

	<p style="text-align: center;"><b>ADAMAS UNIVERSITY</b>  <b>END-SEMESTER EXAMINATION : JANUARY 2021</b>          (Academic Session: 2020 – 21)</p>		
<b>Name of the Program:</b> (Example: B. Sc./BBA/MA/B.Tech.)	<b>BTECH CSE</b>	<b>Semester:</b> (I/III/ V/ VII/IX)	<b>V</b>
<b>Paper Title :</b>	<b>COMPUTER NETWORKS</b>	<b>Paper Code:</b>	<b>ECS43105</b>
<b>Maximum Marks :</b>	<b>40</b>	<b>Time duration:</b>	<b>3 Hrs.</b>
<b>Total No of questions:</b>	<b>08</b>	<b>Total No of Pages:</b>	<b>01</b>
(Any other information for the student may be mentioned here)			

**Answer all the Groups**

**Group A**

**Answer all the questions of the following**  $5 \times 1 = 5$

1.    a) Define Computer Network.
- b) State the names of primary components of data communication.
- c) Discuss the role of transmission media during message communication.
- d) State the full form of CSMA.
- e) Define Virus.

**GROUP –B**

**Answer any three of the following**  $3 \times 5 = 15$

2.    Explain all types of network topologies available in Computer Network with suitable diagram.
3.    Explain Simplex, Half Duplex and Full Duplex mode of message communication with suitable examples.
4.    Why shared transmission media are widely used compared to dedicated transmission media during message communication between connected devices?
5.    Discuss the difference between switch and hub.

**GROUP –C**

**Answer any two of the following**  $2 \times 10 = 20$

6.    Explain layer to layer data communication using OSI Model at sender side and receiver side with suitable diagram.
  7.    Explain Frequency Division Multiplexing, Wavelength Division Multiplexing and Time Division Multiplexing with suitable diagrams.
  8.    Discuss Public Key Cryptography and Private Key Cryptography with suitable diagrams.
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