

**B.Tech. – VIEP – COMPUTER SCIENCE AND  
ENGINEERING (BTCSVI)**

**Term-End Examination**

00525

**June, 2019**

**BICS-017 : COMPUTER NETWORKS**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any **seven** questions. All questions carry equal marks.*

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1. (a) What is packet switching ? How does it differ from circuit switching ? 7
- (b) Why is circuit switching suitable for voice communication ? 3
  
2. What is TCP slow start ? Explain with the help of a diagram. 10
  
3. (a) What kinds of delays are encountered when the packet travels from a source to a destination ? Apply formulae to explain it, wherever it is applicable. 6
- (b) Differentiate between baseband coaxial cable and broadband coaxial cable. 4

4. What are the five layers in the Internet Protocol Stack ? What are the important protocols and tasks performed in each layer ? 10
5. (a) Discuss the following schemes for content distribution in Internet : 6
- (i) Peer to peer file sharing
  - (ii) Web caching
- (b) Discuss the role of DNS in content distribution network. 4
6. Write Dijkstra's algorithm to compute the shortest path from a source to a destination and explain the algorithm. 10
7. Find CRC for the data polynomial  $X^9 + X^7 + X^5 + X^3 + 1$  with generator polynomial  $X^3 + X^2 + 1$ . 10
8. Compare and contrast IPv4 and IPv6 header fields. Do they have any field in common ? 10
9. What is a digital signature ? Explain the process of generating a digital signature. 10
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