**Printed Pages : 1** **Roll No.** | | | | | | | | | | | **ECS601**

**B.TECH.**

**THEORY EXAMINATION (SEM–VI) 2016-17**

**COMPUTER NETWORK**

***Time : 3 Hours*** ***Max. Marks : 100***

***Note :*** *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

## SECTION – A

**1. Explain the following:** **10 x 2 = 20**

**(a)** Write about user access in ISDN.

**(b)** List the advantages and disadvantages of star topology.

**(c)** Compare ALOHA with slotted ALOHA.

**(d)** State the requirements of CRC.

**(e)** Provide few reasons for congestion in a network.

**(f)** With the given IP-address, how will you extract its net-id and host-id?

**(g)** What is piggybacking?

**(h)** How does transport layer perform duplication control?

**(i)** Mention the use of HTTP.

**(j)** List out few email gateways.

## SECTION – B

**2. Attempt any five of the following questions:** **5 x 10 = 50**

**(a)** Discuss the issues in the data link layer and about its protocol on the basis of layering principle.

**(b)** Explain network topological design with necessary diagram and brief the advantages and disadvantages of various topologies.

**(c)** Consider the use of 10 K-bit size frames on a 10 Mbps satellite channel with 270 ms delay. What is the link utilization for stop-and-wait ARQ technique assuming $P=10^{-3}$?

**(d)** Brief about how line coding implemented in FDDI and describe its format.

**(e)** Enumerate on TCP header and working of TCP and differentiate TCP and UDP with frame format.

**(f)** Explain the three way handshaking protocol to establish the transport level connection

**(g)** Elaborate about TELNET and its working procedure.

**(h)** How does FTP work? Differentiate between passive and active FTP.

## SECTION – C

**Attempt any two of the following questions:** **2 x 15 = 30**

**3** (i) Explain functionalities of every layer in OSI reference model with neat block diagram.

(ii) Illustrate the performance issues for GO-BACK-N data link protocol.

**4** (i) Describe the problem of count to infinity associated with distance vector routing technique.

(ii) Enumerate how the transport layer unsure that the complete message arrives at the destination and in the proper order.

**5** Explain the SNMP protocols in detail.

quescol.com