

C 21430

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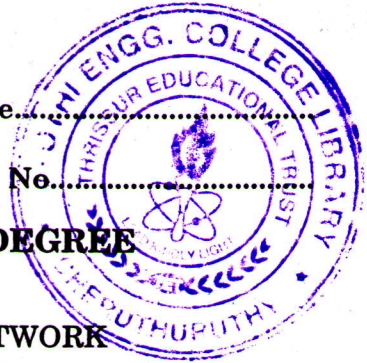
Name.....

Reg. No.....

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, APRIL 2017**

EC/PTEC 09 801—DATA AND COMMUNICATION NETWORK

(2009 Admissions)



Time : Three Hours

Maximum : 70 Marks

Part A

*Answer all questions.
Each question carries 2 marks.*

1. State little theorem.
2. What are tasks performed by the transport layer ?
3. Define the term datagram.
4. What are the advantages of ATM ?
5. Define the stop and wait protocol.

(5 × 2 = 10 marks)

Part B

*Answer any four questions.
Each question carries 5 marks.*

6. Explain Poisson modelling and its failure in detail.
7. Discuss the salient features of character oriented and bit oriented protocols.
8. Discuss X MODEM and Y MODEM asynchronous protocols.
9. Explain the operation of Distributed Queue Dual Bus.
10. Explain about SONET and SDH X.25.
11. Write short notes on Ethernet and token ring.

(4 × 5 = 20 marks)

Part C

Answer all questions.

12. (a) Analyze M/M/1 queuing system with an assumption of Poisson arrival process and exponential service times.

Or

- (b) Discuss M/G/1 queue and derive Pollaczek-Khinchine formula.

Turn over

13. (a) Write short notes on :

(i) TCP/IP protocol.

(5 marks)

(ii) X.25 protocol.

(5 marks)

Or

(b) With neat sketch, explain the various layers of OSI model and their functions.

14. (a) (i) Write short notes on SONET.

(5 marks)

(ii) Explain the operation of CSMA/CD.

(5 marks)

Or

(b) (i) Explain the format structure of ATM cell.

(5 marks)

(ii) Explain the functions of ATM Adaptation Layer.

(5 marks)

15. (a) (i) What is multistage switching network ? Explain the structure of three stage switches with neat diagram.

(6 marks)

(ii) A three stage switching structure is to accommodate $N = 128$ input and 128 output terminals. For 16 first stage and 16 last stage, determine the number of cross points for non-blocking.

(4 marks)

Or

(b) Explain the analysis of blocking models used for loss system.

[4 × 10 = 40 marks]