

**8E8024**

Roll No.

Total No of Pages: **2****8E8024**

**B.Tech. VIII-Sem (Main & Back) Exam September 2020**  
**Electronic Instrumentation & Control Engg.**  
**8EI4.3A Computer Networks**  
**EC,EI**

**Time: 2 Hours**[www.ersahilkagyan.com](http://www.ersahilkagyan.com)**Maximum Marks: 48**  
**Min. Passing Marks: 16***Instructions to Candidates:*

*Attempt three questions, selecting one question each from any three unit. All Questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/ calculated must be stated clearly.*

*Use of following supporting material is permitted during examination. (Mentioned in form No. 205)*

1. NIL2. NIL**UNIT- I**

- Q.1 (a) Define mathematical models for M/M/1 and M/M/∞. [8]  
(b) Define Little's formula. [8]

**OR**

- Q.1 (a) How to work queuing theory for pure birth, pure death and birth death processes? [8]  
(b) Define mathematical models for M/M/m and M/M/1/K. [8]

**UNIT- II**

- Q.2 (a) Explain OSI model with old layers. [8]  
(b) Define Line Coding Schemes. [8]

**OR**

- Q.2 (a) Define Simplex Stop & Wait Protocol. [8]  
(b) What is Protocol? Explain sliding window protocol. [8]

### UNIT- III

- Q.3 (a) Differentiate Token Bus and Token Ring. [8]  
(b) What is static and dynamic channel allocation? [8]

**OR**

- Q.3 (a) Differentiate ALOHA and Slotted ALOHA. [8]  
(b) Define Virtual Circuit Network. [8]

### UNIT- IV

- Q.4 (a) Explain the difference between IPV4 and IPV6. [8]  
(b) Differentiate Non-adaptive & adaptive routing algorithms. [8]

**OR**

- Q.4 (a) Define OSPF and BGP in brief. [8]  
(b) What is Routing Protocol? Explain distance vector routing. [8]

### UNIT- V

- Q.5 (a) Draw and explain Domain Name System (DNS) record structure. [8]  
(b) Differentiate leaky bucket and token bucket implementation. [8]

**OR**

- Q.5 (a) Draw and explain TCP Header and segment structure. [8]  
(b) Explain TCP frame format. [8]
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