

(Time: 2 ½ Hours)

[Total Marks: 75]

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 labelled diagrams** wherever **necessary**.

(6) Use of **Non-programmable** calculators is **allowed**.

**Q1. Attempt the three of the following.**

**15 Marks**

- Explain the key elements and their relationships of a modern networking ecosystem.
- Explain Advantages and Disadvantages of SDN.
- Explain types of Virtualization.
- What is the difference between QoS and QoE?
- Write a short notes on \* as a Service..

**Q2. Attempt the three of the following.**

**15 Marks**

- Explain Applications of Wi-Fi.
- Difference between SDN and Traditional Networking.
- Explain Logical Structure of NFVI Domains..
- Give Definition of Quality of Experience, Definition of Quality, Definition of Experience Quality Formation Process.
- Explain with example Cloud Deployment Models.

**Q3. Attempt three of the following.**

**15 marks**

- a. Explain Transmission medium in Modern networking.
- b. Draw and Explain SDN Architecture.
- c. Write a short notes on Virtual Switches.
- d. Differentiate Subjective Assessment vs Objective Assessment..
- e. How an IoT System Actually Works.

**Q4. Attempt three of the following.**

**15 marks**

- a. What are the differences between 2G, 3G, 4G LTE, and 5G networks?
- b. Explain Benefits of Software-Defined Networking (SDN).
- c. Explain Advantages and Disadvantages of Network Virtualization.
- d. Explain Applications of QoE Network Design.
- e. Explain Cloud Security Risks and Countermeasures.

**Q5. Attempt three of the following.**

**15 marks**

- a. Explain types of Cloud Computing.
- b. How does Software-Defined Networking (SDN) work?
- c. Explain Frame Format of IEEE 802.1Q Frame.
- d. Write a short notes on Glass Box Parameter-Based QoS/QoE Mapping Models.
- e. Explain IoT Security and Privacy Requirements.

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