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Total No. of Pages : 01

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M.Tech.(ECE) (2016 Batch) EL-IV (Sem.-3)

**INTERNET WORKING AND INTERNET PROTOCOLS**

Subject Code : MTEC-302B

M.Code : 74777

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1 a. Explain the TCP/IP Protocol suite with a neat diagram.  
b. What is the origin of term VOIP?
- Q2 a. Explain the phrase "*TCP is a reliable transport layer protocol*".  
b. Explain Address Resolution Protocol (ARP).
- Q3 a. Explain the IPv4 datagram header with explanation of each field.  
b. Explain the connection establishment, data transfer and connection termination processes with TCP.
- Q4 a. Compare and contrast IPv4 and IPv6 protocols briefly.  
b. Differentiate transparent and non transparent fragmentation techniques.
- Q5 a. In the standard Ethernet, if the maximum propagation time is 25.6  $\mu$ s, what is the minimum size of the frame?  
b. Describe the concept of Piconet and Scatternet. What is a bridge? How does it differ from repeater?
- Q6 a. Describe the following terminologies w.r.t Domain Name Space :  
i. Root Server  
ii. Primary Server  
iii. Secondary Server





- b. Write short notes on :
- i. Data encryption
  - ii. Concept of Firewall
  - iii. Denial of Service Attacks
- Q7 a. In all possible scenarios briefly explain the architecture of Electronic Mail.
- b. Draw the header frame format of ICMP and explain all components in it.
- Q8 Write note on following :
- a. Interrupt latency
  - b. Bernal Shifter
  - c. Bit Band operations

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**

