

DECEMBER 2014

**P/ID 16165/PITSF**

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Time : Three hours

Maximum : 100 marks

PART A — (6 × 5 = 30 marks)

Answer any SIX questions.

1. What are the components of data communication system? Discuss.
2. Mention the three criteria necessary for an effective and efficient network. Discuss.
3. Distinguish between point to point links and multipoint links. Give relevant diagrams.
4. What is meant by IP spoofing? How can a router be used to prevent IP spoofing?
5. What are error control and its types? Give brief explanation about stop and wait.
6. What is the difference between boundary level masking and non-boundary level masking? Discuss.
7. What is RTT? How is RTT used in networking?
8. Define substitution ciphers. Discuss about their types.

PART B — (7 × 10 = 70 marks)

Answer any SEVEN questions.

9. What are the major components of an optical communication system? Explain in detail.
10. List and briefly discuss the two different basic transmission technologies that can be used to set up wireless LAN's.
11. (a) A company is granted the site address 201.70.64.0. The company needs 6 subnets. Design the subnets.  
(b) Write short notes on Routing Table and Routing Module.
12. What is the difference between a protocol and a service interface? Explain your answer interms of a the ISO seven layer model.
13. Explain the steps involved in computing checksum for an UDP datagram.
14. How to avoid the congestion in TCP? Explain in detail.
15. Explain in detail about symmetric-key cryptography.

16. Explain the structure of fiber cables with neat diagram.
  17. Briefly discuss how DES algorithm works. Give one example.
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