

Duration: 3 hrs

[Marks: 80]

- N.B. :** (1) Question No 1 is Compulsory.
 (2) Attempt any three questions out of the remaining five.
 (3) All questions carry equal marks.
 (4) Assume suitable data, if required, and state it clearly.

- 1 Attempt **any FOUR** **[20]**
 - a Explain Open flow protocol.
 - b Write a short note on IPTV.
 - c Compare OSI and TCP/IP protocol suite.
 - d Explain Virtual Private Network in brief with diagram.
 - e What are the packet scheduling disciplines on the Internet?
 - 2 a Explain DHCP packet format with diagram. **[10]**
 - b Explain H.261 video compression standard. **[10]**
 - 3 a What is a firewall? Explain packet filter and proxy firewall with necessary diagrams. **[10]**
 - b Define IoT. Explain IoT protocol layer diagram with protocols at each layer. **[10]**
 - 4 a What is Voice over IP? Explain messages and address formats of Session Initiation Protocol (SIP)? How a simple session of VOIP happen using SIP? **[10]**
 - b Explain concepts of device provisioning, data collection, migration and configuration management with respect to network automation. **[10]**
 - 5 a Explain MPEG 2 standard. **[10]**
 - b Explain Differentiated Services (DS) with respect to Quality of Service (QoS). Explain DS field, per-hop behavior and traffic conditioner with respect to DS. **[10]**
 - 6 a Describe each field of Real Time Transport Protocol (RTP) packet header format with diagram? **[10]**
 - b Explain S/MIME protocol with respect to application layer security. **[10]**
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