

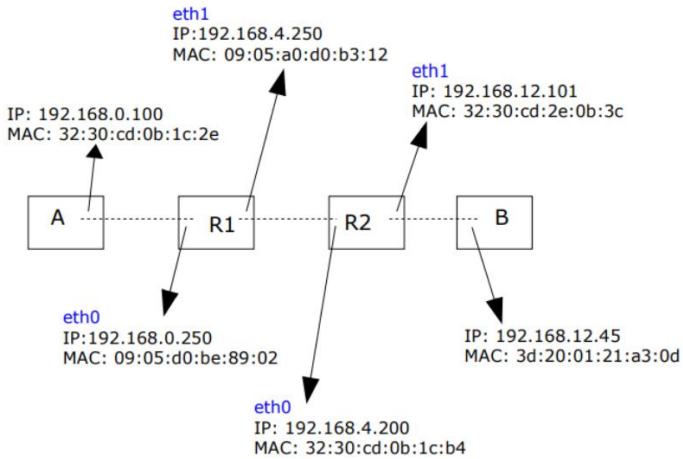
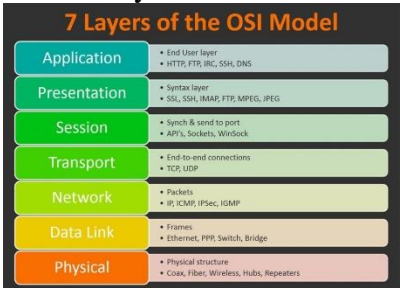


**RV College of Engineering**  
Academic year 2023-2024 (EVEN Sem)

DEPARTMENT OF  
**COMPUTER SCIENCE & ENGINEERING**

Date	June 2024	Maximum Marks	50
Course Code	CY245AT	Duration	90 Min
Sem	IV Semester	CIE -1	
<b>Computer Networks (Common to CS, IS, CD, AI &amp; CY)</b>			

**SCHEME**

Sl. No	Question	Marks	BT	CO
1.	 <ol style="list-style-type: none"> <li>09:05:d0:b2:89:02 – 1 mark</li> <li>HDL, ethernet – 1 mark</li> <li>ARP – Address resolution protocol – 1 mark</li> <li>FCS – 1 mark</li> <li>OSI layers - 6 marks</li> </ol> 	10	4	2

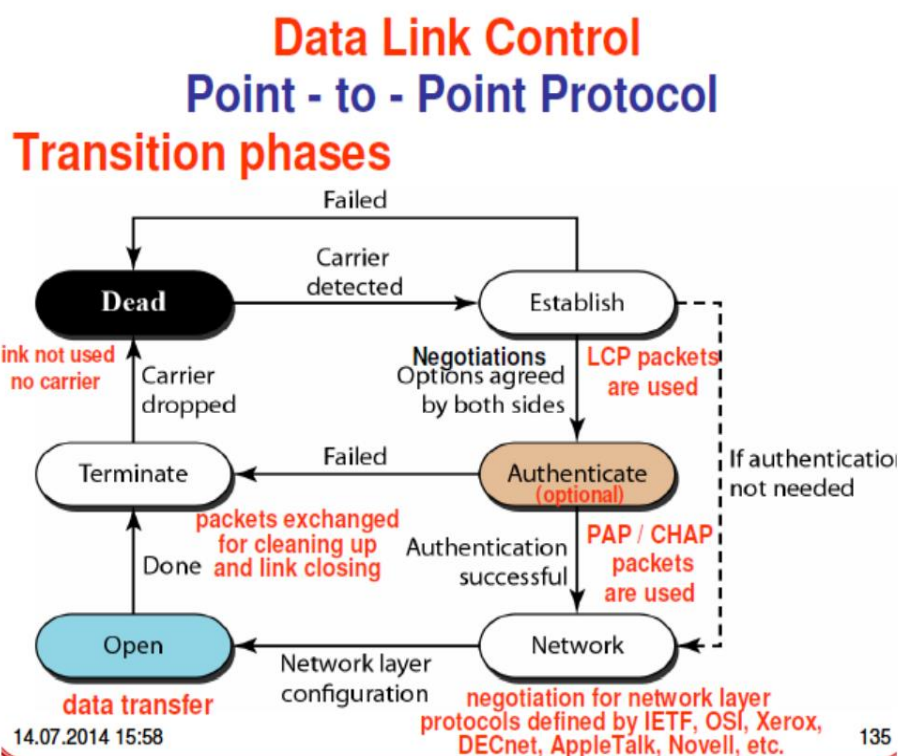


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2	<div> <p>Sending node</p> <pre> graph LR     Start((Start)) --&gt; Ready((Ready))     Ready -- "Packet came from network layer. Make a frame, save a copy, and send the frame. Start the timer." --&gt; Blocking((Blocking))     Blocking -- "Time-out. Resend the saved frame. Restart the timer." --&gt; Blocking     Blocking -- "Corrupted ACK arrived. Discard the ACK." --&gt; Blocking     Blocking -- "Error-free ACK arrived. Stop the timer. Discard the saved frame." --&gt; Ready   </pre> <p>Receiving node</p> <pre> graph LR     Start((Start)) --&gt; Ready((Ready))     Ready -- "Corrupted frame arrived. Discard the frame." --&gt; Ready     Ready -- "Error-free frame arrived. Extract and deliver the packet to network layer. Send ACK." --&gt; Ready   </pre> </div> <p>FSM – 4 marks Expl: 4 marks Disadv – 2 (Waste of time, bandwidth)</p>	10	3	1
3.	A B ESC ESC C ESC FLAG ESC ESC ESC FLAG D – 4 marks	10	4	5



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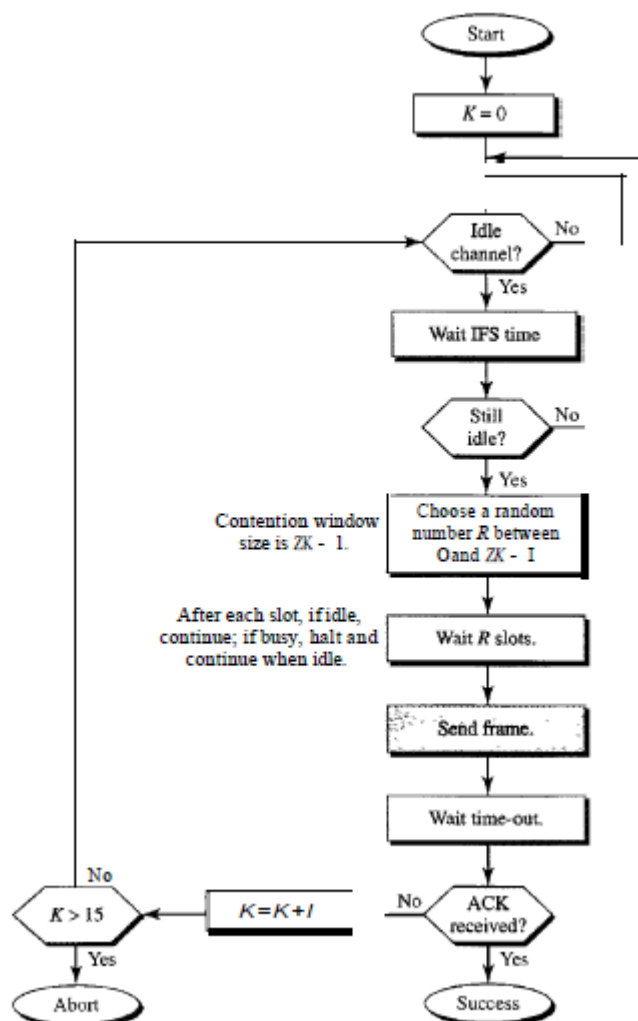


**Phases 6 marks**

4.	CSMA is for collision detection and avoidance. CSMA/CA is for wireless – Disgram—3M Explanation-- 3 marks	10	3	1
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Hidden terminal problem – 1 marks

Exposed terminal problem – 1 marks

5

Destination	Line
R-1	--
R-3	R3
R-4	R3
R-5	R3
R-6	R3

1 Store and forward explanation – 6 marks

2. Next best path – 2

3. No. Since it is connection less service, routing is done independent of every packet arrival, based on the status of network, routing decision can be changed for every packet – 2 mark

10

4

4



*Go, change the world*

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<b>CO1:</b>	Apply the algorithms/techniques of routing and congestion control to solve problems related to Computer Networks.
<b>CO2:</b>	Analyse the services provided by various layers of TCP/IP model to build effective solutions
<b>CO3:</b>	Design sustainable networking solutions with societal and environmental concerns by engaging in Life long learning for emerging technology.
<b>CO4:</b>	Exhibit network configuration, protocol usage and performance evaluation in networks.
<b>CO5:</b>	Demonstrate the solutions using various algorithms/protocols available to address networking issues Using modern tools by exhibiting team work and effective communication

**BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks**

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	CO5	L2	L3	L4	L5	L6
	Test	Max Marks	20	10		10	10		20	30	--	--