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Total Number of Pages : 02

M.TECH

AR-19

M.TECH 1ST SEMESTER EXAMINATIONS NOV/DEC 2019

ECE, MPCEC1010

ADVANCED COMMUNICATION NETWORKS

Time: 3 Hours

Max Marks : 70

The figures in the right hand margin indicate marks.

PART-A

(10 X 2=20 MARKS)

1. Answer the following questions.

- What is the effect of propagation delay on CSMA?
- Write various steps in online bucket scheduling algorithm for broadcasting.
- What is the difference between multiple bit error and burst error?
- What do you mean by RSA? Write the drawback of RSA?
- What do you mean by data communication? Mention the factors on which effectiveness of data communication depends?
- What are the advantages and disadvantages of static routing?
- What is need for tunnelling and encapsulation?
- What is the difference between thick Ethernet and Thin Ethernet?
- Differentiate between FTP and HTTP?
- Calculate the maximum bit rate for a channel having bandwidth 3100Hz and S/N ratio of 20db.

PART-B

(5 X 10=50 MARKS)

Answer any five questions from the following.

Q2.

- Draw the schematic diagram of IPv6 Header. Explain the various fields used in it. Give the advantages of IPv6 over IPv4.
- What do you mean by Transmission media? Describe different types of transmission media with advantages and disadvantages of each?

Q3.

- Discuss the layer functionalities of the OSI reference model with neat diagram?
- How Go-Back-N-ARQ is different from Selective Repeat ARQ, explain with example.

Q4.

- Discuss the use of formal analysis techniques for protocols. Comment on why such techniques are used in analysing protocols, and give some examples of the types of problems that such an analysis can reveal.
- What do you mean by Guided Media? Discuss briefly different types of guided media.



Q5.

- a) What is Random access protocol? Describe different types of random access protocols with advantages and disadvantages of each?
- b) Describe the token bucket mechanism for congestion control. With which other technique is token bucket usually combined to achieve complete flow control?

Q6.

- a) What do you mean by CSMA/CD? Explain its working principle?
- b) Discuss the hierarchy and addressing issues surrounding the construction of large networks?**

Q7.

- a) What is bridge? Describe different types of bridge briefly?
- b) Explain briefly about Web service architecture?

Q8.

- a) What is topology? Describe different types of topology with neat and clean diagram?
- b) What are the design goals and limitations of ATM?

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