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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. Barral Shifter
- c. Bit Band operations

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**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.**