

# Question Paper

Exam Date & Time: 26-May-2023 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

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

### Cloud Networks [CDC 5201]

Marks: 100

Duration: 180 mins.

Friday, May 26, 2023

Answer all the questions.

- 1) Describe the features of servers. Explain the following server form factors. [CO(1) PO(1) BT(L2)] (10)  
(4+6 marks)  
a. Tower case b. Rack mount c. Blade servers
- 2) State why is SSL/TLS important. Discuss the following layers of the OSI model. [CO(1) PO(1) BT(L2)] (10)  
(4+6 marks)  
a. network layer b. data link layer c. physical layer
- 3) Differentiate between private and public IP address. Describe the 5 IP address classes with an example. [CO(1) PO(1) BT(L2)] (10)  
(4+6 marks)
- 4) Design a network for an organization having 2 LAN's each in Tokyo and Toronto. Provide Network Addr, Broadcast addr, First and Last usable addr and Total number of usable host. The IP address given is 192.168.45.0 /24. [CO(1) PO(1,3) BT(L2)] (2 marks each) (10)  
a) Tokyo LAN A - 5 hosts  
b) Tokyo LAN B - 119 hosts  
c) Toronto LAN A - 27 hosts  
d) Toronto LAN AB- 42 hosts  
e) POP
- 5) Differentiate between the following types of Data Center Redundancy. [CO(1) PO(1) BT(L3)] (5+5 Marks) (10)  
a. N vs N+1 b. 2N vs 2N+1
- 6) Discuss the benefits and drawbacks of DAS? Discuss the following RAID types with 1 advantage and disadvantage of each RAID type. [CO(2) PO(1,2) BT(L3)] (4+3+3 marks each) (10)  
a. RAID 6 b. RAID 10
- 7) Describe what is SAN? Explain the following [CO(2) PO(1,2) BT(L3)] (4+6 marks): (10)  
a. What make a good SAN? b. What makes SAN different?
- 8) Discuss the role of CDN in data security. (TLO 4.1) (10 marks) (10)
- 9) Describe CDN building blocks. Explain what is PoP and Why are they so crucial to a CDN? [CO(3) PO(1,2) BT(L4)] (3+3+4 marks) . (10)
- 10) Explain Application Delivery Controller (ADC). Identify the various features of Application Delivery Controller. [CO(3) PO(1,2) BT(L4)] (5+5 marks) (10)

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