

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

7 <sup>th</sup> Semester Regular Examination: Dec 2022	
<b>SUBJECT NAME: Computer Communications</b>	<b>SUBJECT CODE: OE05111</b>
<b>BRANCH: Open Elective</b>	
<b>Time: 03 Hours</b>	
<b>Max Marks: 70</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, CO2, CO5	1,2,3	Explain the OSI Reference model.	8
Q2	CO1, CO5	1,2,3	Draw the TCP segment header format. Explain the various fields in the TCP segment header.	8
Q3	CO5	1,2,3,4	Describe the architecture of Electronic Mail and draw its architecture.	8
Q4	CO5, CO6, CO7	1,2,3,4	Explain in details a.) Email Security b.) Web Security	10
Q5	CO1, CO5	1,2,4	Explain the requirement and features of UDP.	8
Q6	CO1, CO4, CO5	1,2,4	List out the differences between distance vector and link state routing protocols.	8
Q7	CO1, CO4, CO5, CO6, CO7	1,2	Write note on following: (Any 5) i) Domain Name System (DNS) ii) Crash Recovery iii) HTTP iv) OSPF-The Interior Gateway Routing Protocol v) Digital Signatures vi) Tunneling vii) Broadcast Routing	20