

# Question Paper

Exam Date & Time: 06-Jan-2023 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

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

### Cloud Foundations and Architecting (Elective -1) [CDC 5132]

Marks: 100

Duration: 180 mins.

Friday, January 6, 2023

Answer all the questions.

- 1) A. Briefly explain the benefits of Cloud Computing over Traditional IT Infrastructure. (TLO 1.2) (10)  
B. Explain Cloud Deployment models with relevant examples. (TLO 1.1) (6 + 4 = 10 MARKS)
- 2) Briefly explain about AWS Services under Billing and Cost Management Category with suitable usage objectives. (10)  
(TLO 1.3) (10 MARKS)
- 3) Explain the following components of AWS Global Infrastructure: (10)
  - a. Datacentre
  - b. Availability Zone
  - c. Regions
  - d. Points of Presence. (TLO 2.1) (2.5 \* 4 = 10 MARKS)
- 4) A. Explain action plans or step-by-step guidance to create and VPC with public and private subnet across multi availability zones within a region of AWS. And also highlight how to configure resources in public and private subnets to connect to internet. (TLO 6.1) (10)  
B. List and provide suitable business case examples for different Route53 Routing policies. (TLO 6.3) (6 + 4 = 10 MARKS)
- 5) A. List and explain the key 9 components required to launch an EC2 instance using Launch wizard. (10) (TLO 4.1)  
B. Brief about container based compute services available in AWS. (TLO 4.3) (6 + 4 = 10 Marks)
- 6) Write a short note on following storage solution features, use-cases and its pricing. (10)
  - a. Elastic Block Storage (EBS)
  - b. Elastic File system (EFS)
  - c. S3 Glacier (TLO 5.3) (4 + 3 + 3 = 10 MARKS)
- 7) A. Compare and contrast RDS with DynamoDB and highlight suitable business requirement for each of the database solution (TLO 7.2) (10)  
  
B. Explain with suitable diagram architecture and use-cases of AWS Redshift Cluster. (TLO 7.3) (6 + 4 = 10 MARKS)
- 8) Write a short note on the following : (10)
  - a. Elastic LoadBalancer types
  - b. Cloud watch static alarm configurations with an example

c. AWS EC2 Autoscaling Scaling types and policies. (TLO 9.1) (3 + 3 + 4 = 10 MARKS)

- 9) Brief about the need and objectives of AWS Well Architected Framework. (TLO 8.1) (10 MARKS) (10)
- 10) Explain the need and importance of Automation of Infrastructure. Also comment on AWS Automation Service used to deploy infrastructure layers reliable and consistently. (TLO 10.2) (10 MARKS) (10)

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