

Information Technology : Modern Networking (R-2020)

(2 Hours)

[Total Marks: 60]

- N. B.:
- (1) All questions are compulsory.
  - (2) Make suitable assumptions wherever necessary and state the assumptions made.
  - (3) Answers to the same question must be written together.
  - (4) Numbers to the right indicate marks.
  - (5) Draw neat labeled diagrams wherever necessary.
  - (6) Use of Non-programmable calculators is allowed.

**Q1. Attempt the two of the following.**

**12 Marks**

- a. Explain the modern network in the ecosystem.
- b. Give a brief idea about global networking architecture.
- c. What are the benefits of cloud computing?
- d. Write a short note on network function virtualization.

**Q2. Attempt the two of the following.**

**12 Marks**

- a) What is the SDN approach? And how it is Achieved to build network requirement?
- b) Explain the Data Plane Protocols
- c) List and explain the key functions of the SDN control plane
- d) what is Traffic Engineering?

**Q3. Attempt the two of the following.**

**12 Marks**

- a) Explain NFV Reference Architectural Framework.
- b) Write a short note on Virtual Machine Monitor.
- c) What are the Benefits of Network Virtualization
- d) Draw and Explain Network Virtualization Architecture.

**Q4. Attempt the two of the following.**

**12 Marks**

- a. Explain DiffServ architecture.
- b. Write a short note on service level agreement (SLA).
- c. What are the applications of QoE?
- d. Write a short note on Glass-Box Parameter-Based QoS/QoE Mapping Models

**Q5. Attempt the two of the following.**

**12 Marks**

- a) What are the services provided by the cloud?
- b) Differentiate between public cloud and private cloud.
- c) Differentiate between Traditional IT on-premise service and cloud service models with the help of a suitable diagram.
- d) Write a short note on the NIST Cloud Computing Reference Architecture.

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