code and artifacts to deploy them on suitable platform

Q.3 Do as Directed

14

- a) Explain the terms in reference to kubernetes (1,2,2,2)
 - 1) etcd
 - 2) Pod and Service
 - 3) API gate way (ingress)
 - 4) Kubectl commands
- b) Write a note on Cloud Deployment models and explain its advantages and disadvantages.

Q.4 Do as Directed (Any Two)

14

- a) What is VPC? Explain its importance in Cloud usage by taking an example.
- b) Write a note on Cloud9 in detail.
- c) Explain any one server less computing service in detail.

Q.5 Do as Directed (Any Two)

14

- a) What is Virtualization? Why we need it? Explain its role in Cloud Computing.
- b) Write a note on Service Level Agreement in Cloud Computing. Explain its components by taking any one cloud service.
- c) Explain importance of Containerization in Cloud Computing with example.
