

Exam Date & Time: 30-Dec-2022 (02:30 PM - 05:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.TECH MAKE-UP EXAMINATIONS, DEC 2022-JAN 2023

CLOUD COMPUTING [DSE 3157]

Marks: 50

Duration: 180 mins.

A

Answer all the questions.

Instructions to Candidates: Answer ALL questions Missing data may be suitably assumed

- 1) Explain the cloud computing stack by indicating various services offered by the service provider. (5)
 - A)
 - B) Summarize the characteristics of grid computing and identify the drawbacks. (3)
 - C) List the technologies that gave a breakthrough for cloud computing. (2)
- 2) Infer the architectural differences before and after virtualization. (5)
 - A)
 - B) Infer the interaction of ISA, API and ABI in computer system architecture. (3)
 - C) Differentiate between regular and live migration with suitable examples. (2)
- 3) Describe the data centre elements that can be combined with hyper-converged infrastructure. (5)
 - A)
 - B) Explain the role of VSA in hyper-converged architecture. (3)
 - C) “Storage and computer are the core components of hyper-converged infrastructure” Justify. (2)
- 4) Summarize how the service provider offers services under various phases. (5)
 - A)
 - B) Consider a cloud-based smart-home application having a refrigerator and fan connected to cloud server. For this set-up explain how the publisher-subscriber model can be applied by assuming two states for each application as “ON” and “OFF”. (3)

- C) Contrast the difference between agnostic and class-aware load-balancing techniques. (2)
- 5) Explain the need of installing firewalls to monitor the traffic between virtual servers. Illustrate firewall perimeter security. (5)
 - A)
 - B) “The term parallel computing and distributed computing are often used interchangeably, even though they mean slightly different things.” Justify (3)
 - C) Consider two parties as caller and callee and explain how a caller can execute his/her process remotely on a callee’s infrastructure. (2)

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