

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.

- Q. 1 Attempt three of the following. 15
- Compare and contrast software define networking and network functions virtualization.
 - Discuss the traffic demands placed on contemporary networks by big data, cloud computing, and mobile traffic.
 - Describe various congestion control techniques used in computer network
 - What is Quality of Service (QoS)? How many classes does quality of service policy support?
 - Define Ethernet, Ethernet data rate and explain Wi-Fi Data rates 4G/5G Cellular fifth Generation.
- Q. 2 Attempt three of the following. 15
- Explain the OpenDaylight DDoS Application.
 - Write a note on Wireless information-centric networking CCN.
 - Explain Southbound interface routing in detail.
 - Explain the Software-Defined Architecture.
 - What in software defined network? With the help of diagram, Explain SDN architecture.
- Q. 3 Attempt three of the following. 15
- Explain network virtualization architecture with diagram.
 - Write a short note on SND controller.
 - Discuss the different types of functions performed by the data plane network devices.
 - List and discuss the characteristics of software defined networking.
 - What is virtual network function? Explain the concept of NFV.
- Q. 4 Attempt three of the following. 15
- List and discuss factors influencing QoE.
 - Draw diagram of QoE/QoS Layered Model with the Domains of Interest for the frameworks.
 - Differentiate between QoE Versus QoS Service Monitoring.
 - Explain Application of QoE.
 - Explain Service Level Agreements.
- Q. 5 Attempt three of the following. 15
- List and discuss the five principal components of IoT-enabled things.
 - List and explain the various cloud service categories.
 - What is RFID? Describe the working of RFID, Sensors and Actuators.
 - Discuss cloud services as defined by NIST.
 - Explain the various cloud deployment models.