

B.E SEM-VII C-scheme Summer 2025 10/6/25  
Duration: 3hrs Total Marks: 80 EXTC

N.B.:

1. Question no.1 is compulsory.
2. Attempt any three questions from the remaining five questions.
3. Total four questions need to be solved.
4. Assume suitable data whenever necessary, justify the same.

Attempt any four questions from Q1

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|-------|--|------|
| Q.1 a | Explain the overview of the TCP/IP model.  | [5]  |
| Q.1 b | Compare Telnet and SSH remote login protocol.  | [5]  |
| Q.1 c | Explain the working of Domain Name System (DNS).                                       | [5]  |
| Q.1 d | Differentiate between MPEG and JPEG compression standards.                             | [5]  |
| Q.1 e | Explain the working of a Firewall.   | [5]  |
| Q.2 a | Explain the detail working of different steps of Image compression technique.          | [10] |
| Q.2 b | Analyze how S/MIME protocol provides security to electronic mail.                      | [10] |
| Q.3 a | Draw and explain the physical design of IoT. Also explain the characteristics of IoT.  | [10] |
| Q.3 b | Explain the working of different types of Audio (sound) signal compression techniques. | [10] |
| Q.4 a | Explain working of Transport layer security protocol, Secure Sockets Layer (SSL).      | [10] |
| Q.4 b | What is a Software Defined Network? Describe network automation in SDN.                | [10] |
| Q.5 a | Explain working of RSVP: reservation protocol and its different types of messages.     | [10] |
| Q.5 b | Explain the working of Network Layer Security in detail.                               | [10] |
| Q.6   | Write a short note on the following.   | [20] |
| a     | Real-Time Streaming Protocol(RTSP)   |      |
| b     | H.261 and H.263  |      |
| c     | Differentiated services (diffserv)   |      |
| d     | VoIP   |      |