

**NATIONAL INSTITUTE OF TECHNOLOGY PATNA**  
Department of Electronics and Communication Engineering  
**MID SEMESTER EXAMINATION, Jul-Dec 2022**

| VII Semester Regular Examination: October 2022   |                              |
|--|------------------------------|
| <b>SUBJECT NAME: Computer Communications</b>   | <b>SUBJECT CODE: OE05111</b> |
| <b>BRANCH: Open Elective</b>   |                              |
| <b>Time: 02 Hours</b>  |                              |
| <b>Max Marks: 20</b>   |                              |
| <b>Instructions:</b> <ol style="list-style-type: none"> <li>1. All questions are compulsory</li> <li>2. Assume any suitable data if necessary</li> <li>3. The CO (Course Outcome) and Level (from Bloom's Taxonomy) related to questions are given in the left-hand side and Marks are mentioned on the right-hand side margin.</li> </ol> |                              |

| Q No. | CO  | Level   | Questions  | Marks |
|-------|---|---------|--|-------|
| Q1    | CO1<br>,<br>CO5                                     | 1,2     | Define Congestion Control. Explain approaches for Congestion Control in Virtual-Circuit Subnets.   | 4     |
| Q2    | CO1<br>,<br>CO5                                     | 1,2,6   | Briefly explain Network Layer Design issues.   | 3     |
| Q3    | CO5   | 1,2,3,4 | Briefly explain TCP Timer Management.  | 4     |
| Q4    | CO4<br>,<br>CO5                                     | 1,2,3,4 | Explain Optimality Principle in details with a suitable example.   | 3     |
| Q5    | CO1<br>,<br>CO2<br>,<br>CO3<br>,<br>CO4<br>,<br>CO5 | 1,2,4   | List out the following comparison between- (Any 3)<br>i) Connection-less and Connection-oriented Services<br>ii) TCP and UDP<br>iii) OSI and TCP/IP models<br>iv) LAN, MAN and WAN<br>v) IPv4 and IPv6 | 3     |
| Q8    | CO1<br>,<br>CO4<br>,<br>CO5                         | 1,2     | Write short notes on following: (Any 3)<br>i) Multiplexing<br>ii) Border Gateway Protocol (BGP)<br>iii) Remote Procedure Call<br>iv) Hierarchical Routing<br>v) Fragmentation                          | 3     |