

SUBJECT CODE NO:- P-8058
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E. (CSE/SE) Examination May/June 2017
Computer Network Protocol Design (EL-1 on SE)
(Revised)

[Time :ThreeHours]

[Max Marks :80]

Please check whether you have got the right question paper.

- N.B i) Please be specific while writing answers.
 ii) Attempt any two questions from each section.
- Section A
- Q.1 a) Explain what is auto correlation & cross correlation? Why it is important to study in computer network protocol design. 10
 b) What is ensemble average & time average? How they are used in computer networks. 10
- Q.2 a) Explain discrete Markov chain and Markov chain transition matrix. 10
 b) What is physical significance of Eigen values and Eigen vectors? 10
- Q.3 a) How to model M/M/I queue. 10
 b) Explain Kindell's notions for.
 (i) M/M/I
 (ii) M/M/J/B
 (iii) $M^m/M^m/J/B$
 (iv) $M/M^m/1/B$ 10
- Section B
- Q.4 a) Derive expression for leaky bucket algorithm(M/M/1/B case) 10
 b) Model stop and wait ARQ protocol. 10
- Q.5 a) Explain auto regressive model of network traffic. 10
 b) What is realistic model of Poisson's traffic? 10
- Q.6 a) Explain various packet scheduling issues. 10
 b) Explain RR and WRR packet scheduling algorithm. 10